GW - 049 - 0

2015 GW WP

04 / 22 / 2015



April 22, 2015

Enterprise Field Services, LLC 614 Reilly Avenue Farmington, NM 87401 Attn: Mr. Tom Long

Re: Supplemental Environmental Site Investigation Work Plan

Blanco Storage Vent Tank NW ¼ Section 14, T29N R11W

Bloomfield, San Juan County, New Mexico

Project No 7030411G018

Dear Mr. Long:

Apex TITAN, Inc. (Apex) appreciates the opportunity to submit this letter work plan to provide environmental consulting services at the above-referenced facility (hereinafter, the Site). The proposed scope of work is based on Apex's review of information provided by Enterprise Field Services, LLC (Enterprise) and previous activity performed by Apex. Based on results obtained from the previous Supplemental Site Investigation (Supplemental Site Investigation Report (2014), dated December 11, 2014 – Apex), additional soil delineation activities in the vicinity of the former release point is warranted. The primary objective will be to further evaluate the extent of constituents of concern (COCs) in soil in respect to the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), Oil Conservation Division (OCD) Remediation Action Levels.

I. SCOPE OF WORK

The proposed scope of work will include the advancement of up to 20 soil borings and the potential installation of one (1) groundwater monitoring well, if warranted, as well as the preparation of a Supplemental Environmental Site Investigation Report. An initial site investigation has been performed which identified COC concentrations in exceedance of applicable New Mexico EMNRD OCD Remediation Action Levels.

I.A Site Ranking and Proposed Cleanup Goals

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. To address activities related to condensate releases, the New Mexico EMNRD OCD utilizes the Guidelines for Remediation of Leaks, Spills and Releases as guidance, in addition to the OCD rules, specifically New Mexico Administrative Code (NMAC) 19.15.29 *Remediation Plan*. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action. Apex TITAN, Inc. (Apex) utilized the general site characteristics to determine the appropriate "ranking" for the Site. Ranking criteria and associated scoring are provided in the following table:

Ranking Criteria			Ranking Score	
	<50 feet	20		
Depth to Groundwater	50 to 99 feet	10	20	
	>100 feet	0		
Wellhead Protection Area • <1,000 feet from a water	Yes	20	0	
source, or; <200 feet from private domestic water source.	No	0		
Distance to Surface Water Body	<200 feet	20		
	200 to 1,000 feet	10	10	
	>1,000 feet	0		
Total Ranking Score			30	

Based on Apex's evaluation of the scoring criteria, the Site would have a maximum Total Ranking Score of 30. This ranking is based on the following:

- Numerous wells are documented within a 1.5 mile radius of the site. The closest well, based on information obtained from the New Mexico State Engineer's Office is >1,000 feet to the southeast of the Site at a lower elevation on the valley floor. Groundwater was not encountered during the excavation activities, and the actual depth to groundwater is unknown. Based on data from other environmental studies in the vicinity, groundwater may be present at a depth of < 50 feet below grade surface (bgs) at the Site.
- No water sources were identified in the immediate area.
- Bloomfield Canyon Arroyo, though generally dry, is located approximately 2,450 feet west of the Site. A seasonal irrigation ditch is located approximately 850 feet west of the Site.

Based on a Total Ranking Score of 30, cleanup goals for soil located at the Site include: 10 milligrams per kilogram (mg/Kg) for benzene, 50 mg/Kg for total benzene, toluene, ethylbenzene, and xylenes (BTEX), and 100 mg/Kg for total petroleum hydrocarbon (TPH) gasoline range organics (GRO)/diesel range organics (DRO).

I.B. Soil Boring Installation

Up to 20 soil borings will be advanced utilizing a hollow-stem auger drilling rig. The soil borings will be advanced in locations to further evaluate potential petroleum hydrocarbon impacts to soil. Bedrock is anticipated at depths of ten (10) feet or less at each of the proposed boring locations. The soil borings will be advanced until unaffected material is encountered, or auger refusal, whichever is more shallow. If groundwater is encountered, the soil boring may be advanced into the initial groundwater bearing unit to allow the installation of a monitoring well. The proposed total depths will not be exceeded without verbal approval from Enterprise. Possible soil boring locations are provided on Figure 1 (Attachment).

Non-disposable sampling and drilling equipment will be decontaminated using an Alconox[®] (or equivalent) wash and potable water rinse (and/or steam washed) prior to commencement of the project and prior to re-use.

Soil samples will be collected continuously using core barrels or split spoon samplers to document lithology, color, relative moisture content and visual or olfactory evidence of impairment. In addition, the samples will be scanned with a photoionization detector (PID) to evaluate the presence of volatile organic compounds (VOCs).



