1RP-4166
CLOSURE REPORT
LMPSU #286 Flowline
Crude Oil Spill
Lea County, New Mexico

Latitude: 32.36392°
Longitude: -103.17660°

LAI Project No. 17-0175-19

February 8, 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
Staff Geologist

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1.0 INTRODUCTION

Larson & Associates, Inc. (LAI), has prepared this closure report on behalf of Legacy Reserves Operating, Inc. (Legacy) for submittal to the New Mexico Oil Conservation Division (OCD) District 1 and New Mexico State Land Office (SLO) for a crude oil spill at the LMPSU #286 flowline (Site) located in Unit H (SE/4, NE/4), Section 29, Township 22 South, Range 37 East in Lea County, New Mexico. The geodetic position is North 32.36392° and West -103.17660°. Figure 1 presents a topographic map. Figure 2 presents an aerial map.

1.1 Background

The release occurred on January 12, 2014 due to ruptured flowline allowing for approximately 100 barrels (bbl) of crude oil to be released. Approximately 70 bbl were recovered. The spill area measured about 2,200 square feet at the time of release. The spill was reported to the OCD on January 21, 2014 (verbal communication with Geoff Leking). The initial C-141 was submitted and assigned remediation permit number 1RP-4166. Appendix A presents the initial C-141.

On January 22, 2014, personnel from Environmental Plus Inc. (EPI) collected soil samples at seven (7) locations (TS1 through TS7). The samples were collected at depths of between 3 (TS2) and 16 (TS7) feet below ground surface (bgs). The soil samples were analyzed in the field for chloride by titration method with a LaMotte Chloride Kit. Select portions from the samples were analyzed for organic vapors with a Mini-Rae Photoionization Detector (PID).

Chloride tested above the delineation limit (600 mg/Kg) in the following samples:

- TS2, 3’ (1,200 mg/Kg)
- TS5, 9’ (1,600 mg/Kg)
- TS6, 8’ (1,200 mg/Kg)
- TS6, 13’ (1,400 mg/Kg)
- TS6, 15’ (2,300 mg/Kg)
- TS7, 12’ (1,400 mg/Kg)

On January 23, 2014 EPI personnel collected soil samples at three (3) locations (SP 1 through SP 3) within the spill area. The samples were collected at depths of 7 feet bgs (SP 1), 8 feet bgs (SP 2) and 16 feet (SP 3). An additional sample was collected approximately 25 feet west of the spill at a depth of 5 feet bgs to determine background conditions. The samples were analyzed by Cardinal Laboratories (Cardinal) in Hobbs New Mexico, for the sum of benzene, toluene, ethylbenzene and xylenes (BTEX), total petroleum hydrocarbons (TPH), including gasoline range organics (C6-C10) and diesel range organics (>C10-C28) by EPA SW-846 Methods 8021B and 8015, respectively, and chloride by titration method SM4500 CL-B. All samples reported benzene, BTEX and TPH below the OCD remediation limits. Chloride was delineated to 600 mg/Kg.

In January 2014, soil was excavated from the spill area to approximately 5 feet bgs on the east end, 3 feet bgs on the west end and 8 feet bgs in the middle. The excavation measured approximately 2,700 square feet. The contaminated soil was hauled to an OCD approved disposal facility. Appendix B presents EPI work plan.

1.2 Physical Setting

The physical setting is as follows:

- The surface elevation is approximately 3,360 feet above mean sea level (msl);

- The topography slopes gently to the southeast;
- There are no surface water features within 1,000 feet of the Site;
- The soils are designated as "Pyote and maljamar fine sands, 0 to 3 percent slope", consisting of 0 to 30 inched fine sand underlain by 30 to 60 inches of fine sandy loam;
- The geology is eolian and piedmont deposits (Holocene to middle Pleistocene) underlain by the Blackwater Draw and Ogallala formations (Tertiary), in descending order;
- Groundwater occurs in the Ogallala Formation at approximately 61 feet below ground surface (bgs) (1996);
- The nearest freshwater well is located in Unit L (NW/4, SW/4), Section 28, Township 22 South, Range 37 East about 0.30 miles southeast of the Site.

1.3 Remediation Action Levels

The following remediation standards are based on closure criteria for soils impacted by a release as 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

2.0 REMEDIATION CONFIRMATION

On January 5, 2018, LAI personnel collected confirmation soil samples at three (3) locations (S-1 through S-3) in the bottom of the excavation. The samples were collected with a stainless steel hand auger at 1 foot intervals to a depth of approximately 7 feet bgs (S-1), 10 feet bgs (S-2), and 4 feet bgs (S-3). Sidewall samples were collected at a mid-excavation depth of about 2 feet bgs e north and south of each bottom sample, as well as the east and west sidewalls. The samples were delivered under chain of custody and preservation to Permian Basin Environmental Lab (PBEL) in Midland Texas. The upper samples were analyzed for BTEX and TPH by EPA SW-846 8021B and 8015M, respectively. All samples were analyzed for chloride by EPA Method 300. The laboratory reported benzene, BTEX and TPH and chloride below the OCD remediation action levels in Table 1 (19.15.29 NMAC) Chloride was delineated to 600 mg/Kg in all samples. Table 1 presents an analytical soil data summary. Figure 2 presents an aerial map with soil sample locations. Appendix C presents the laboratory report.

On January 9, 2018, LAI, on behalf of Legacy, submitted a Remediation Confirmation Report titled, "1RP-4166 LMPSU #286 Flowline Remediation Confirmation Report" to OCD District 1 requesting approval to backfill the excavation and seed the location. OCD District 1 approved the report on February 15, 2018. Appendix D presents OCD communications.

3.0 CLOSURE

In December 2018 a Legacy contractor filled the excavation to approximately 1 foot bgs with caliche and to surface with topsoil. On February 1, 2019, LAI personnel seeded the location to SLO requirements. Appendix E presents the grass seed receipt. Legacy requests no further action for 1RP-4166. Appendix F presents photographs. Appendix G presents the final C-141.

Tables

Table 1
1RP-4166
Confirmation Soil Sample Analytical Data Summary
Legacy Reserves Operating, Inc. LMPSU #286 Flowline
Lea County, New Mexico

Sample	Collection Date	Depth (Feet)	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C10 (mg/Kg)	>C10 - C28 (mg/Kg)	>C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
RRAL:								**1,000**	***600**
Bottom Samples from Excavation									
S-1	1/5/2018	5 - 6	<0.00111	<0.00777	<27.8	<27.8	<27.8	<27.8	<1.11
	1/5/2018	6 - 7	--	--	--	--	--	--	<1.11
S-2	1/5/2018	8 - 9	<0.00112	<0.00786	<28.1	<28.1	<28.1	<28.1	<1.12
	1/5/2018	9 - 10	--	--	--	--	--	--	<1.14
S-3	1/5/2018	3 - 4	<0.00115	<0.00805	<28.7	<28.7	<28.7	<28.7	<1.15
Side Wall Samples from Excavation									
S-1 North	1/5/2018	2	<0.00110	<0.0077	<27.5	<27.5	<27.5	<27.5	<1.10
S-1 South	1/5/2018	2	<0.00108	<0.00754	<26.9	<26.9	<26.9	<26.9	<1.08
S-2 North	1/5/2018	2	<0.00112	<0.00932	<28.1	<28.1	<28.1	<28.1	<28.1
S-2 South	1/5/2018	2	<0.00111	<0.00902	<27.8	<27.8	<27.8	<27.8	<1.11
S-3 North	1/5/2018	2	<0.00115	<0.01119	<28.7	<28.7	<28.7	<28.7	15.6
S-3 South	1/5/2018	2	<0.00115	<0.00805	<28.7	<28.7	<28.7	<28.7	<1.15
East	1/5/2018	2	<0.00110	<0.00816	<27.5	<27.5	<27.5	<27.5	<1.10
West	1/5/2018	2	<0.00112	<0.00786	<28.1	<28.1	<28.1	<28.1	<1.12

