ENVIRO SOIL TECH CONSULTANTS

Environmental & Geotechnical Consultants

131 TULLY ROAD, SAN JOSE, CALIFORNIA 95111

Tel: (408) 297-1500 Email: info@envirosoiltech.com

July 6, 2017

Mr. Keith Nowell
Alameda County Health Care Services Agency
Environmental Health Department
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

RECEIVED
By Alameda County Environmental Health 2:20 pm, Jul 07, 2017

REGARDING: RO#0003148, EMBL LLC TANK
1501 MARTIN LUTHER KING JR. WAY, OAKLAND

Dear Mr. Nowell,

Please find the attached work plan for additional work at 1501 Martin Luther King Jr Way that you requested in your letter dated May 16, 2017

In accordance with your subsequent request transmitted on June 30, 2017, our Registered Geologist has singed and stamped the plan. However, we would like to point out that according to the California Professional Code as promulgated by the Department of Consumer Affairs does not require that work plans for geological work to be written or stamped by a registered professional. The law requires only that reports that contain geological **interpretations** be so stamped. That requirement is also spelled out on page 2 of the 1990 *Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites*:

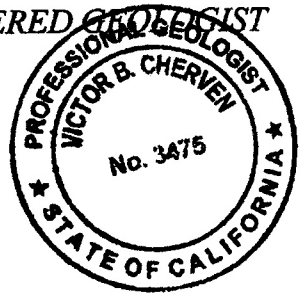
"ALL WORK AND REPORTS WHICH REQUIRE GEOLOGICAL OR ENGINEERING EVALUATIONS AND/OR JUDGEMENTS MUST BE PERFORMED UNDER THE DIRECITON OF AN APPROPRIATELY REGISTERED OR CERTIFIED PROFESSIONAL"

Sincerely,

ENVIRO SOIL TECH CONSULTANTS

FRANK HAMEDI
GENERAL MANAGER

VICTOR B. CHERVEN, Ph.D.
REGISTERED GEOLOGIST



Ed Hemmat

2420 San Pablo Avenue
Oakland, CA 94612

June 15, 2017

Mr. Keith Nowell
Alameda County LOP
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

SUBJECT: WORK PLAN TO DRILL CONFIRMATION BORINGS
1501 Martin Luther King Jr. Way, Oakland, CA

Dear Mr. Nowell:

Enclosed, please find a copy of the June 15, 2017 subject Work Plan to Drill Confirmation Borings prepared by my consultant, Enviro Soil Tech Consultants.

I declare, under penalty of perjury, that the information and/or recommendations contained in this report are true and correct to the best of my knowledge.

Sincerely,

ED HEMMAT

File No. 6-13-858-SA

WORK PLAN TO DRILL CONFIRMATION BORINGS ON THE PROPERTY LOCATED AT 1501 MARTIN LUTHER KING JR WAY OAKLAND, CALIFORNIA

JUNE 12, 2017

PREPARED FOR:
MR. ED HEMMAT
2420 SAN PABLO AVENUE
OAKLAND, CALIFORNIA 94612

BY:
ENVIRO SOIL TECH CONSULTANTS
131 TULLY ROAD
SAN JOSE, CALIFORNIA 95111

ENVIRO SOIL TECH CONSULTANTS

LIST OF FIGURES

LIST OF APPENDICES

TABLE OF CONTENTS **PAGE NO.**

ENVIRO SOIL TECH CONSULTANTS

Environmental & Geotechnical Consultants

131 TULLY ROAD, SAN JOSE, CALIFORNIA 95111

Tel: (408) 297-1500 Email: info@envirosoiltech.com

June 12, 2017

File No. 6-13-858-SA

Mr Ed Hemmat
2420 San Pablo Avenue
Oakland, California 94612

SUBJECT: WORK PLAN TO DRILL CONFIRMATION BORINGS ON THE PROPERTY
Located at 1501 Martin Luther King Jr Way, in Oakland, California

Dear Mr. Hemmat:

ESTC completed the investigation and remediation of gasoline-contaminated groundwater at the property located at 1501 Martin Luther King Jr Way, in Oakland, California in early 2016 and submitted our reports of the work to the Local Oversight Program of the Environmental Health Department of Alameda County later that year Agency's staff has reviewed these documents and requested that you submit an additional work plan to evaluate the current site conditions and the effectiveness of the remedial work. It is not uncommon for regulatory agencies to request that "confirmation samples" be collected at the completion of remedial work to confirm that the work has successfully brought the site into compliance with regulatory requirements for case closure. We believe that this objective can be achieved by a short program of additional drilling to collect soil, vapor, and water samples, and that the work can be completed without adverse impacts to the occupants of the property The proposed activities are described in this document.

File No. 6-13-858-SA
June 12, 2017

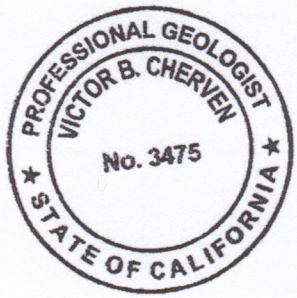
If you have any questions or require additional information, please feel free to contact our office at 408-297-1500 or via email at info@envirosoiltech.com.

