APPROVED
By Olivia Yu at 11:10 am, Jan 02, 2018

NMOCD approves of the proposed delineation for 1RP-3327.

1RP-3327
DELINEATION PLAN
Wallingford #3 LSE
Crude Oil Spill
Lea County, New Mexico

Latitude: N32.7956°
Longitude: W-103.7897°

LAI Project No. 17-0175-10

October 27, 2017

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

Prepared by:
Larson & Associates, Inc.
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1.0 INTRODUCTION

Larson & Associates, Inc. (LAI) has prepared this delineation plan 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 Wallingford #3 LSE (Site) located in Unit C (NE/4, NW/4), Section 32, Township 17 South, Range 32 East, in Lea County , New Mexico. The geodetic position is North 32.7956° and West -103.7897°. Figure 1 presents a topographic map. Figure 2 presents an aerial map.

1.1 Background

The spill occurred on August 31, 2014, due to a small leak in a flow line, releasing 2 barrels (bbl) of crude oil. No liquids were recovered. The crude oil was released as a spray and restricted to the pasture adjacent to the highway. The well was shut in and the flow line was replaced. The contaminated soil was removed from the site and clean soil was put in place. The initial C-141 was submitted on September 2, 2014 and assigned remediation permit number 1RP-3327. Appendix A presents the initial C-141.

1.2 Physical Setting

The physical setting is as follows:

- The surface elevation is approximately 3,915 feet above mean sea level (msl);
- The topography slopes gradually towards the southeast and southwest;
- The nearest surface water is a seasonal playa approximately 0.2 miles southwest 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 Eolian and Piedmont deposits from the Holocene to middle Pleistocene, the deposits consist of interlayed eolian sands and piedmont-slope deposits underlain by the Tertiary-age Blackwater Draw and Ogallala formations in descending order;
- Groundwater occurs in the Ogallala formation at approximately 80 feet below ground surface (bgs) (1996);
- The nearest freshwater well is located in Unit P (SE/4, SE/4), Section 7, Township 18 South, Range 32 East, approximately 2.75 miles southwest of the Site.

1.3 Remediation Action Levels

The remediation action levels (RRAL) were calculated for benzene, BTEX and TPH based on the following criteria established by the OCD in “*Guidelines for Remediation of Leaks, Spills and Releases, pp. 6-7, August 13, 1993”*:

Criteria	***Result***	***Score***
Depth-to-Groundwater	50 – 99 Feet	10
Wellhead Protection Area	No	0
Distance to Surface Water Body	>1,000 Horizontal Feet	0

The following RRAL apply to the release ranking score: 10

- Benzene 10 mg/Kg
- BTEX 50 mg/Kg
- TPH 1,000 mg/Kg

Depth to groundwater between 50 and 100 feet bgs requires vertical delineation for chloride to 600 milligrams per kilogram (mg/Kg) and maintained a minimum 5 feet farther in depth.

2.0 DELINEAITON PLAN

LAI proposes to collect soil samples at three (3) locations within the contaminated area. The samples will be collected at 1 foot intervals to approximately 4 feet bgs using direct push technology (DPT) depending on subsurface conditions. Additional samples will be collected in each cardinal direction (north, south, east and west) of the spill at the same depth intervals for horizontal delineation. The soil samples will be delivered under chain of custody and preservation to Permian Basin Environmental Lab (PBEL) in Midland, Texas, and analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX), total petroleum hydrocarbons (TPH), including gasoline range organics (GRO), diesel range organics (DRO) and oil range organics (ORO) and chloride by EPA SW-846 Methods 8021B, 8015M and 300 respectively. Pending laboratory results, further delineation will be determined to reach cleanup level standards. Figure 2 presents a site map showing proposed soil sample locations. Appendix B presents photographs.

3.0 REMEDIATION PLAN

Legacy will include a remediation plan in the delineation report to be submitted to the OCD upon receipt of the laboratory report.