Notes: Laboratory analysis performed by Permian Basin Environmental Lab, Midland, Texas, by SW-846 Method 8021B (BTEX), Method 8015M (GRO, DRO and ORO) and Method 300 (chloride).
Depth in feet below ground surface (bgs)
mg/Kg: milligrams per kilogram equivalent to parts per million (ppm)
--: No data available
*: OCD delineation limit

Figures

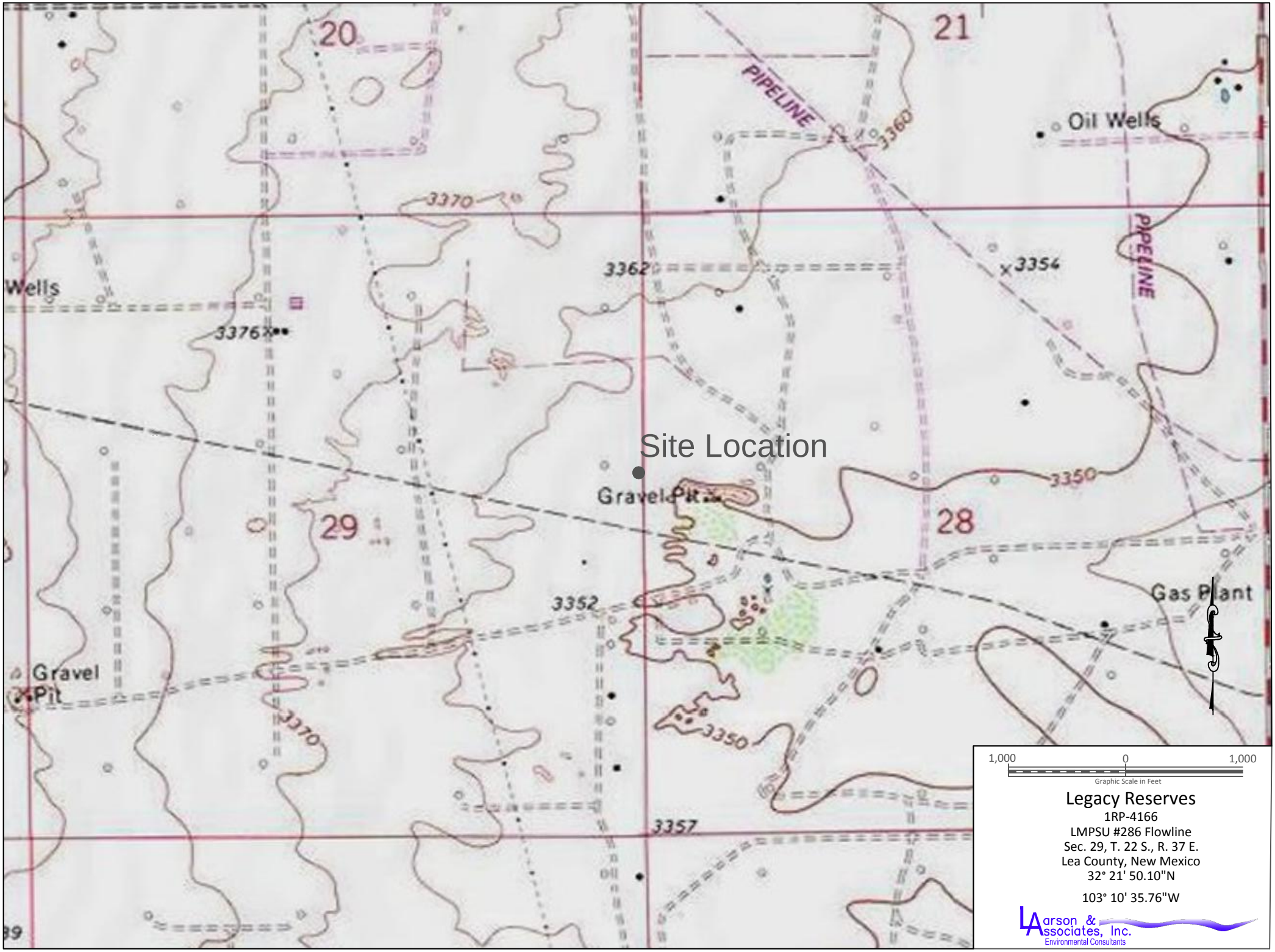

Figure 1 - Topographic Map

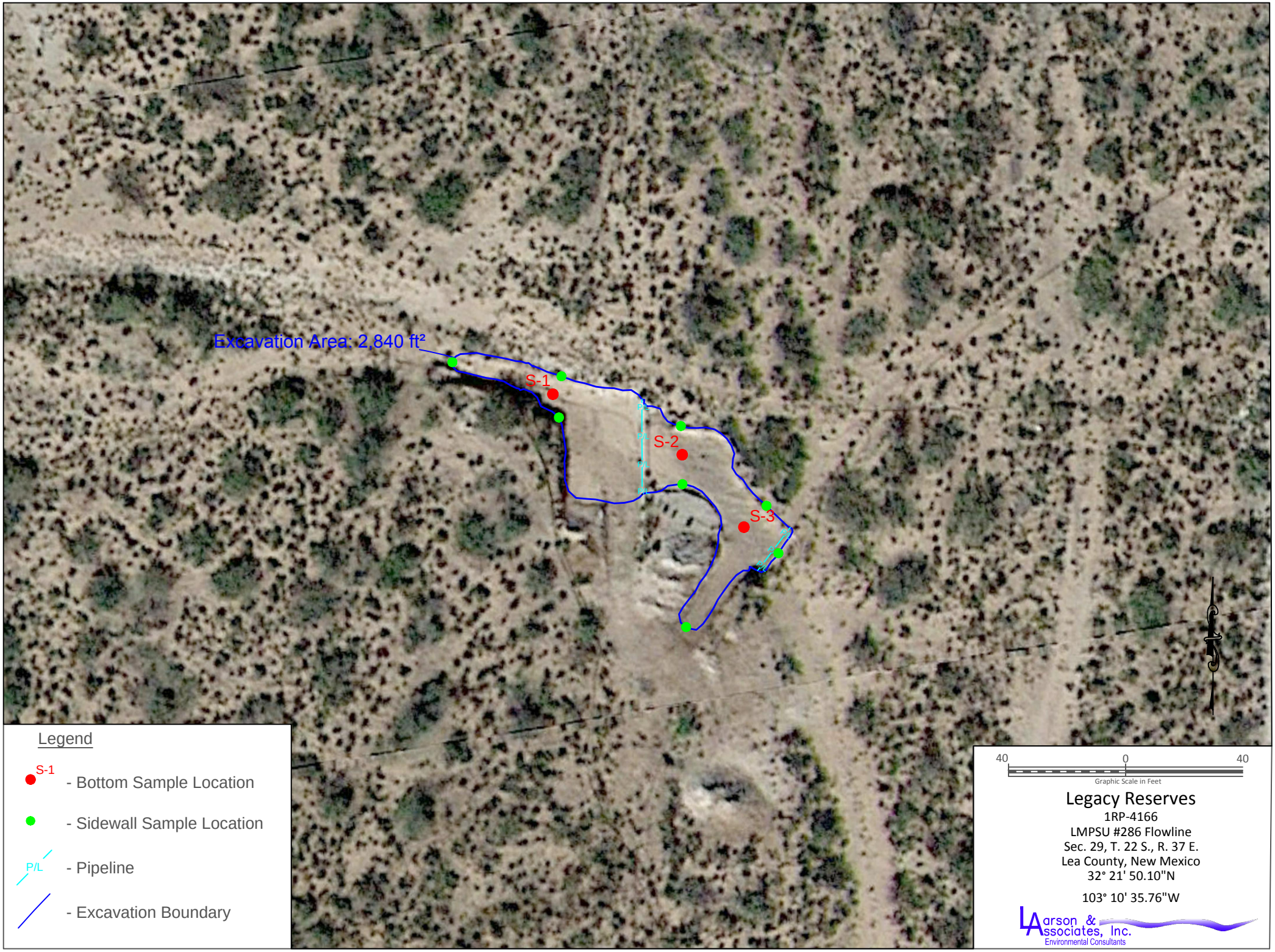

Figure 2 - Aerial Map Showing Sidewall Sample Locations

Appendix A

Initial C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Legacy LP	**Contact:** Greg Skiles
Address: P.O. Box 10848 Midland, TX 79702	**Telephone No.:** (432) 528 – 4014
Facility Name: LMPSU #286 Flowline	**Facility Type:** Flowline