Sincerely,

ENVIRO SOIL TECH CONSULTANTS

FRANK HAMEDI
GENERAL MANAGER

VICTOR B. CHERVEN, Ph. D.
R. G. #3475



GENERAL SITE DESCRIPTION

The site is located on the northwest corner of Martin Luther King Junior Way and 15th Street (Figure 1). The site has two parcel numbers that are identified as 003-0073-004 and 003-0073-005. However according to the Alameda County Assessor Office (ACAO), the side of the building facing Martin Luther King Junior Way is 1501 with parcel number 3-73-4 is listed as a commercial repair garage. The side that is facing 15th Street is 660 15th Street (parcel number 3-73-5) is listed as vacant commercial building and land.

The property lot has an approximately 13,750 square feet one-story, free standing brick building/warehouse with 3 roll-up doors and a locked chain link fence around a 7,500 square feet parking lot for 22 vehicles. The building was erected in the 1930's. The building was remodeled, and it is now being used as an office and retail shop.

PREVIOUS ACTIVITIES

ESTC conducted a Phase II soil and groundwater site assessment in June 2013, when four borings were drilled inside the building (Figure 2). Subsequently, a 1,000-gallon underground storage gasoline tank was discovered in the sidewalk in front of the building and was removed in December 2013. Petroleum hydrocarbons were detected in the soil beneath the tank and in the borings, and after evaluating the results of those investigations, ESTC drilled six remediation wells inside the building. These were installed in March 2014. The distance between the wells and the excavated tank ranged from 5 to 50 feet.

After the groundwater samples were analyzed, a groundwater remediation system was constructed inside the building to extract and treat the contaminated groundwater. The system utilized a network of pumps, tanks, PVC piping, and canisters of granulated activated carbon

(GAC). It operated from August 2014 to April 2015, extracting and treating over 1,000,000 gallons of groundwater. During its operation, ESTC monitored the system on several occasions and collected samples of the treated groundwater to assess the effectiveness of the GAC in filtering the hydrocarbons. After treatment, the water was disposed to the sanitary sewer under permits granted by the East Bay Municipal Utility District.

Prior to operation, a water sample from extraction well STEW-1 was impacted at a TPHg concentration of 11,000 micrograms per liter (µg/L). STEW-2 was not impacted, but STEW-3 was impacted at 7,200 µg/L. Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX) were also present in STEW-1 and STEW-3. Both wells were still impacted at these concentrations a month after the startup of remediation, but by March 2015 the TPHg concentration had declined to 410 µg/L in STEW-1 and 840 µg/L in STEW-3. Samples were collected again in May 2015, and TPHg and BTEX concentrations had declined below the detection limits in STEW-3. By June, TPHg, Benzene, and Toluene had declined below the detection limit in STEW-1 and only Ethylbenzene and Xylene were detected (Figures 3 and 4).

In view of the concentration trend, a decision was made to remove the extraction wells so that re-development of the property could begin. The wells were abandoned in November 2015 and the remediation equipment was removed. The property has since been developed and is now occupied by Flax Art & Design.

PROPOSED EVALUATION PROCEDURES

ESTC proposes to assess the current site conditions by boring beneath the concrete slab inside the building to collect a soil vapor sample, and by drilling four borings in the sidewalk to collect soil and groundwater samples (Figure 2).

The purpose of the vapor sample is to assess the potential for gasoline vapors to intrude into the occupied building space. A roto hammer will be used to drill a small-diameter borehole through the concrete to a depth of between 2 and 5 feet into the soil. Approximately 2 inches of sand will be placed at the bottom of the hole, and the vapor point will be placed on top of the sand and encased in additional sand. Teflon tubing will be attached to the point.

The surface seal will consist of hydrated granular bentonite poured on top of the sand. The tubing will be capped with a Swagelok valve. The assembly will be allowed to reach equilibrium for several hours while the soil borings are drilled and sampled. The shut-off valve will be closed during this time. A 167 milliters-per-minute flow regulator inclusive of particulate filter will then be fitted to the shut-off valve and the end will be connected to a T fitting. One end of the T will be connected to a summa canister, and the other end will be connected to a vacuum gauge and a second summa canister for purging.

A 10-minute vacuum tightness test will be performed by opening and closing the purge canister valve and then applying and monitoring a vacuum on the vacuum gauge. When the vacuum gauge reads a constant pressure for 10 minutes, purging will begin. The shut-off valve on the tubing will be opened and approximately three pore volumes of air will be removed to the purge canister. Isopropyl alcohol will be utilized to detect any leaks in the system during sampling by applying 5 to 15 drops to cotton gauze placed near the borehole. When the summa canister valve is opened, a shroud will be placed over the borehole and sampling assembly. The valve will remain open for approximately 5 minutes until the vacuum gauge reads 5 inches of mercury.