Figures

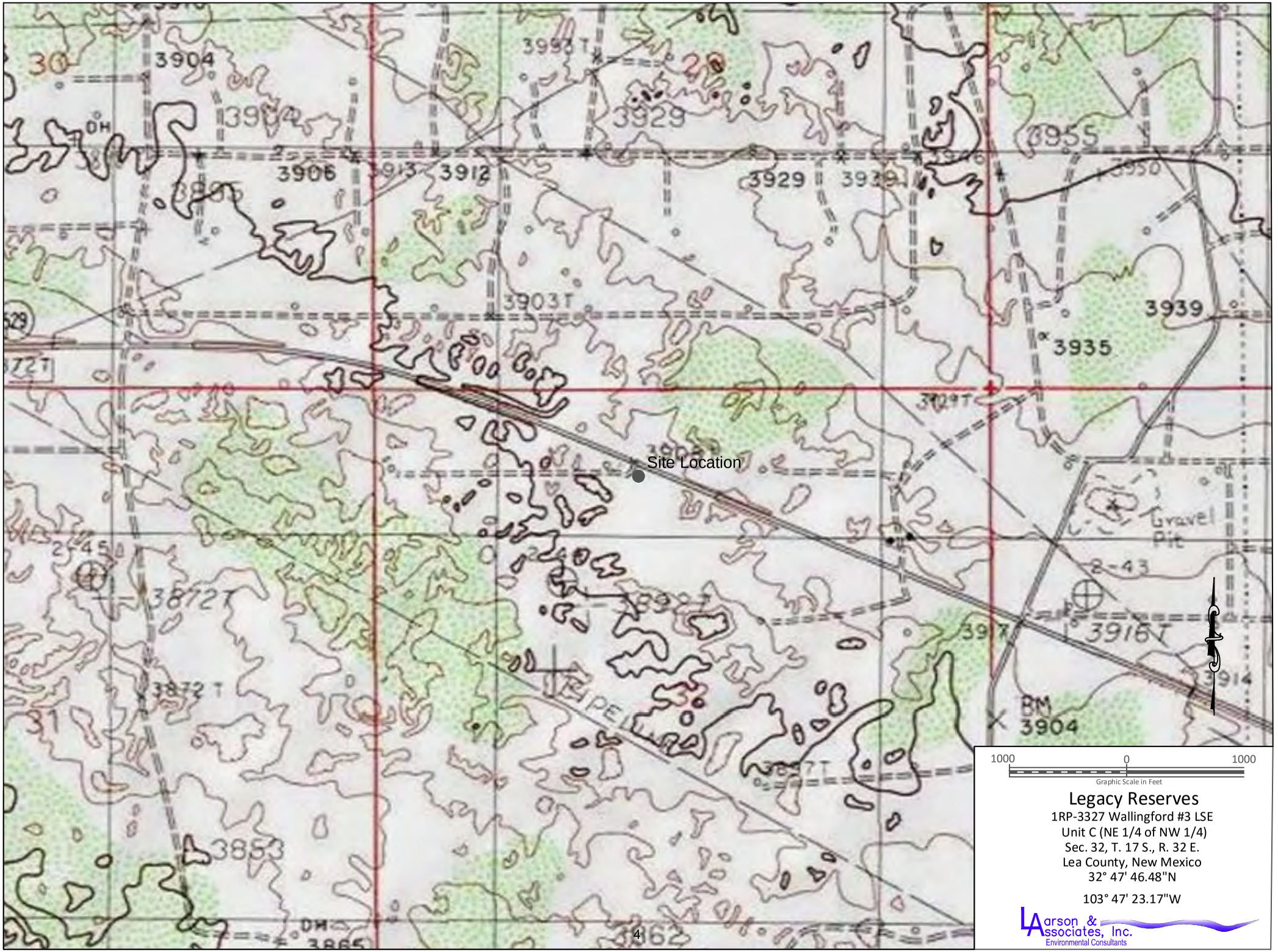

Figure 1 - Topographic Map

Figure 2 - Aerial Map Showing Proposed Sample Points

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

State of New Mexico
Energy Minerals and Natural Resources

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

HOBBS OCD
SEP 16 2014
RECEIVED

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in Accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☒ Final Report

Name of Company – Legacy Reserves	Contact – Brain Cunningham
Address – 303 W. Main St.	Telephone No. -
Facility Name – Wallingford #3 LSE	Facility Type

Surface Owner – Federal	Mineral Owner – Federal	API No. 30-025-7292

27292

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	32	17S	32E	990	North	2310	West	Lea

Latitude 32.7956 **Longitude** -103.7897

NATURE OF RELEASE

Type of Release - Crude	Volume of Release 2 bbl	Volume Recovered 0
Source of Release flow line	Date and Hour of Occurrence 8/31/14	Date and Hour of Discovery 8/31/14 1800hrs
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☐ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Flow line developed a small leak. The well was immediately shut in.

Describe Area Affected and Cleanup Action Taken.*

The area that was affected was predominately on a old location with minimal spray in the pasture adjacent to the highway. The flow line was replaced. The contaminated soil was removed and disposed of at a licensed disposal. Fresh soil was put back in.

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 ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: Brian Cunningham

Printed Name: Brian Cunningham

Title: Production Foreman

E-mail Address: bcunningham@legacylp.com

Date: 9/2/14 Phone: 432 234 9450

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 9-16-14 Expiration Date: —

Conditions of Approval: —

Attached ☐

IRP-3327

* Attach Additional Sheets If Necessary

SEP 16 2014

ogrid 240974
n70425 95303
p70425 95421

Appendix B

Photographs

Site Location

Site Prior to Remediation Viewing East, September 11, 2017

Site Prior to Remediation Viewing North, September 11, 2017

Site prior to Remediation Viewing West, September 11, 2017