Surface Owner: State of New Mexico	**Mineral Owner:**	**API:**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	29	22S	37E					Lea

E-28-22-37
30-025-10494

Latitude: N 32° 21' 50.01" **Longitude:** W 103° 10' 35.76"

NATURE OF RELEASE

Type of Release: Oil	**Volume of Release:** 100 bbls	**Volume Recovered:** 70 bbls
Source of Release: flow-line	**Date and Hour of Occurrence:** 1/17/14	**Date and Hour of Discovery:** 1/17/14
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	**If YES, To Whom?** Geoff Leking	
By Whom? Greg Skiles	**Date and Hour:** 1/21/14	
Was a Watercourse Reached? ☐ Yes ☒ No	**If YES, Volume Impacting the Watercourse:** Not Applicable	

Depth to Water. ~70 ft bgs

If a Watercourse was Impacted, Describe Fully.* Not Applicable

Describe Cause of Problem and Remedial Action Taken.* Approximately 100 bbls of oil were released when the sidewall of a flow-line split. There was approximately 70 bbls recovered. An Emergency Response Team arrived at the release area and began continuous abatement of the impacted area. Visibly stained soil was excavated and hauled away for disposal at a state approved facility.

Describe Area Affected and Cleanup Action Taken.* Approximately 2,200 square feet of surface area was impacted by the release. Soil samples will be collected from release area and submitted to Cardinal Laboratories for testing. Upon receipt of laboratory analytical data from soil samples collected during delineation operations, EPI will prepare and present a Remediation Proposal for approval.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to [illegible] surface water, human health or the environment. In addition, NMOCD accep[illegible] for compliance with any other federal, state, or local laws and/or regulations.

APPROVED

Signature:	**Approved by District Supervisor:**	
Printed Name: Greg Skiles	**Approval Date:** 2/8/14	**Expiration Date:**
Title: Production Foreman		
E-mail Address: gskiles@legacylp.com	**Conditions of Approval:**	**Attached** ☐
Date: 1/21/14 **Phone:** (432) 528-4014		

*** Attach Additional Sheets If Necessary**

(RP 4166

Appendix B

EPI Work Plan

AE Order Number Banner

Report Description

This report shows an AE Order Number in Barcode format for purposes of scanning. The Barcode format is Code 39.

App Number: pKJ1603945716

1RP - 4166

LEGACY RESERVES OPERATING, LP

2/8/2016

ENVIRONMENTAL PLUS, INC.
CONSULTING AND ENVIRONMENTAL REMEDIATION

22 January 2014

Mr. Geoff Leking, Environmental
NMOCD
1625 N. French Drive
Hobbs, New Mexico 88240

HOBBS OCD

JAN 21 2014

RECEIVED

Re: Initial C-141
Legacy LP
LMPSU #286 Flowline
UL-H, Section 29, Township 22 South, Range 37 East
Lea County, New Mexico

Mr. Leking:

Environmental Plus, Inc. (EPI), on behalf of Mr. Greg Skiles, Legacy LP (Legacy), submits the attached form C-141 for the above-referenced leak site, located on land owned by the State of New Mexico.

The site is located approximately 4 miles south of Eunice, New Mexico (reference *Figure 1*). A search for water wells was completed utilizing the New Mexico Office of the State Engineer's website and a United States Geological Survey (USGS) database. A total of one (1) wells are located in the area surrounding the release site (reference *Table 1*). No wells (domestic, agriculture or public) and no bodies of surface water exist within a 1,000-foot radius of the release site (reference *Figure 2*). Groundwater data indicated the average water depth is approximately 70 feet below ground surface (bgs). The attached site information and metrics form ranks the site in accordance with the NMOCD Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993).

Approximately 100 bbls of oil was released when a flow-line sidewall split, 70 barrels were recovered (reference *Figure 3* and attached photographs). Based on available information, it was projected distance between impacted soil and groundwater is approximately 70 vertical feet. Utilizing this information, New Mexico Oil Conservation Division (NMOCD) Remedial Goals for this Site were determined as follows:

Parameter	Remedial Goal
Benzene	10 parts per million
BTEX	50 parts per million
TPH	1,000 parts per million
Chloride	500 parts per million

P.O. BOX 1558 ••• 2100 WEST AVE. O ••• EUNICE, NEW MEXICO 88231
TELEPHONE 575•394•3481 FAX 575•394•2601

ENVIRONMENTAL PLUS, INC.

Should you have any questions or concerns please feel free to contact me at (575) 394-3481 or via e-mail at ddominguezepi@gmail.com or Mr. Greg Skiles at (432) 528-4014 or via e-mail at gskiles@legacylp.com. All official communication should be addressed to:

Mr. Greg Skiles
Legacy LP
P.O. Box 10848
Midland, TX 79702

Sincerely,

ENVIRONMENTAL PLUS, INC.