The four borings in the sidewalk will be drilled with a Geoprobe© rig and sampled continuously in plastic liners, and soil samples will be analyzed at 5-foot intervals until groundwater is reached. A log of each boring will be prepared during sampling.

A water sample will be collected from each boring by inserting a length of slotted PVC casing into the hole. After approximately 30 minutes, a clean bailer will then be lowered into the casing to collect a water sample, which will be decanted into 40-ml glass vials and preserved for analysis. The boring will then be backfilled with neat cement.

SAMPLE ANALYSIS

All samples will be labeled, placed in a cooled ice chest, and transported to a state-certified analytical laboratory. Soil and water samples will be analyzed for Total Petroleum Hydrocarbons in the gasoline range (TPHg) and BTEX using EPA method 8260. The vapor sample will be analyzed for the same hydrocarbons using method TOF-15.

REPORT

The results of the investigation will be reported to the regulatory agency after the analysis has been completed. A licensed professional geologist will oversee the activities, write and sign the report.

SCHEDULE

After receiving approval of this work plan by Alameda County Environmental Health Department, ESTC will commence the following activities:

1. Obtain C57 licensed drilling contractor.
2. Apply for drilling permit from Alameda County Public Works.
3. Apply for encroachment permit from City of Oakland.
4. All underground utilities will be surveyed and marked by private locator as well as USA Alert services.
5. Alameda County will be notified 48 hours prior to commencing fieldwork.

File No. 6-13-858-SA
June 12, 2017

A P P E N D I X "A"