I.C. Monitoring Well Installation

Subsequent to advancement (if warranted), one soil boring may be completed as a groundwater monitoring well to further evaluate the initial groundwater-bearing unit. The monitoring well will be completed as follows:

- Installation of 10 to 15 feet of 2-inch diameter, machine slotted (0.010 inch) schedule 40 PVC well screen assembly with a threaded bottom plug;
- Installation of schedule 40 riser pipe to surface;
- Addition of graded silica sand for annular sand pack around the well screen from the bottom of the well to two feet above the top of the screen;
- Placement of two feet of hydrated bentonite pellets above the sand;
- Addition of cement/bentonite slurry to the surface; and
- Installation of an above-grade steel riser with an integrated padlock hasp.

The monitoring well will be developed by surging and removing groundwater until the fluid appears free of fine-grained sediment.

I.C. Soil Sampling

Up to two (2) soil samples will be collected from each soil boring. Soil samples selected for laboratory analysis will be collected from soils exhibiting the highest PID reading and/or the capillary fringe, the greatest olfactory or visual impairment, or the bottom of the soil boring. The soil samples will be collected in laboratory prepared glassware and placed on ice in a cooler, which will be secured with a custody seal. The samples will be transported to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico along with a completed chain-of-custody form.

I.D. Laboratory Analytical Program - Soil

The soil samples will be analyzed for total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO) utilizing Environmental Protection Agency (EPA) SW-846 Method 8015 and benzene, toluene, ethylbenzene, and xylenes (BTEX) utilizing EPA SW-846 Method 8021.

A summary of the analysis, sample type, and EPA-approved methods for soil samples is presented below:

Analysis	Sample Type	No. of Samples	EPA Method
TPH GRO/DRO	Soil	Up to 40	SW-846 8015
втех	Soil	Up to 40	SW-846 8021

I.E. Groundwater Sampling

If a monitoring well is installed, Apex will collect one (1) groundwater sample from the monitoring well, utilizing a low-flow pump or disposable bailer, to determine if COCs have affected the initial groundwater-bearing unit.

Fluid levels in the monitoring well will be gauged utilizing an interface probe capable of detecting non aqueous-phase liquid (NAPL).

Low-flow refers to the velocity with which groundwater enters the pump intake and that is imparted to the formation pore water in the immediate vicinity of the well screen. It does not necessarily refer to the flow rate of water discharged at the surface which can be affected by flow regulators or restrictions. Water



level drawdown provides the best indication of the stress imparted by a given flow-rate for a given hydrological situation. The objective is to pump in a manner that minimizes stress (drawdown) to the system to the extent practical taking into account established site sampling objectives. Flow rates on the order of 0.1 to 0.5 liters per minute (L/min) will be maintained during the sampling activities using dedicated sampling equipment.

The utilization of low-flow minimal drawdown techniques enables the isolation of the screened interval groundwater from the overlying stagnant casing water. The pump intake is placed within the screened interval such that the groundwater pumped is drawn in directly from the formation with little mixing of casing water or disturbance to the sampling zone.

The monitoring well will be purged until produced groundwater is consistent in color, clarity, pH, temperature and conductivity. The general goal for stabilization of the monitored groundwater parameters of pH, temperature, and conductivity is three (3) consecutive readings at five (5) minute intervals that demonstrate less than 10% variation.

If a disposable bailer is utilized to sample the monitoring well, between three (3) and five (5) casing volumes of water will be purged from the monitoring well prior to sampling. Groundwater parameters will be monitored during the bailer/pump purging process to evaluate pH and conductivity stabilization.

The groundwater samples will be collected in laboratory prepared glassware and placed on ice in a cooler, which will be secured with a custody seal. The samples will be transported to a selected analytical laboratory along with a completed chain-of-custody form.

I.F. Laboratory Analytical Program

The groundwater samples will be analyzed for BTEX utilizing EPA SW-846 Method 8021.

A summary of the analysis, sample type, and EPA-approved method is presented in the following table:

Analysis	Sample Type	No. of Samples	EPA Method
втех	Groundwater	1	SW-846 8021

II. REPORTING

Upon completion of supplemental site investigation activities and receipt of the analytical results, a Supplemental Environmental Site Investigation Report will be prepared that will include documentation of the field activities, tabular data summaries, a site plan detailing pertinent site features, laboratory analytical reports, an evaluation of sampling results and recommendations concerning further action.

III. STANDARD OF CARE, LIMITATIONS, AND RELIANCE

Apex's services will be performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Apex makes no warranties, expressed or implied, as to the services performed hereunder. Additionally, Apex does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services will be performed in accordance with the scope of work agreed with the client.

Findings, conclusions and recommendations resulting from these services will be based upon information derived from the on-Site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may be latent, inaccessible,



unobservable, or not present during these services, and Apex cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this scope of services. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. Apex's findings and recommendations will be based solely upon data available to Apex at the time of these services.

This work plan has been prepared for the exclusive use of Enterprise, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the expressed written authorization of Enterprise and Apex. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, the report, and Apex's Agreement. The limitation of liability defined in the agreement is the aggregate limit of Apex's liability to the client.

Sincerely,

Apex TITAN, Inc.

Kyle Summers, CPG

Branch Manager / Senior Geologist

Umms





Attachment

Site Map with Proposed Soil Boring Locations