Daniel Dominguez
Environmental Consultant

cc: Greg Skiles – Production Foreman, Legacy LP, Midland Texas
File

FIGURES

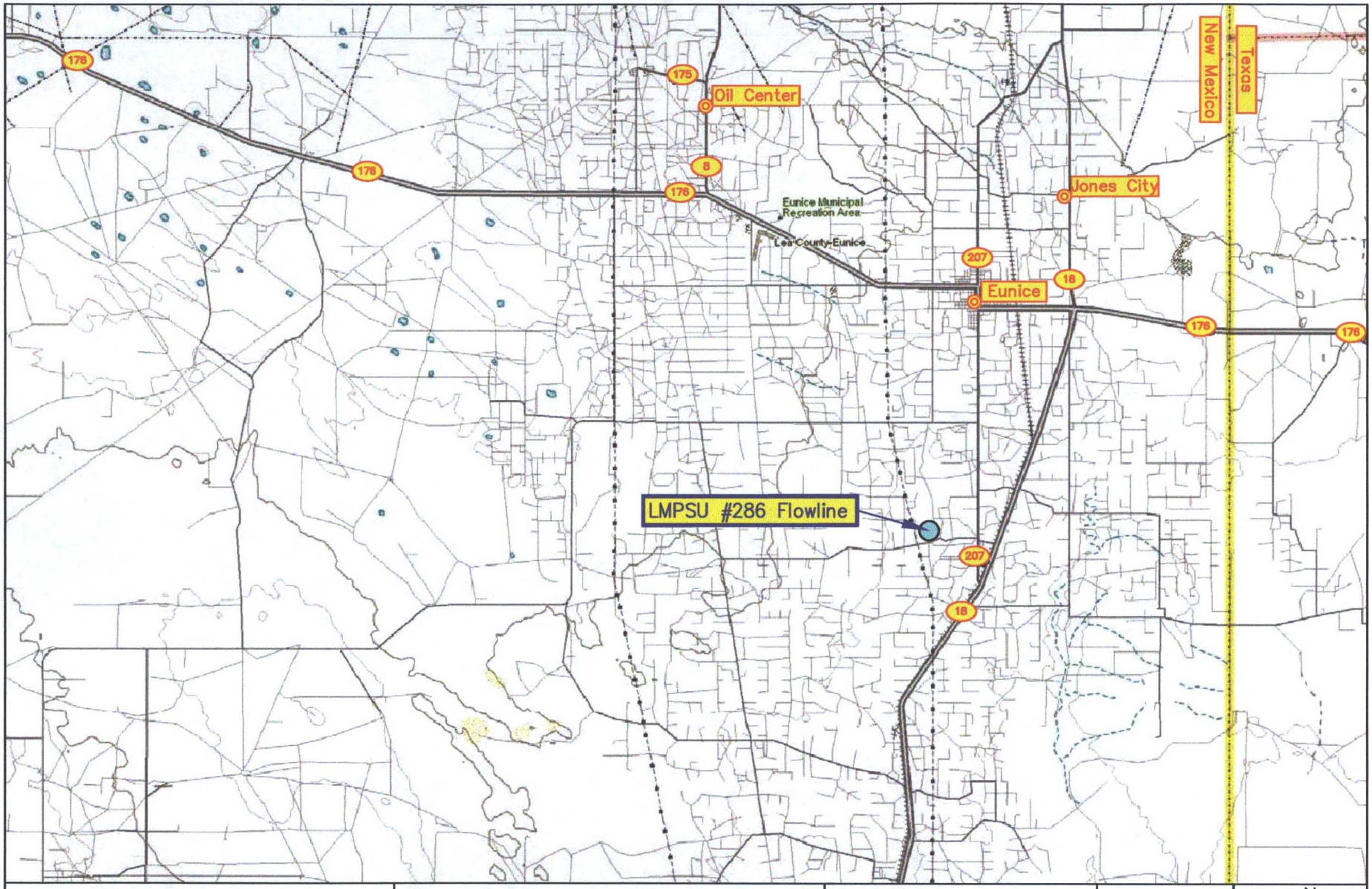

Figure 1 Area Map Legacy LMPSU #286 Flowline	Lea County, New Mexico SE 1/4 of NE 1/4, Sec. 29, T22S, R37E N 32° 21' 50.01" W 103° 10' 35.76" Elevation: 3,355 feet amsl	DWG By: D Dominguez January 2014 0 3 6 Miles	REVISED: SHEET 1 of 1	N

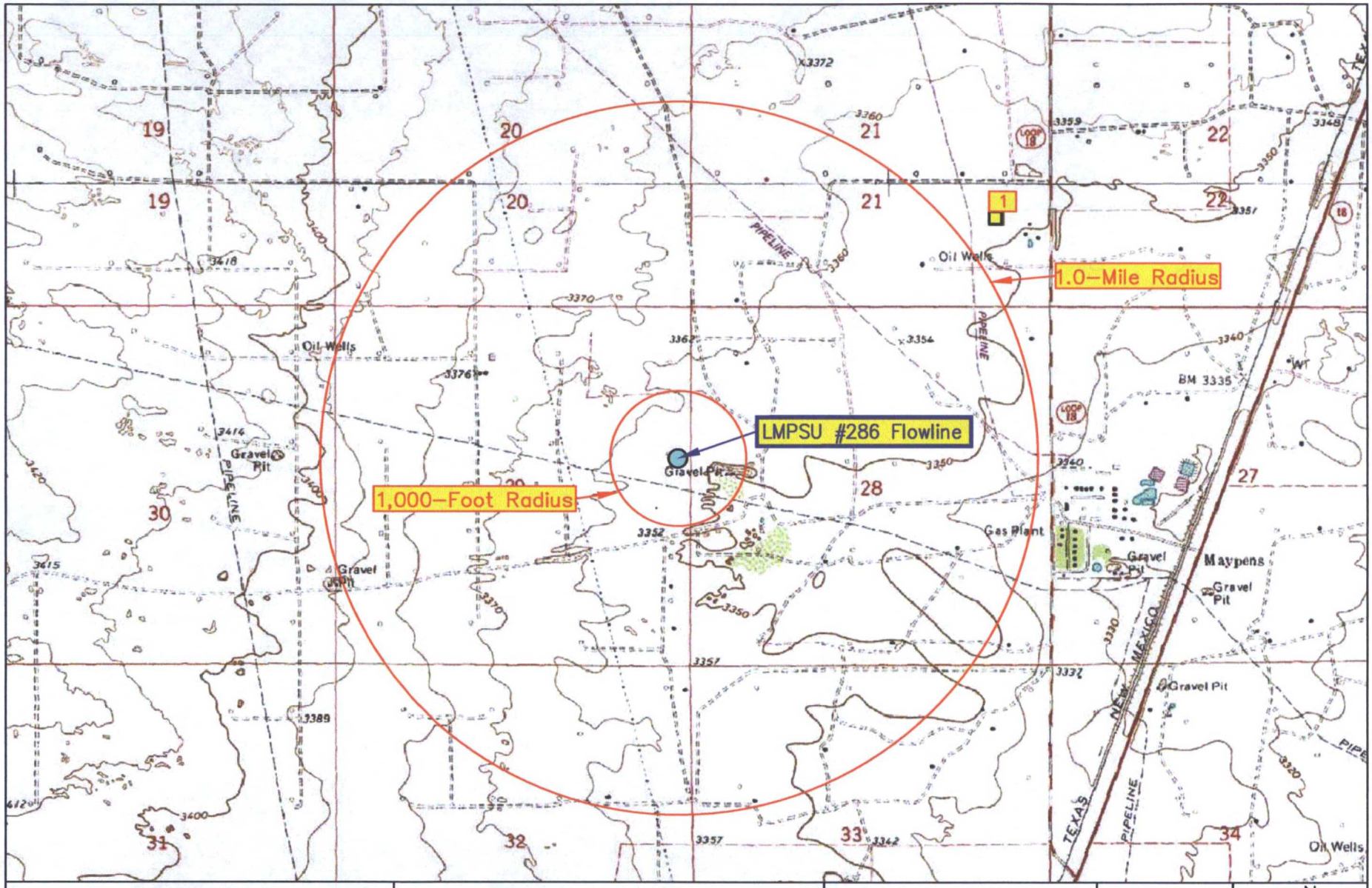

Figure 2 Site Location Map Legacy LMPSU #286 Flowline	Lea County, New Mexico SE 1/4 of NE 1/4, Sec. 29, T22S, R37E N 32° 21' 50.01" W 103° 10' 35.76" Elevation: 3,355 feet amsl	DWG By: D Dominguez January 2014 0 2,000 4,000 Feet	REVISED: SHEET 1 of 1

Figure 3 Site Map Legacy LMPSU #286 Flowline	Lea County, New Mexico SE 1/4 of NE 1/4, Sec. 29, T22S, R37E N 32° 21' 50.01" W 103° 10' 35.76" Elevation: 3,355 feet amsl	DWG By: D Dominguez January 2014 0 20 40 Feet	REVISED: SHEET 1 of 1	N

TABLE 1

Well Data

Legacy - LMPSU #286 Flowline

Ref #	Well Number	Diversion[A]	Owner	Use	Twsp	Rng	Sec	q64	q16	q4	Easting	Northing	Date Measured	Surface Elevation[B]	Depth to Water (ft bgs)
1	CP 00503	3	TOMMY HENDERSON	DOL	22S	37E	21		4	4	672965	3583144	15-Sep-72	3,352	65

* = Data obtained from the New Mexico Office of the State Engineer Website (http://iwaters.ose.state.nm.us:7001/iWATERS/wr_RegisServlet1) and USGS Database

[A] = In acre feet per annum

[B] = Elevation interpolated from USGS topographical map based on referenced location.

DOL = 72-12-1 Domestic and Livestock watering

quarters are 1=NW, 2=NE, 3=SW, 4=SE; quarters are smallest to biggest

Photograph #1- Looking north-west across release area.

Photograph #2- Looking northerly toward release point.

Photograph #3- Looking westerly across release area.

Photograph #4- Looking south-easterly across release area.