FIGURES

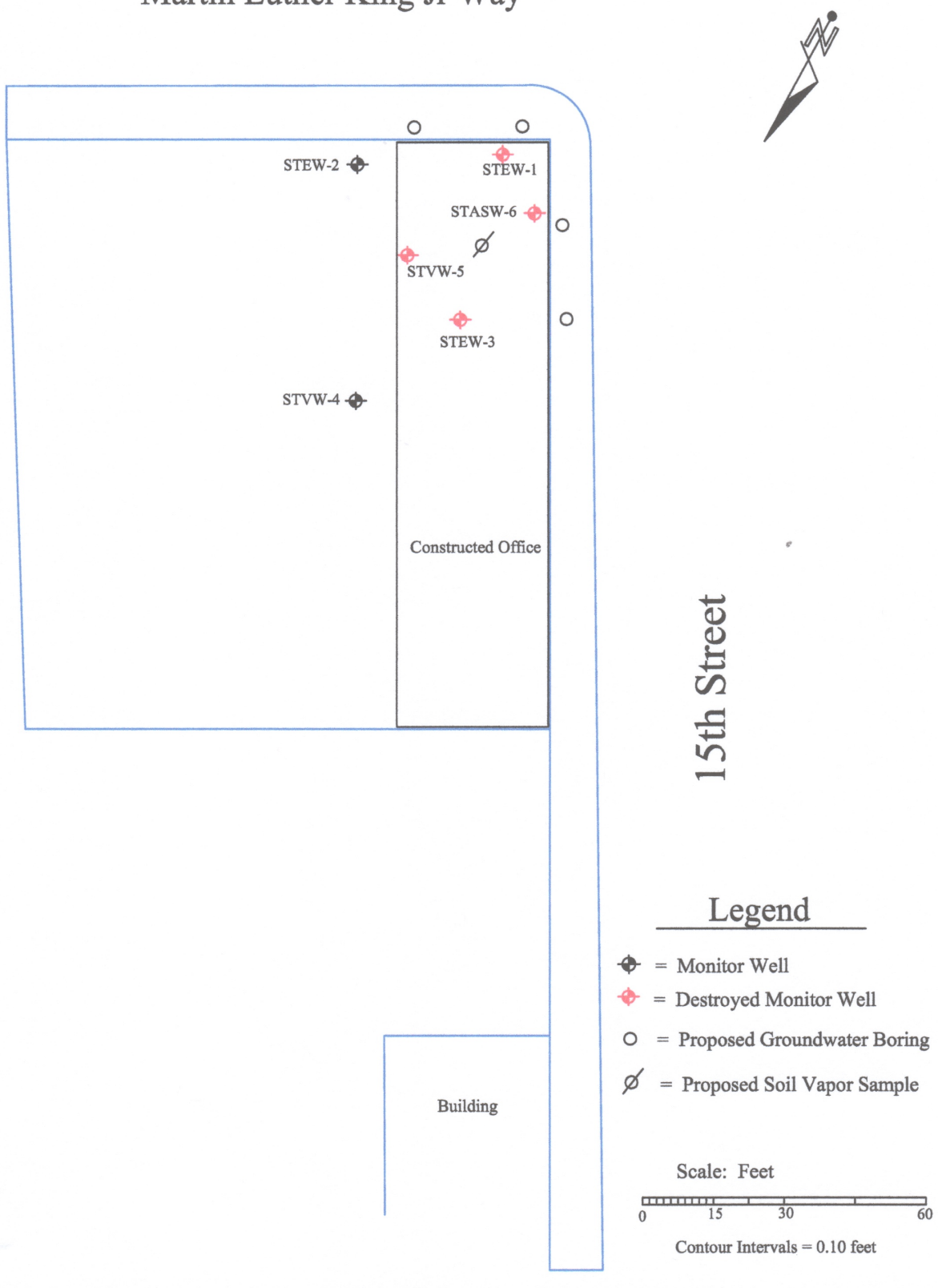
ENVIRO SOIL TECH CONSULTANTS

1501 MARTIN LUTHER KING JR. WAY, OAKLAND, CA

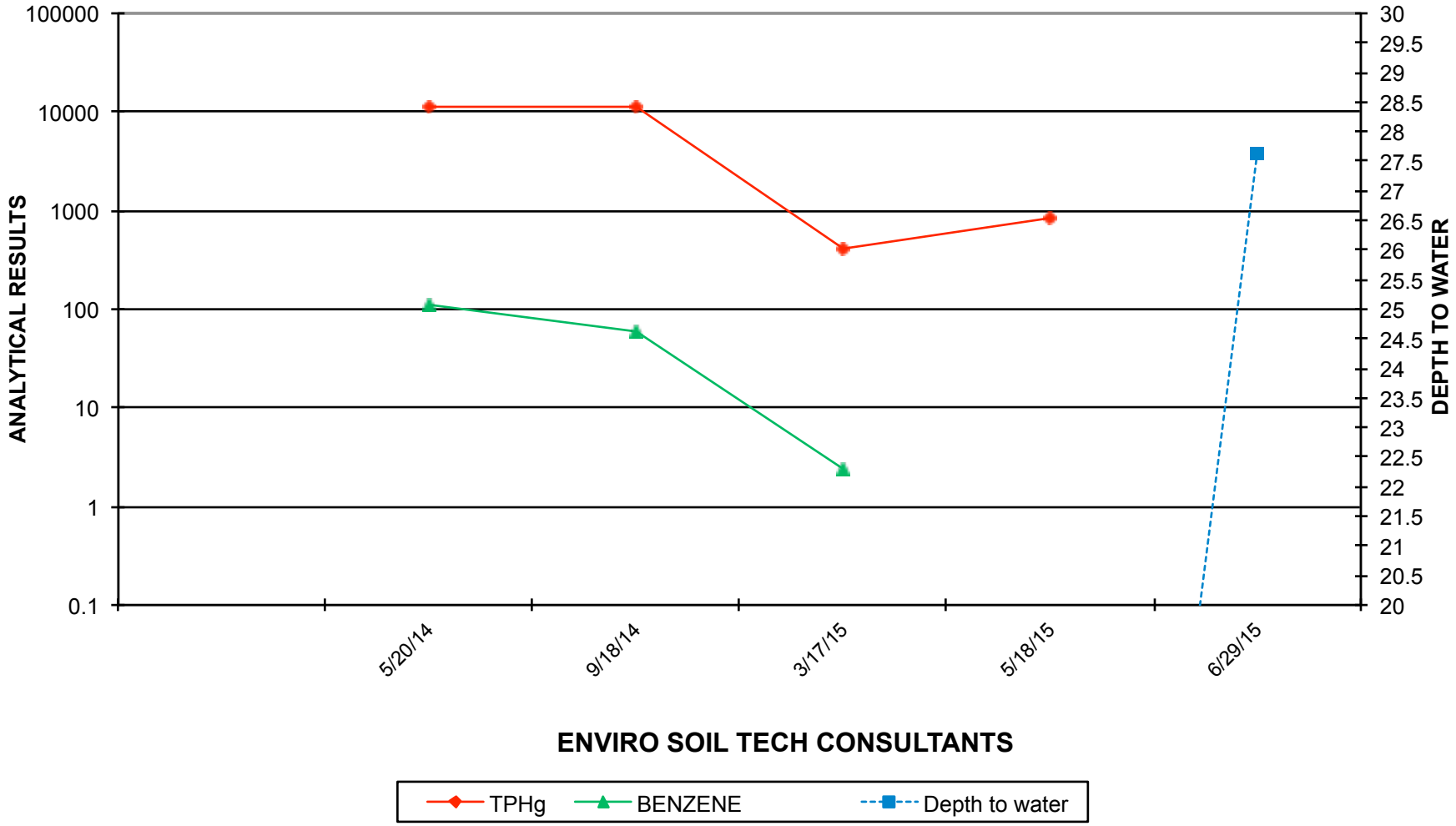
ENVIRO SOIL TECH CONSULTANTS

Figure 1

Enviro Soil Tech Consultants 131 Tully Road San Jose, CA 95111	PROJECT 1501 Martin Luther King Jr Way Oakland, California PROJECT # 6-13-858-SA DATE: 6/12/2017	Figure 2 Proposed Locations of Confirmation Borings

