



**REVIEWED**

*By Kellie Jones at 11:42 am, Oct 30, 2015*

**APPROVED**

*By Kellie Jones at 11:44 am, Oct 30, 2015*

October 30, 2015

Ms. Kellie Jones  
Environmental Specialist, District 1  
Oil Conservation Division, EMNRD  
1625 N. French Drive  
Hobbs, NM 88240

Dear Ms. Jones:

Re: Work Plan  
New Mexico EX State #2  
RP# 3947  
Unit B, Section 9, Township 17S, Range 37E  
Latitude: 32.856153, Longitude: 103.254374  
Lea County, New Mexico

On behalf of Dakota Resources, Inc., Origin Bio Solutions, LLC is pleased to present this work plan to the New Mexico Conservation Division (NMOCD). This work plan presents our proposed approach to restoration activities for a historic connection line release that occurred at the above referenced well site location.

### **1.0 Project Information**

The New Mexico EX State #2 site (hereafter referred to as the "Site"), is an active well location situated approximately 5 miles north of Hobbs on Highway 18, right on Stiles Road approximately 2 miles in Lea County, New Mexico (see Figure 1). It is located in Unit B, Section 9, Township 17 South, and Range 37 East. According to Dakota Resources, Inc. a release of approximately 5 barrels of oil occurred to an 8 foot connection line between two unload tanks. The release occurred onto a 40 mil liner and was contained within the berm walls and inside the liner. Upon discovery, the leak was fixed. There were no recoverable fluids. A C-141 was submitted to the NMOCD and remediation permit number 3947 was assigned.

Origin Bio Solutions, LLC sent a field technician to the Site to perform initial soil samples and determine the horizontal and vertical extent of the release. Two soil

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samples were collected from depths of 4 inches below ground surface. Samples were sent to XENCO Laboratories in Midland, TX for the analysis of benzene, toluene, ethyl benzene, and xylenes (BTEX), total petroleum hydrocarbons (TPH), and chloride. Analytical Results are pending laboratory analysis.

Based on information available from the USGS, the depth to groundwater at the Site is most likely between 58 and 61 feet below ground surface. Therefore, the preliminary ranking score is 10.

Based on this score, the Site-specified Recommended Remediation Action Levels to be applied by the NMOCSO are 10 milligrams per kilogram (mg/kg) for benzene; 50 mg/kg for total BTEX; 1,000 mg/kg for TPH and 250 mg/kg for chlorides.

## **2.0 Scope of Work**

The scope of work for this project will involve the bioremediation of the impacted soil to be delivered in four phases.

### ***Phase 1***

The first phase of the remediation consists of the following:

- Removal of debris and oil residue by pressure washing tanks, pipe and interior of containment walls to remediate all hydrocarbons in the affected area. The affected berm wall has been estimated to be approximately 173 feet by 64 feet.
- Hydration of contaminated area and the application of microbes.

### ***Phase 2***

The second phase of the remediation consists of the following:

*Remediation process requires a 48 hour time frame for microbes to consume hydrocarbons.*

- Following a 48 hour period an activator is applied to affected area and rehydrated. Additionally, a period of 7-10 days is allowed for the microbes to remediate the area to required levels.



### ***Phase 3***

The third phase of the remediation consists of the following:

- Remaining carbons are removed by pressure washing remediated area.
- Begin resurface area inside the containment walls by applying a layer of crushed based material (rock based).

### ***Phase 4***

The fourth phase of the remediation consists of the following:

- Complete resurfacing to affected area and final clean-up of all debris and excess material.
- Final soil sampling will be taken to ensure Recommended Remediation Action Levels.

### ***Reporting***

Upon approval and completion of the above plan a brief letter report will be prepared by Origin Bio Solutions. It will include a scaled site plan showing the location of the remediated area and other site features, summary of the field investigation and laboratory results, and recommendations for any additional remediation or no further action.

If you have any questions or comments regarding this Work Plan, please do not hesitate to contact Tracy Kuzmich at [jt@originbiosolutions.com](mailto:jt@originbiosolutions.com) or 432.215.6708. Thank you for your time and consideration.