Information and Metrics	**Incident Date:** 1/17/14	**NMOCD Notified:** 1/21/14

Site: LMPSU #286 Flowline	**Assigned Site Reference #:**
Company: Legacy LP	
Street Address:	
Mailing Address: P.O. Box 10848	
City, State, Zip: Midland, TX 79702	
Representative: Greg Skiles	
Representative Telephone: (432) 528 – 4014	
Telephone:	
Fluid volume released (bbls): ~100 bbls	**Recovered (bbls):** 70 barrels
>25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas)	
5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas)	
Leak, Spill, or Pit (LSP) Name: LMPSU #286 Flowline	
Source of contamination: Flowline	
Land Owner, i.e., BLM, ST, Fee, Other: State	
LSP Dimensions: ~122 feet by 23 feet	
LSP Area: ~2,200 ft^2	
Location of Reference Point (RP):	
Location distance and direction from RP:	
Latitude: N 32° 21' 50.01"	
Longitude: W 103° 10' 35.76"	
Elevation above mean sea level: 3,355 feet	
Feet from North Section Line:	
Feet from West Section Line:	
Location- Unit or ¼¼: SE¼ of the NE¼	**Unit Letter:** H
Location- Section: 29	
Location- Township: T22S	
Location- Range: R37E	
Surface water body within 1000 ' radius of site: none	
Domestic water wells within 1000' radius of site: none	
Agricultural water wells within 1000' radius of site: none	
Public water supply wells within 1000' radius of site: none	
Depth from land surface to ground water (DG): ~ 70'	
Depth of contamination (DC): unknown	
Depth to ground water (DG – DC = DtGW): ~ 70'	

1. Ground Water	**2. Wellhead Protection Area**	**3. Distance to Surface Water Body**
If Depth to GW <50 feet: *20 points*	If <1000' from water source, or;<200' from private domestic water source: *20 points*	<200 horizontal feet: *20 points*
If Depth to GW 50 to 99 feet: *10 points*		200-100 horizontal feet: *10 points*
If Depth to GW >100 feet: *0 points*	If >1000' from water source, or; >200' from private domestic water source: *0 points*	>1000 horizontal feet: *0 points*
Site Rank (1+2+3) = 10 + 0 + 0 = 10		

Total Site Ranking Score and Acceptable Concentrations

Parameter	>19	**10-19**	0-9
Benzene[1]	10 ppm	**10 ppm**	10 ppm
BTEX[1]	50 ppm	**50 ppm**	50 ppm
TPH	100 ppm	**1,000 ppm**	5,000 ppm

[1]100 ppm field VOC headspace measurement may be substituted for lab analysis

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: Legacy LMPSU 286

Project Number: 17-0175-19

Location: NM

Lab Order Number: 8A05009

NELAP ACCREDITED TNI LABORATORY

NELAP/TCEQ # T104704516-16-7

Report Date: 01/10/18

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

Project: Legacy LMPSU 286
Project Number: 17-0175-19
Project Manager: Mark Larson

Fax: (432) 687-0456

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-1 5'-6'	8A05009-01	Soil	01/05/18 10:50	01-05-2018 16:53
S-1 6'-7'	8A05009-02	Soil	01/05/18 10:58	01-05-2018 16:53
S-2 8'-9'	8A05009-03	Soil	01/05/18 11:05	01-05-2018 16:53
S-2 9'-10'	8A05009-04	Soil	01/05/18 11:20	01-05-2018 16:53
S-3 3'-4'	8A05009-05	Soil	01/05/18 11:32	01-05-2018 16:53
S-1N2'	8A05009-06	Soil	01/05/18 11:42	01-05-2018 16:53
S-1S2'	8A05009-07	Soil	01/05/18 11:49	01-05-2018 16:53
E-Wall2'	8A05009-08	Soil	01/05/18 11:58	01-05-2018 16:53
S-2S2'	8A05009-09	Soil	01/05/18 12:13	01-05-2018 16:53
S-2N2'	8A05009-10	Soil	01/05/18 12:03	01-05-2018 16:53
S-3N2'	8A05009-11	Soil	01/05/18 12:18	01-05-2018 16:53
S-3S2'	8A05009-12	Soil	01/05/18 12:25	01-05-2018 16:53
W-Wall 2'	8A05009-13	Soil	01/05/18 12:31	01-05-2018 16:53

S-1 5'-6'

8A05009-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.00111	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Toluene	ND	0.00222	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*99.7 %*	*75-125*		*P8A0909*	*01/09/18*	*01/09/18*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*80.0 %*	*75-125*		*P8A0909*	*01/09/18*	*01/09/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.11	mg/kg dry	1	P8A0910	01/09/18	01/10/18	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P8A0906	01/09/18	01/09/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*108 %*	*70-130*		*P8A0806*	*01/08/18*	*01/08/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*113 %*	*70-130*		*P8A0806*	*01/08/18*	*01/08/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	01/08/18	01/08/18	calc	

Larson & Associates, Inc.	Project: Legacy LMPSU 286	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 17-0175-19	
Midland TX, 79710	Project Manager: Mark Larson	

S-1 6'-7'

8A05009-02 (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	1.11	mg/kg dry	1	P8A0910	01/09/18	01/10/18	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P8A0906	01/09/18	01/09/18	ASTM D2216	

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Project: Legacy LMPSU 286
Project Number: 17-0175-19
Project Manager: Mark Larson

Fax: (432) 687-0456

S-2 8'-9'

8A05009-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.00112	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Toluene	ND	0.00225	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*74.1 %*	*75-125*		*P8A0909*	*01/09/18*	*01/09/18*	*EPA 8021B*	*S-GC*
Surrogate: 4-Bromofluorobenzene		*99.2 %*	*75-125*		*P8A0909*	*01/09/18*	*01/09/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.12	mg/kg dry	1	P8A0910	01/09/18	01/10/18	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P8A0906	01/09/18	01/09/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*90.1 %*	*70-130*		*P8A0806*	*01/08/18*	*01/08/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*93.0 %*	*70-130*		*P8A0806*	*01/08/18*	*01/08/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	01/08/18	01/08/18	calc	

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Midland TX, 79710	Project Manager: Mark Larson	

S-2 9'-10'

8A05009-04 (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	1.14	mg/kg dry	1	P8A0910	01/09/18	01/10/18	EPA 300.0	
% Moisture	**12.0**	0.1	%	1	P8A0906	01/09/18	01/09/18	ASTM D2216	

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Project Number: 17-0175-19
Project Manager: Mark Larson

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S-3 3'-4'

8A05009-05 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00115	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Toluene	ND	0.00230	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Ethylbenzene	ND	0.00115	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Xylene (p/m)	ND	0.00230	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Xylene (o)	ND	0.00115	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*76.2 %*	*75-125*		*P8A0909*	*01/09/18*	*01/09/18*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*103 %*	*75-125*		*P8A0909*	*01/09/18*	*01/09/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.15	mg/kg dry	1	P8A0910	01/09/18	01/10/18	EPA 300.0	
% Moisture	**13.0**	0.1	%	1	P8A0906	01/09/18	01/09/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.7	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
>C12-C28	ND	28.7	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
>C28-C35	ND	28.7	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*113 %*	*70-130*		*P8A0806*	*01/08/18*	*01/08/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*119 %*	*70-130*		*P8A0806*	*01/08/18*	*01/08/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.7	mg/kg dry	1	[CALC]	01/08/18	01/08/18	calc	

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Project Number: 17-0175-19
Project Manager: Mark Larson

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S-1N2'

8A05009-06 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00110	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Toluene	ND	0.00220	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*91.1 %*	*75-125*		*P8A0909*	*01/09/18*	*01/09/18*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*71.5 %*	*75-125*		*P8A0909*	*01/09/18*	*01/09/18*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.10	mg/kg dry	1	P8A0910	01/09/18	01/10/18	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P8A0906	01/09/18	01/09/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*104 %*	*70-130*		*P8A0806*	*01/08/18*	*01/08/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*P8A0806*	*01/08/18*	*01/08/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	01/08/18	01/08/18	calc	

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S-1S2'

8A05009-07 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00108	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Toluene	ND	0.00215	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*98.3 %*	*75-125*		*P8A0909*	*01/09/18*	*01/09/18*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*78.1 %*	*75-125*		*P8A0909*	*01/09/18*	*01/09/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.08	mg/kg dry	1	P8A0910	01/09/18	01/10/18	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	P8A0906	01/09/18	01/09/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*110 %*	*70-130*		*P8A0806*	*01/08/18*	*01/08/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*112 %*	*70-130*		*P8A0806*	*01/08/18*	*01/08/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	01/08/18	01/08/18	calc	

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E-Wall2'