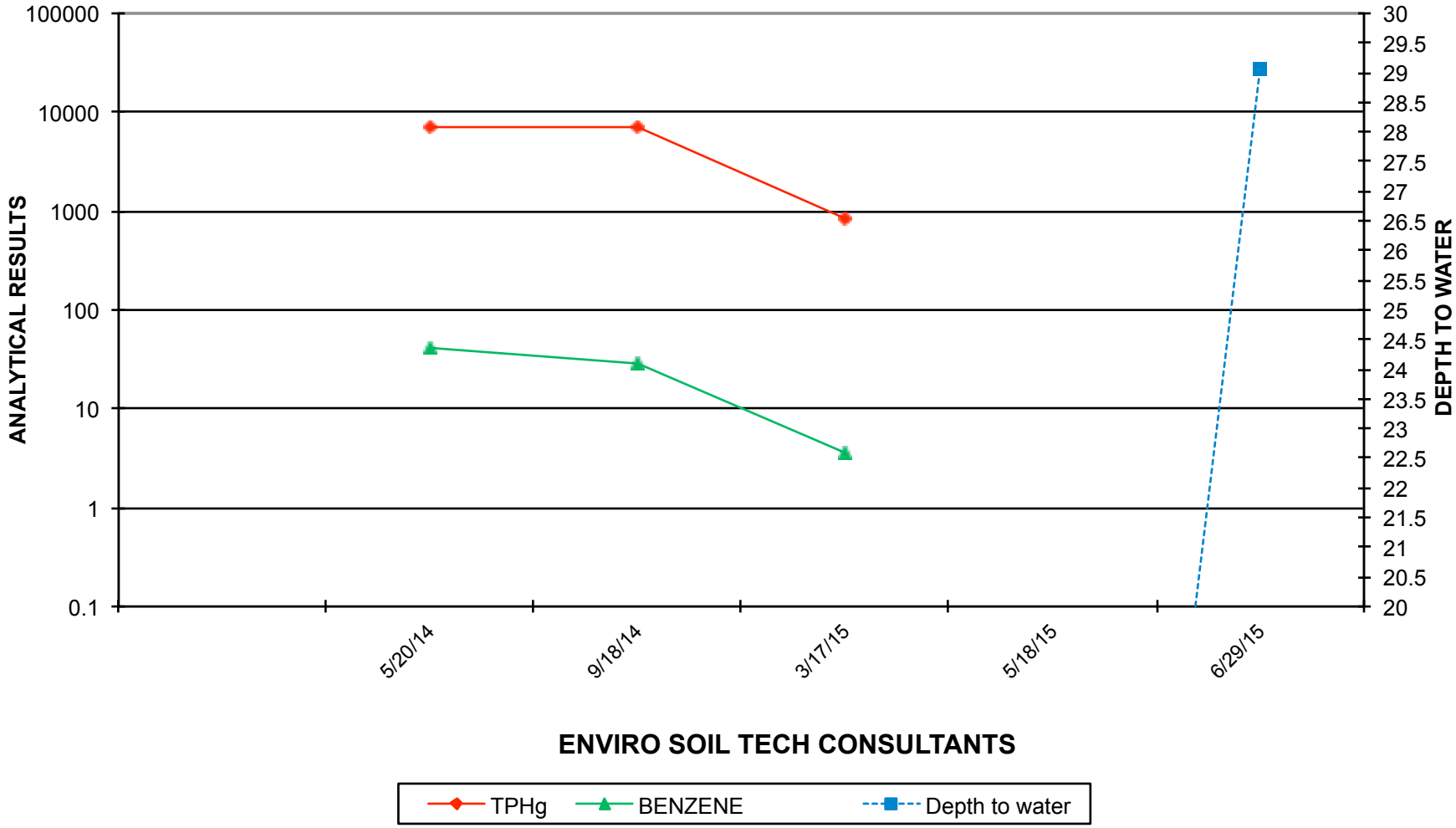


FILE NO.: 6-13-858-SA
TPHg & BENZENE RESULTS FOR STEW-1 (µg/L)
DEPTH TO WATER MEASUREMENT (feet)
FIGURE 3



ENVIRO SOIL TECH CONSULTANTS

FILE NO.: 6-13-858-SA
TPHg & BENZENE RESULTS FOR STEW-3 (µg/L)
DEPTH TO WATER MEASUREMENT (feet)
FIGURE 4



File No. 6-13-858-SA
June 12, 2017

A P P E N D I X "B"

SOIL VAPOR SAMPLING PROTOCOLS

ENVIRO SOIL TECH CONSULTANTS

File No. 6-13-858-SA
June 12, 2017

TEMPORARY SOIL VAPOR WELL INSTALLATION

A California Professional Geologist (PG) will supervise or directly perform the drilling of the soil boring(s). The boring(s) will be completed to 6½ feet below ground surface (bgs) by utilizing a pre-cleaned 2¼ or 3¼-inch diameter stainless steel hand auger. Soil recovered from the auger will be inspected, logged and field screened with a photoionization detector (PID). Spoils will be added to those generated during the Geoprobe work.

