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June 9, 2015

Mr. Jerry Wickham
Senior Hazardous Materials Specialist
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Re: Terradev Jefferson LLC Property
645 Fourth Street, Oakland, CA 94607
Fuel Leak Case No. RO0003001
Blue Rock Project No. ASE-1

Dear Mr. Wickham,

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

Sincerely,

Sara May
Director of Operations
Metrovation, LLC, managing agent for
Terradev Jefferson, LLC

Attachment:

Blue Rock Environmental, Inc.'s *Workplan for Additional Site Characterization, Sub-Slab-Vapor Sampling, and Indoor Air Sampling* dated June 9, 2015.

OAKLAND IRONWORKS BUILDING
580 SECOND STREET, SUITE 260, OAKLAND CA 94607 TELEPHONE (510) 839-4000 FAX (510) 839-4025

BLUE ROCK ENVIRONMENTAL, INC.

Mr. Jerry Wickham
Senior Hazardous Materials Specialist
Alameda County Health Care Services Agency
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1131 Harbor Bay Parkway, Suite 250
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Re: Workplan for Additional Site Characterization, Sub-Slab-Vapor Sampling, and Indoor Air Sampling
Terradev Jefferson LLC Property
645 4th Street, Oakland, CA 94607
Fuel Leak Case No. RO0003001
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Dear Mr. Wickham,

This workplan, prepared by Blue Rock Environmental, Inc. (Blue Rock) on behalf of Terradev Jefferson, LLC, presents a workplan for additional site investigation as requested in the Alameda County Environmental Health Services (ACEHS) letter dated April 22, 2015 (attached).

Background

Site Description and UST Discovery / Removal

The site is located southeast of the intersection of 4th Street and Martin Luther King Jr. Way (MLK Jr. Way) in Oakland, California (Figures 1 and 2). The site consists of a single story commercial building, bounded closely on the sides and back by other commercial buildings. One single-walled steel underground storage tank (UST) was discovered beneath the sidewalk immediately adjacent to the front of the building during renovation in 2006 (Figure 2a/b).

Phase I Environmental Site Assessments completed in support of the purchase (1999) and for refinancing (2006) indicated that no sign of a UST was observed during associated site inspections. The Phase I author also interviewed persons knowledgeable with the property from the 1950s until the time of the Phase I, and the interviewees could recollect no UST being used during the period of their familiarity.

A review of Sanborn Fire Insurance Maps revealed no evidence of subject site use that would potentially require a UST, and as such it is difficult to discern precisely when the tank was installed or operated. Based on the Phase I interviews, it is assumed the tank was installed and last used prior to the 1950s. State and local regulations require the proper abandonment of tanks that are no longer used to store or dispense fuels, thus the tank abandonment work was performed after its discovery in 2006.

According to Golden Gate Tank Removal, Inc. (Golden Gate), after consultation with the City of Oakland, it was determined that building structural considerations prohibited physical tank removal and that in-place abandonment was the appropriate means to close the subject UST. Therefore, Golden Gate abandoned the UST in-place by triple washing followed by filling it to capacity with concrete slurry on September 5, 2006. Abandonment was performed with the permission and under the oversight of the City of Oakland Fire Prevention Bureau. Details of this event are presented in Golden Gate's *Tank Closure Report* dated September 21, 2006.

Golden Gate reported that the UST contained gasoline with an approximate holding capacity of 1,000-gallons, measuring approximately 10 feet in length and 4 feet in diameter. The bottom of the UST was estimated to be located 7.5 to 8 feet below ground surface (ft bgs). The fill port was reported to be located at the west end of the tank.

At the direction of the Oakland Fire Department, two holes were cored in the bottom of the cleaned tank prior to its abandonment to enable the collection of samples of underlying material. Golden Gate reported that the soil beneath the tank was wet, but that groundwater was not encountered. Soil samples were collected at a depth of 9 ft bgs. The samples were analyzed for concentrations of total petroleum hydrocarbons as diesel (TPHd), gasoline (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX), and the five fuel oxygenates (MTBE, TBA, ETBE, DIPE, and TAME). Results of analysis indicated the presence of residual fuel hydrocarbons in both samples, with concentrations higher in the sample collected from the western end of the tank. This sample contained TPHg at 10,000 mg/kg and benzene at 130 mg/kg.