8A05009-08 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00110	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Toluene	**0.00266**	0.00220	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*110 %*	*75-125*		*P8A0909*	*01/09/18*	*01/09/18*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*78.7 %*	*75-125*		*P8A0909*	*01/09/18*	*01/09/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.10	mg/kg dry	1	P8A0910	01/09/18	01/10/18	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P8A0906	01/09/18	01/09/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*108 %*	*70-130*		*P8A0806*	*01/08/18*	*01/08/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*109 %*	*70-130*		*P8A0806*	*01/08/18*	*01/08/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	01/08/18	01/08/18	calc	

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S-2S2'

8A05009-09 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00111	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Toluene	**0.00347**	0.00222	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*86.5 %*	*75-125*		*P8A0909*	*01/09/18*	*01/09/18*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*84.1 %*	*75-125*		*P8A0909*	*01/09/18*	*01/09/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.11	mg/kg dry	1	P8A0910	01/09/18	01/10/18	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P8A0906	01/09/18	01/09/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*105 %*	*70-130*		*P8A0806*	*01/08/18*	*01/08/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*110 %*	*70-130*		*P8A0806*	*01/08/18*	*01/08/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	01/08/18	01/08/18	calc	

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S-2N2'

8A05009-10 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00112	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Toluene	ND	0.00225	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Ethylbenzene	**0.00258**	0.00112	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P8A0909	01/09/18	01/09/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*89.0 %*	*75-125*		*P8A0909*	*01/09/18*	*01/09/18*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*100 %*	*75-125*		*P8A0909*	*01/09/18*	*01/09/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.12	mg/kg dry	1	P8A0910	01/09/18	01/10/18	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P8A0906	01/09/18	01/09/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*108 %*	*70-130*		*P8A0806*	*01/08/18*	*01/08/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*92.1 %*	*70-130*		*P8A0806*	*01/08/18*	*01/08/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	01/08/18	01/08/18	calc	

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S-3N2'

8A05009-11 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00115	mg/kg dry	1	P8A0909	01/09/18	01/10/18	EPA 8021B	
Toluene	**0.00249**	0.00230	mg/kg dry	1	P8A0909	01/09/18	01/10/18	EPA 8021B	
Ethylbenzene	**0.00256**	0.00115	mg/kg dry	1	P8A0909	01/09/18	01/10/18	EPA 8021B	
Xylene (p/m)	**0.00360**	0.00230	mg/kg dry	1	P8A0909	01/09/18	01/10/18	EPA 8021B	
Xylene (o)	**0.00139**	0.00115	mg/kg dry	1	P8A0909	01/09/18	01/10/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*73.2 %*	*75-125*		*P8A0909*	*01/09/18*	*01/10/18*	*EPA 8021B*	*S-GC*
Surrogate: 1,4-Difluorobenzene		*82.2 %*	*75-125*		*P8A0909*	*01/09/18*	*01/10/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**15.6**	1.15	mg/kg dry	1	P8A0910	01/09/18	01/10/18	EPA 300.0	
% Moisture	**13.0**	0.1	%	1	P8A0906	01/09/18	01/09/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.7	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
>C12-C28	ND	28.7	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
>C28-C35	ND	28.7	mg/kg dry	1	P8A0806	01/08/18	01/08/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*111 %*	*70-130*		*P8A0806*	*01/08/18*	*01/08/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*P8A0806*	*01/08/18*	*01/08/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.7	mg/kg dry	1	[CALC]	01/08/18	01/08/18	calc	

Larson & Associates, Inc.
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Project: Legacy LMPSU 286
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S-3S2'

8A05009-12 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00115	mg/kg dry	1	P8A0909	01/09/18	01/10/18	EPA 8021B	
Toluene	ND	0.00230	mg/kg dry	1	P8A0909	01/09/18	01/10/18	EPA 8021B	
Ethylbenzene	ND	0.00115	mg/kg dry	1	P8A0909	01/09/18	01/10/18	EPA 8021B	
Xylene (p/m)	ND	0.00230	mg/kg dry	1	P8A0909	01/09/18	01/10/18	EPA 8021B	
Xylene (o)	ND	0.00115	mg/kg dry	1	P8A0909	01/09/18	01/10/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*80.9 %*	*75-125*		*P8A0909*	*01/09/18*	*01/10/18*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*86.6 %*	*75-125*		*P8A0909*	*01/09/18*	*01/10/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.15	mg/kg dry	1	P8A0910	01/09/18	01/10/18	EPA 300.0	
% Moisture	**13.0**	0.1	%	1	P8A0906	01/09/18	01/09/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.7	mg/kg dry	1	P8A0806	01/08/18	01/09/18	TPH 8015M	
>C12-C28	ND	28.7	mg/kg dry	1	P8A0806	01/08/18	01/09/18	TPH 8015M	
>C28-C35	ND	28.7	mg/kg dry	1	P8A0806	01/08/18	01/09/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*115 %*	*70-130*		*P8A0806*	*01/08/18*	*01/09/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*114 %*	*70-130*		*P8A0806*	*01/08/18*	*01/09/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.7	mg/kg dry	1	[CALC]	01/08/18	01/09/18	calc	

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

Project: Legacy LMPSU 286
Project Number: 17-0175-19
Project Manager: Mark Larson

Fax: (432) 687-0456

W-Wall 2'