The temporary soil vapor well(s) will then be installed as follows: A) The vapor point will be installed by placing approximately 2-inches of sand via tremie pipe; then place the stainless steel expendable vapor tip with stainless steel screen affixed to Teflon™ tubing on the sand by utilizing a tremie. B) Additional sand will then be placed via tremie to create approximately a 6-inch sand pack interval around the vapor tip as the tremie hosting the Teflon™ tubing is withdrawn. C) The surface seal will consist of hydrated granular bentonite added in increments (50/50) or through tremie to ensure integrity. D) The Teflon™ tubing will be labeled with depth of placement location and capped utilizing a Swagelok valve. Typical well completion details are shown on Figure B-1. E) The wells will be protected from tempering during equilibration by the installation of surface-mount vault box.

VAPOR SAMPLING PROCEDURE

Figure B-2 presents a diagram that shows the sampling train for soil vapor sampling collection. The soil vapor sampling will be completed as follows:

1. The tubing emanating from the vapor points will be affixed to a sample shut-off valve in the off position during the time needed to reach equilibrium (48 hours). A 167 milliliters-per-minute (mpm) flow regulator inclusive of particulate filter will be fitted to the shut-off valve and the other end to a "T" fitting. One end of the "T" will be connected to the sampling summa canister(s). The other end of the "T" will be affixed to a digital vacuum gauge and a 1-liter summa canister(s) utilized for purging.

2. A ten (10)-minute minimum vacuum tightness test will be performed on the manifold and connections by opening and closing the 1-liter purge canister(s) valve and applying and monitoring a vacuum on the vacuum gauge. The sample shut-off valve on the down-hole side of the sampling manifold will remain in the closed position. When gauge vacuum is maintained for ten (10) minutes without any noticeable decrease (less than 0.1-inches of mercury (Hg) for properly connected fittings) and the time to reach equilibrium has elapsed (at 48-hours for temporary well) since the boring was sealed, then purging may begin. The down-hole shut-off valve will be opened and approximately three pore volumes will be removed utilizing the purging summa. Purged volumes of vapor will be removed and verified by the calculated pressure drop in the 1-liter summa canister(s) utilized for purging.

3. Isopropyl alcohol will be utilized as a leak detection compound during sampling by applying 5 to 15 drops to cotton gauze and placing near the borehole. Sampling will begin by opening the summa canister valve. Immediately upon opening the sampling valve, a shroud will be placed over and enclose the atmosphere of the borehole and entire sampling train including all connections (see photo on Figure B-3). The shroud will be loosely sealed to the surface with a soft gasket.

4. Sampling will continue until the vacuum gauge indicates approximately five (5) inches of Hg remaining (approximately thirty [30] minutes for a 6-liter canister or five [5] minutes for a 1-liter canister equipped with a 167 mpm flow regulator). A flow controller will be utilized in the sample train to control the flow of soil gas into the summa canister(s) for sample collection. Limiting the purging and sampling rate to between 100 and 200 mpm limits stripping and aids in preventing ambient air from diluting the soil gas samples. During sampling, a data-logging PID will be utilized to monitor the atmosphere inside the shroud through a bulkhead fitting. The logged data (at minimum thirty [30] second intervals) will be connected to parts per million (ppm) by volume isopropyl alcohol concentrations and utilized to evaluate the integrity of the sampling train.

5. One confirmation Tedlar bag sample will be collected of the shroud atmosphere (through the sampling port of the PID) during sampling collection to confirm the correction factor of the PID to isopropyl alcohol by analyzing for isopropyl alcohol by TO-15. All field data, including equilibrium time, purge volume calculations and leak check measurements will be recorded and presented in the report.