Regards,

Tracy Kuzmich  
Operations Manager

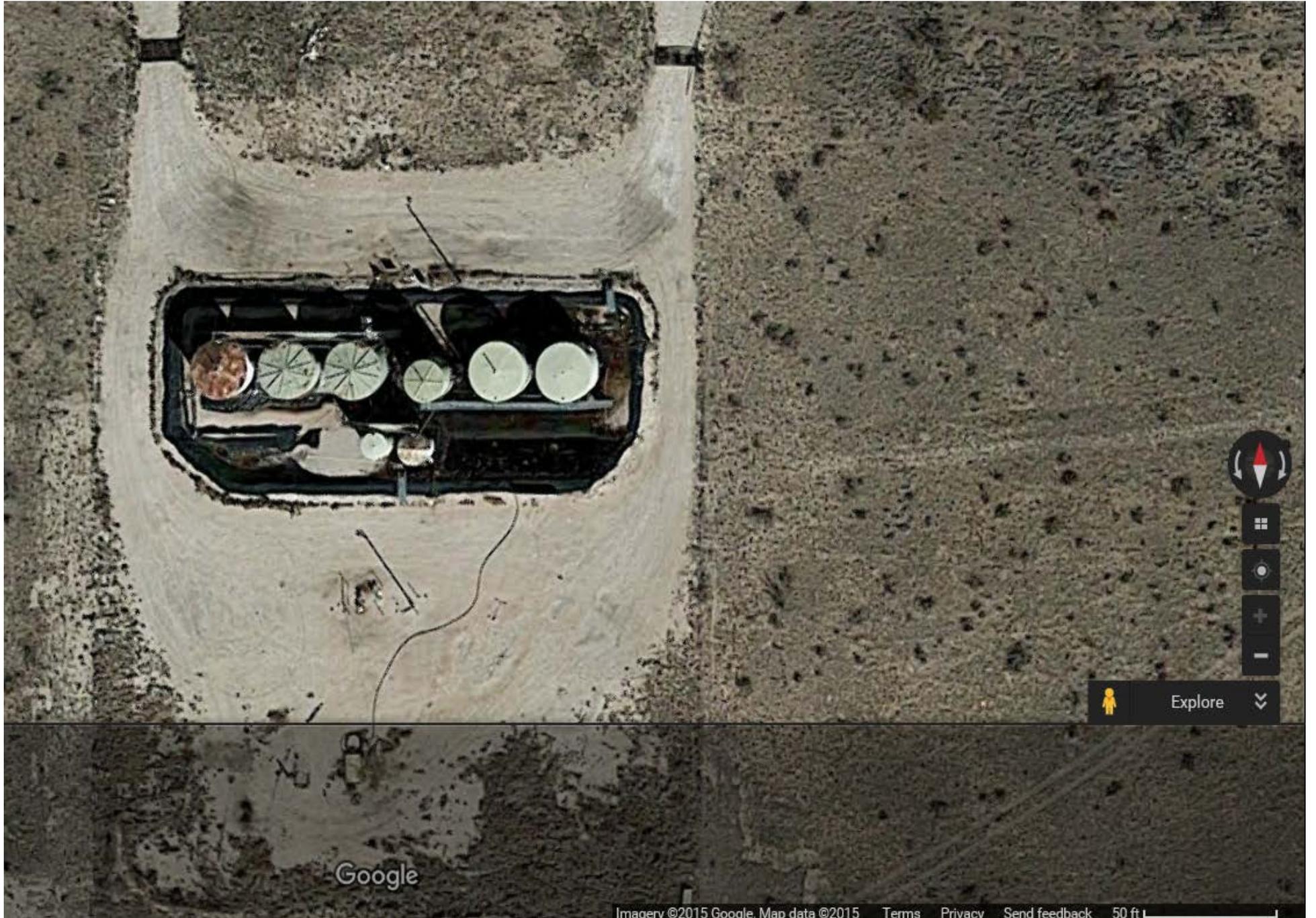
Enclosures:

Figure 1 Area Map

Figure 2 Site Location Map of Sampling

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Area Map - Figure 1



Google

Site Map - Samples Taken (S-1 and S-2)

Figure 2