8A05009-13 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.00112	mg/kg dry	1	P8A0909	01/09/18	01/10/18	EPA 8021B	
Toluene	ND	0.00225	mg/kg dry	1	P8A0909	01/09/18	01/10/18	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P8A0909	01/09/18	01/10/18	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P8A0909	01/09/18	01/10/18	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P8A0909	01/09/18	01/10/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*84.3 %*	*75-125*		*P8A0909*	*01/09/18*	*01/10/18*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*98.6 %*	*75-125*		*P8A0909*	*01/09/18*	*01/10/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.12	mg/kg dry	1	P8A0910	01/09/18	01/10/18	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P8A0906	01/09/18	01/09/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P8A0806	01/08/18	01/09/18	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P8A0806	01/08/18	01/09/18	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P8A0806	01/08/18	01/09/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*110 %*	*70-130*		*P8A0806*	*01/08/18*	*01/09/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*103 %*	*70-130*		*P8A0806*	*01/08/18*	*01/09/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	01/08/18	01/09/18	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 P8A0909 - General Preparation (GC)										
Blank (P8A0909-BLK1)				Prepared & Analyzed: 01/09/18						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*0.0576*		*"*	*0.0600*		*95.9*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0680*		*"*	*0.0600*		*113*	*75-125*			
LCS (P8A0909-BS1)				Prepared & Analyzed: 01/09/18						
Benzene	0.104	0.00100	mg/kg wet	0.100		104	70-130			
Toluene	0.110	0.00200	"	0.100		110	70-130			
Ethylbenzene	0.118	0.00100	"	0.100		118	70-130			
Xylene (p/m)	0.218	0.00200	"				70-130			
Xylene (o)	0.117	0.00100	"				70-130			
Surrogate: 1,4-Difluorobenzene	*0.0660*		*"*	*0.0600*		*110*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0725*		*"*	*0.0600*		*121*	*75-125*			
LCS Dup (P8A0909-BSD1)				Prepared & Analyzed: 01/09/18						
Benzene	0.103	0.00100	mg/kg wet	0.100		103	70-130	1.10	20	
Toluene	0.112	0.00200	"	0.100		112	70-130	1.81	20	
Ethylbenzene	0.118	0.00100	"	0.100		118	70-130	0.424	20	
Xylene (p/m)	0.216	0.00200	"				70-130		20	
Xylene (o)	0.116	0.00100	"				70-130		20	
Surrogate: 4-Bromofluorobenzene	*0.0712*		*"*	*0.0600*		*119*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0687*		*"*	*0.0600*		*114*	*75-125*			
Calibration Blank (P8A0909-CCB1)				Prepared & Analyzed: 01/09/18						
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	*0.0558*		*"*	*0.0600*		*93.0*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0721*		*"*	*0.0600*		*120*	*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 P8A0909 - General Preparation (GC)										
Calibration Blank (P8A0909-CCB2)				Prepared & Analyzed: 01/09/18						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	*0.0598*		*"*	*0.0600*		*99.7*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0539*		*"*	*0.0600*		*89.8*	*75-125*			
Calibration Check (P8A0909-CCV1)				Prepared & Analyzed: 01/09/18						
Benzene	0.108	0.00100	mg/kg wet	0.100		108	80-120			
Toluene	0.117	0.00200	"	0.100		117	80-120			
Ethylbenzene	0.115	0.00100	"	0.100		115	80-120			
Xylene (p/m)	0.216	0.00200	"	0.200		108	80-120			
Xylene (o)	0.117	0.00100	"	0.100		117	80-120			
Surrogate: 4-Bromofluorobenzene	*0.0766*		*"*	*0.0600*		*128*	*75-125*			*S-GC*
Surrogate: 1,4-Difluorobenzene	*0.0653*		*"*	*0.0600*		*109*	*75-125*			
Calibration Check (P8A0909-CCV2)				Prepared & Analyzed: 01/09/18						
Benzene	0.0903	0.00100	mg/kg wet	0.100		90.3	80-120			
Toluene	0.0947	0.00200	"	0.100		94.7	80-120			
Ethylbenzene	0.0976	0.00100	"	0.100		97.6	80-120			
Xylene (p/m)	0.202	0.00200	"	0.200		101	80-120			
Xylene (o)	0.112	0.00100	"	0.100		112	80-120			
Surrogate: 1,4-Difluorobenzene	*0.0619*		*"*	*0.0600*		*103*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0689*		*"*	*0.0600*		*115*	*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 P8A0906 - * DEFAULT PREP *** **										
Blank (P8A0906-BLK1)				Prepared & Analyzed: 01/09/18						
% Moisture	ND	0.1	%							
Duplicate (P8A0906-DUP1)		**Source: 8A05009-01**		Prepared & Analyzed: 01/09/18						
% Moisture	9.0	0.1	%		10.0			10.5	20	
Duplicate (P8A0906-DUP2)		**Source: 8A05014-01**		Prepared & Analyzed: 01/09/18						
% Moisture	6.0	0.1	%		7.0			15.4	20	
Batch P8A0910 - * DEFAULT PREP *** **										
Blank (P8A0910-BLK1)				Prepared: 01/09/18 Analyzed: 01/10/18						
Chloride	ND	1.00	mg/kg wet							
LCS (P8A0910-BS1)				Prepared: 01/09/18 Analyzed: 01/10/18						
Chloride	399	1.00	mg/kg wet	400		99.8	80-120			
LCS Dup (P8A0910-BSD1)				Prepared: 01/09/18 Analyzed: 01/10/18						
Chloride	394	1.00	mg/kg wet	400		98.5	80-120	1.30	20	
Duplicate (P8A0910-DUP1)		**Source: 8A05009-01**		Prepared: 01/09/18 Analyzed: 01/10/18						
Chloride	ND	1.11	mg/kg dry		ND				20	
Duplicate (P8A0910-DUP2)		**Source: 8A05009-11**		Prepared: 01/09/18 Analyzed: 01/10/18						
Chloride	15.4	1.15	mg/kg dry		15.6			1.63	20	
Matrix Spike (P8A0910-MS1)		**Source: 8A05009-01**		Prepared: 01/09/18 Analyzed: 01/10/18						
Chloride	1200	1.11	mg/kg dry	1110	ND	108	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 P8A0806 - General Preparation (GC)										
Blank (P8A0806-BLK1)				Prepared & Analyzed: 01/08/18						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*122*		*"*	*100*		*122*	*70-130*			
Surrogate: o-Terphenyl	*64.6*		*"*	*50.0*		*129*	*70-130*			
LCS (P8A0806-BS1)				Prepared & Analyzed: 01/08/18						
C6-C12	879	25.0	mg/kg wet	500		176	75-125			
>C12-C28	993	25.0	"	500		199	75-125			
Surrogate: 1-Chlorooctane	*129*		*"*	*100*		*129*	*70-130*			
Surrogate: o-Terphenyl	*56.6*		*"*	*50.0*		*113*	*70-130*			
LCS Dup (P8A0806-BSD1)				Prepared & Analyzed: 01/08/18						
C6-C12	956	25.0	mg/kg wet	500		191	75-125	8.35	20	
>C12-C28	1030	25.0	"	500		206	75-125	3.63	20	
Surrogate: 1-Chlorooctane	*115*		*"*	*100*		*115*	*70-130*			
Surrogate: o-Terphenyl	*58.5*		*"*	*50.0*		*117*	*70-130*			
Calibration Blank (P8A0806-CCB1)				Prepared & Analyzed: 01/08/18						
C6-C12	15.6		mg/kg wet							
>C12-C28	11.9		"							
Surrogate: 1-Chlorooctane	*117*		*"*	*100*		*117*	*70-130*			
Surrogate: o-Terphenyl	*61.8*		*"*	*50.0*		*124*	*70-130*			
Calibration Blank (P8A0806-CCB2)				Prepared & Analyzed: 01/08/18						
C6-C12	16.8		mg/kg wet							
>C12-C28	12.2		"							
Surrogate: 1-Chlorooctane	*121*		*"*	*100*		*121*	*70-130*			
Surrogate: o-Terphenyl	*60.9*		*"*	*50.0*		*122*	*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 P8A0806 - General Preparation (GC)										
Calibration Check (P8A0806-CCV1)				Prepared & Analyzed: 01/08/18						
C6-C12	519	25.0	mg/kg wet	500		104	85-115			
>C12-C28	574	25.0	"	500		115	85-115			
Surrogate: 1-Chlorooctane	*127*		*"*	*100*		*127*	*70-130*			
Surrogate: o-Terphenyl	*62.1*		*"*	*50.0*		*124*	*70-130*			
Calibration Check (P8A0806-CCV2)				Prepared & Analyzed: 01/08/18						
C6-C12	546	25.0	mg/kg wet	500		109	85-115			
>C12-C28	574	25.0	"	500		115	85-115			
Surrogate: 1-Chlorooctane	*122*		*"*	*100*		*122*	*70-130*			
Surrogate: o-Terphenyl	*63.1*		*"*	*50.0*		*126*	*70-130*			
Calibration Check (P8A0806-CCV3)				Prepared: 01/08/18 Analyzed: 01/09/18						
C6-C12	554	25.0	mg/kg wet	500		111	85-115			
>C12-C28	568	25.0	"	500		114	85-115			
Surrogate: 1-Chlorooctane	*127*		*"*	*100*		*127*	*70-130*			
Surrogate: o-Terphenyl	*64.5*		*"*	*50.0*		*129*	*70-130*			
Matrix Spike (P8A0806-MS1)		**Source: 8A05009-06**		Prepared: 01/08/18 Analyzed: 01/09/18						
C6-C12	1100	27.5	mg/kg dry	549	10.9	197	75-125			
>C12-C28	1170	27.5	"	549	11.6	211	75-125			
Surrogate: 1-Chlorooctane	*132*		*"*	*110*		*120*	*70-130*			
Surrogate: o-Terphenyl	*66.8*		*"*	*54.9*		*122*	*70-130*			
Matrix Spike Dup (P8A0806-MSD1)		**Source: 8A05009-06**		Prepared: 01/08/18 Analyzed: 01/09/18						
C6-C12	1120	27.5	mg/kg dry	549	10.9	203	75-125	2.55	20	
>C12-C28	1190	27.5	"	549	11.6	214	75-125	1.73	20	
Surrogate: 1-Chlorooctane	*129*		*"*	*110*		*118*	*70-130*			
Surrogate: o-Terphenyl	*65.6*		*"*	*54.9*		*119*	*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.
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: 1/10/2018

Brent Barron, Laboratory Director/Technical Director

CHAIN-OF-CUSTODY

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

DATE: Jan 5 2018 PAGE ____ OF ____
PO #: ____ LAB WORK ORDER #: ____
PROJECT LOCATION OR NAME: Legacy LMPSU 2806
LAI PROJECT #: 17-0175-19 COLLECTOR: SJ