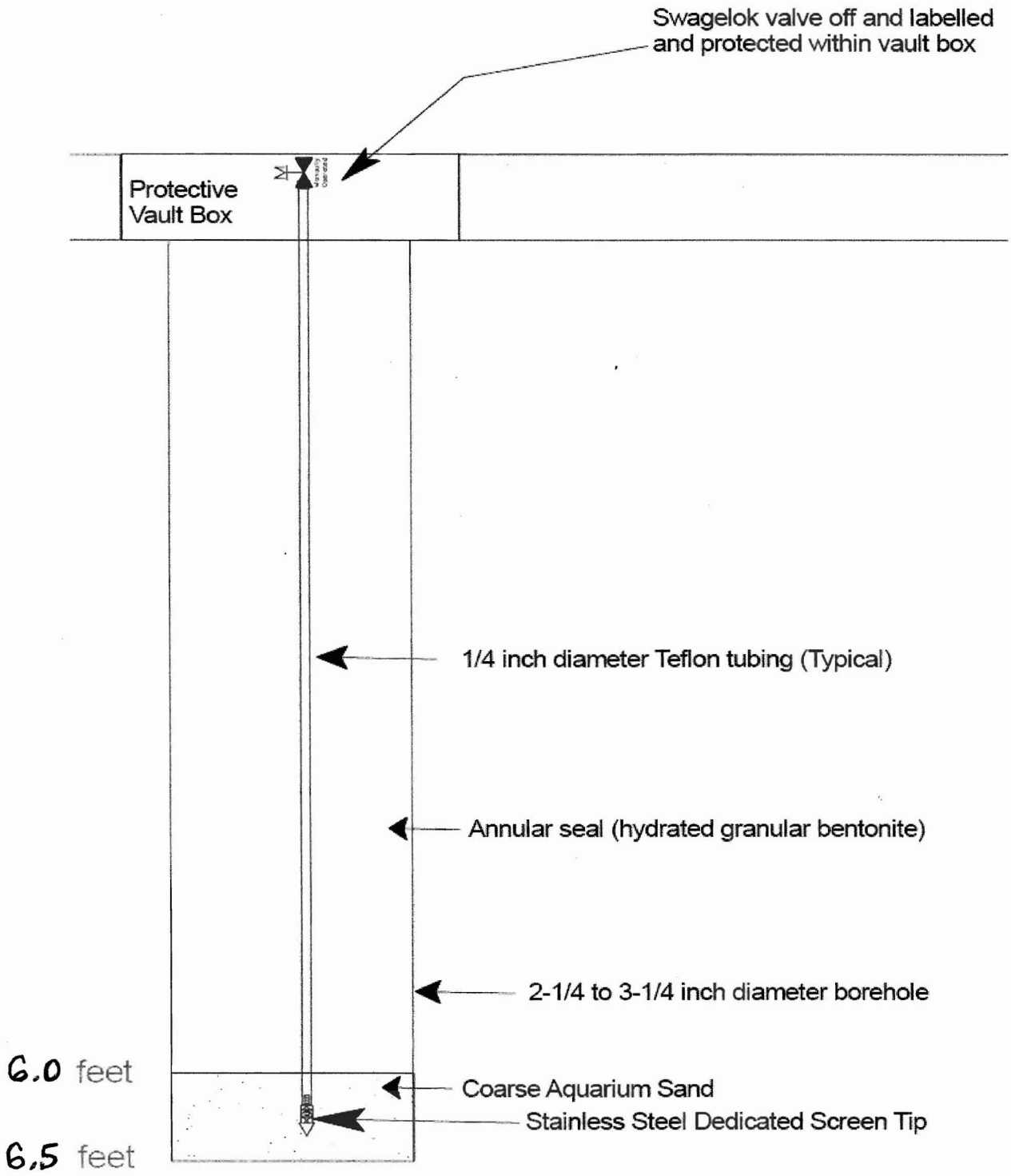


FIGURE B-1

TEMPORARY SOIL VAPOR WELL

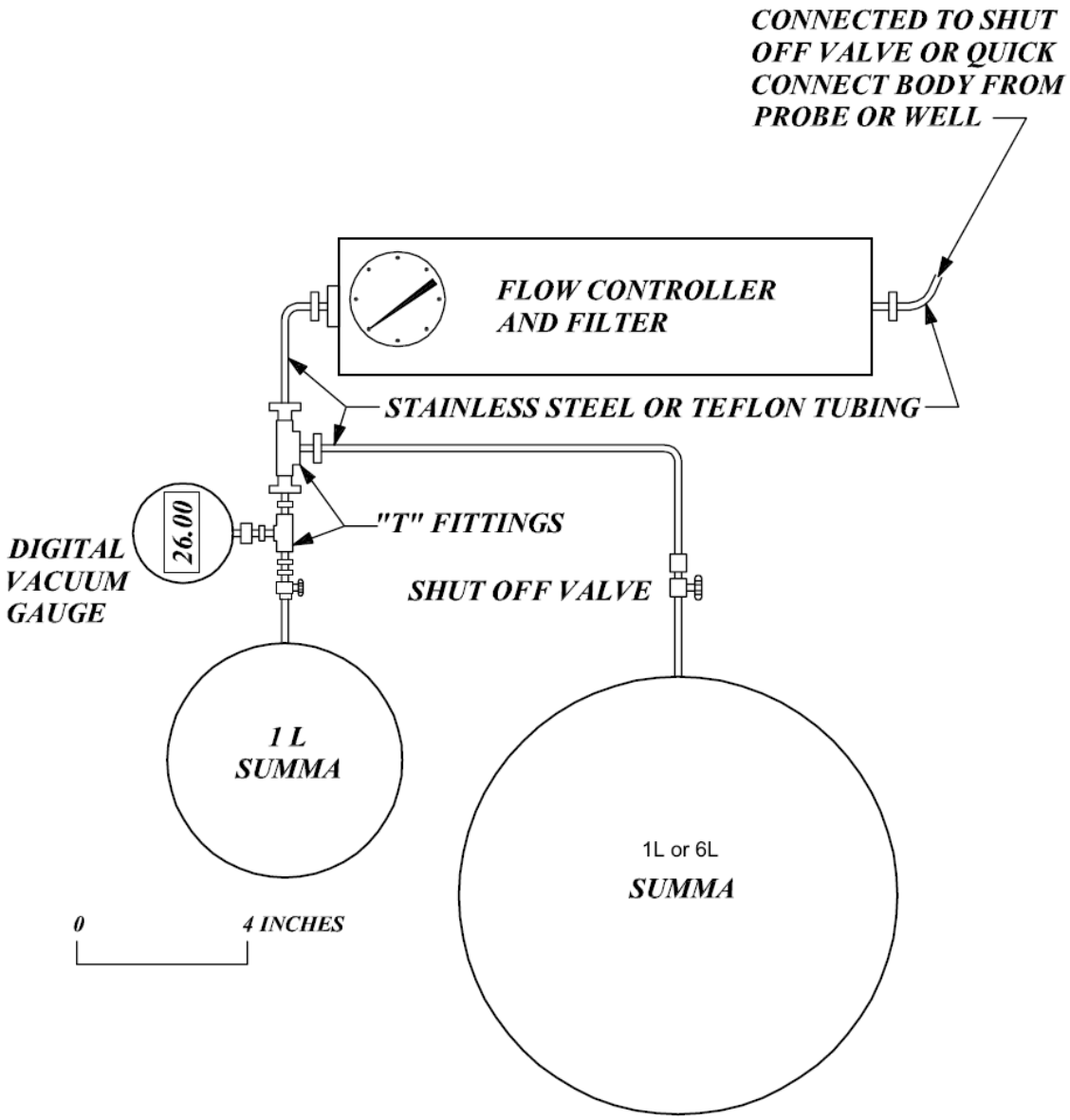