Data Reported to:

TRRP report? ☐ Yes ☒ No
TIME ZONE: Time zone/State: MST/NM
S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER
8A05009

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 ☒ DRO	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 ☐	RGI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐ M 300	FIELD NOTES
S-1 5'-6'	01	1/5/18	10:50	S	1				✓		✓		✓	✓													✓	
6'-7'	02		10:58																									
S-2 8'-9'	03		11:05								✓		✓	✓														
9'-10'	04		11:20																									
S-3 3'-4'	05		11:32								✓		✓	✓														
S-1 N 2'	06		11:42								✓		✓	✓														
S-1 S 2'	07		11:49								✓		✓	✓														
E. Wall 2'	08		11:58								✓		✓	✓														
S-2 S 2'	09		12:13								✓		✓	✓														
S-2 N 2'	10		12:03								✓		✓	✓														
S-3 N 2'	11		12:18								✓		✓	✓														
S-3 S 2'	12		12:25								✓		✓	✓														
W. Wall 2'	13		12:31								✓		✓	✓														
TOTAL																												

RELINQUISHED BY:(Signature) Sara Jones DATE/TIME 1/5/18 RECEIVED BY: (Signature)
RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)
RELINQUISHED BY:(Signature) DATE/TIME 1-5-18 15:45 RECEIVED BY: (Signature) Sam Cruz

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

LABORATORY USE ONLY:
RECEIVING TEMP: 3.0 NCF 4 THERM #: ____
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL # ____
☐ HAND DELIVERED

Appendix D

Photographs

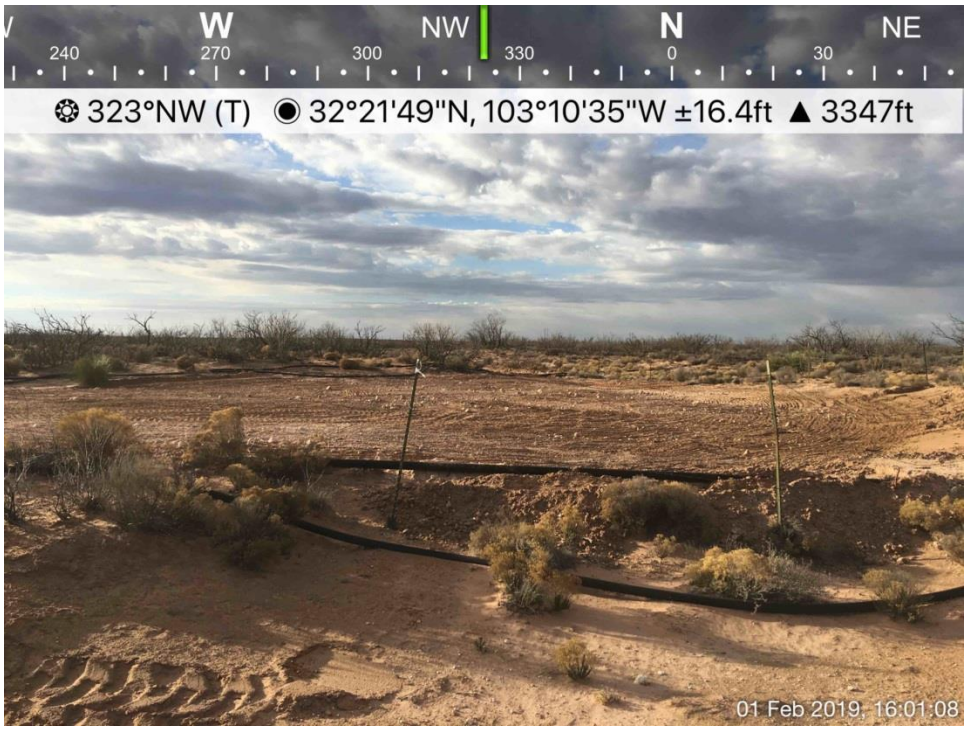
Site Location

Initial Spill Area Viewing Northwest, January 12, 2014

Initial Spill Area Viewing East, January 12, 2014

Excavation Viewing Southeast, January 5, 2018

Excavation Viewing Northeast, January 5, 2018



Backfilled and Seeded Area Viewing Northwest, February 1, 2019

Backfilled and Seeded Area Viewing Northeast, February 1, 2019

Appendix E

Grass Seed Receipt

BUNK'S FEED BARN
3128 S. EUNICE HWY
HOBBS, NM 88240
575-397-1228 Fax: 575-397-1250
www.bunksfeedbarn.com

7/30/2018
Invoice #: 531983
Page: 1

Ship To:
Rapid Sale

Bill To:
Rapid Sale

Phone:
Cust PO:
Reference:

Terms:
Ship Via:

Salesperson:

Stock Code	Description	Taxable	Quantity	Price	Extended
084369007863	BUCKET 8 QT FLAT BACK BLUE P8FB	Y	2.00	8.99	17.98
084369007917	BUCKET FLAT BACK 8 QT PURPLE	Y	2.00	6.99	13.98

BUNK'S F...
3128 S. EU...
HOBBS, NM ...
575-397-1228

Sale
Merchant ID: 5429298007291...
Term ID: LK360125
July 30, 2018
Batch#: 000270 Inv #: 000...
DEBIT Entry Method:
XXXXXXXXXXXX7572
Seq.#: 0025 Appr Code: 001576
Trace #: 341776
Total:$ 33.72
APPROVED

SubTotal:	31.96
Tax:	1.76
Shipping:	0.00
Total:	33.72
Credit: 0.00 Cash: 0.00 Check: 0.00 Charge: 0.00 Debit:	33.72
Balance:	0.00

THANK YOU FOR SHOPPING AT BUNK'S FEED BARN

Appendix F

Final 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

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	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Legacy Reserves, L.P.	OGRID 240974
Contact Name Steven Dittman	Contact Telephone 432-312-4757
Contact email sdittman@legacylp.com	Incident # *(assigned by OCD)* 1RP-4166
Contact mailing address 303 West Wall Street, Suite 1300	

Location of Release Source

Latitude 32.36392° N Longitude -103.17660° W

(NAD 83 in decimal degrees to 5 decimal places)

Site Name LMPSU 286 Flowline	Site Type Flowline
Date Release Discovered 1/17/14	API# *(if applicable)* 30-025-10494

Unit Letter	Section	Township	Range	County
H	29	22S	37E	Lea

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

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) 100 bbls	Volume Recovered (bbls) 70 bbls
☐ 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 sidewall of a flowline split.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
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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)? Greg Skiles gave notice to Geoff Leking on 11/21/2014.	

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: Steven Dittman Title: Production Foreman

Signature: Steve Dittman Date: 2/11/2019

email: sdittman@legacylp.com Telephone: 432-312-4757

OCD Only

Received by: _____ Date: _____

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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?	61 (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.

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Printed Name: Steven Dittman Title: Production Foreman

Signature: Steven Dittman Date: 2/11/2019

email: sdittman@legacylp.com Telephone: 432-312-4757

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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.*

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

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Printed Name: Steven Dittman Title: Production Foreman

Signature: Steven Dittman Date: 2/11/2019

email: sdittman@legacylp.com Telephone: 432-312-4757

OCD Only

Received by: _____ Date: _____

- [ ] Approved
- [ ] Approved with Attached Conditions of Approval
- [ ] Denied
- [ ] Deferral Approved

Signature: _____ Date: _____

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Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

[X] A scaled site and sampling diagram as described in 19.15.29.11 NMAC

[X] Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

[X] Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

[X] Description of remediation activities

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Steven Dittman Title: Production Foreman

Signature: Steven Dittman Date: 2/11/2019

email: sdittman@legacylp.com Telephone: 432-312-4757

OCD Only

Received by: Vanessa Fields Date: 2/11/2019

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Vanessa Fields Date: 2/14/2019

Printed Name: Vanessa Fields Title: Environmental Specialist