FIGURE B-2

VAPOR SAMPLING SET-UP

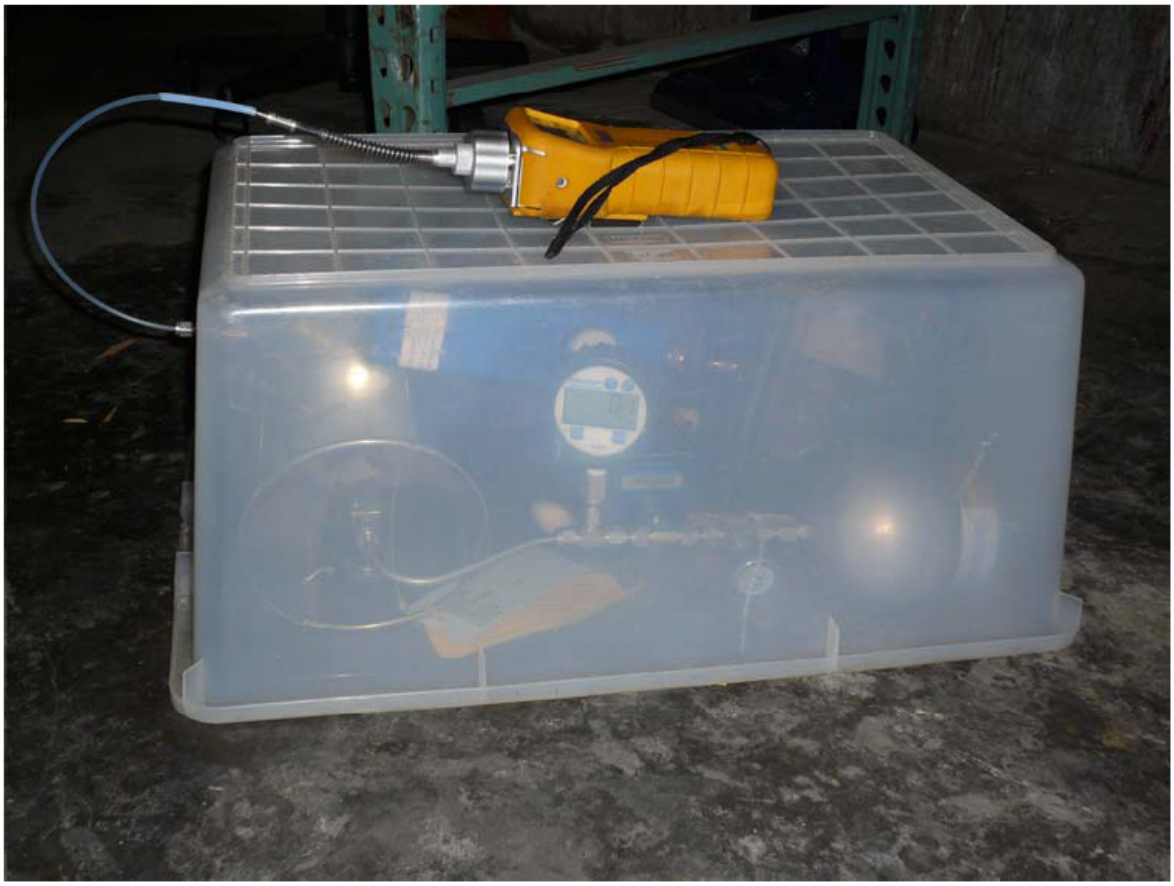


FIGURE B-3

SHROUD OVER VAPOR SAMPLING EQUIPMENT