Geophysical Survey for Other Potential Tanks

In August 2014, Blue Rock supervised Norcal Geophysical Consultants, Inc. (Norcal) in performance of the geophysical survey to evaluate the sidewalk area around the subject UST to evaluate the presence of other potential UST(s) in the area. The area investigated was approximately 90 feet long by 17 feet wide encompassing the location of the subject UST. Techniques employed consisted of electromagnetic survey and ground penetrating radar. No anomalous survey results suggestive of additional USTs were found in the search area. The results of that work were presented in Blue Rock's *Report for Geophysical Survey and Additional Site Characterization Workplan* dated September 18, 2014.

Summary of Investigation Activities

Subsurface investigation began in 2009. A total of 10 soil borings have been drilled (B-1 through B-6, CB-1, CB-2, SB-7, and SB-8) and nine passive sample modules deployed (S-1 through S-9). Additionally, three extraction wells (DPE-1 through DPE-3) and three sub-slab soil vapor points (VP-1 through VP-3) have been installed at the site (Figure 2a). A summary of well construction details is included in Table 1, and summaries of soil, groundwater, sub-slab soil vapor, and passive sample module analytical data are included in Tables 2, 3, 4, and 5, respectively.

Physiography and Hydrogeology

The subject site is located in a commercial/industrial neighborhood along the San Francisco Bay-Margin. The site is set at an elevation of approximately 16 feet above mean sea level (ft msl) and local topography dips gently in a southerly direction toward the Oakland Inner Harbor, which is located approximately 1,250 feet from the subject UST (Figure 1).

The site is underlain predominantly by varying gradations of sand. The upper six feet generally consists of a brown sand (SP-SM), which has been interpreted as fill material. Native soil underlying the fill consists of a gray and yellow-brown sandy clay (CL) unit from ~6 – 7 ft bgs and a mottled red-brown and gray clayey sand (SC) from ~7 – 14 ft bgs, a brown sand (SP) from ~14 – 16 ft bgs, and gray clayey sand (SC) from ~ 16 – 20 ft bgs, the maximum depth explored.

Groundwater is present in unconfined conditions at a depth of approximately 9 ft bgs. Based on data from the nearby Allen Property site, groundwater flows in southerly direction towards the Oakland Inner Harbor, with calculated flow direction from individual monitoring events ranging from south-southwesterly, southerly, to south-southeasterly.

Potential Constituents of Concern

Gasoline range hydrocarbons are present in soil and groundwater proximal to the abandoned UST. Specific compounds that have been detected in soil or groundwater at the source area include: TPHd, TPHg, BTEX, MTBE, TBA, 1,2-dichloroethane (1,2-DCA), 1,2-dibromoethane (EDB), and naphthalene.

The addition of MTBE to gasoline began as early as 1979, and its use became ubiquitous in California by March 1996 to meet Clean Air Act standards at that time. However, its use in California was banned as of January 1, 2004. Although it is uncertain when the subject UST was removed from service, it is not expected to have been in service during MTBE's lifespan as a gasoline additive in California.

Nearby Leaking UST Sites and Other Potential Petroleum Sources

The "Grove Auto Repair" (Global ID T06000101350) case is located upgradient of the subject site at the southeast corner of 5th Street and MLK Jr. Way (Figure 2a). Sanborn maps indicate that property was used as a gasoline station from at least the early 1950s. ACEHS file documents indicate that five USTs (two 4,000-galllon, two 6,000-gallon, and one 550-gallon capacities) were removed in 1983. In 1988, approximately 1,000 cubic yards of soil were excavated from the former UST area and disposed off-site. The Grove Auto Repair case received regulatory closure in 1993. It is notable the area of the former southern dispenser island does not appear to have been investigated, nor was the southerly extent of dissolved-phase fuel hydrocarbons detected in former well MW-3 ever delineated in the direction of the subject site.

The "Allen Property" case (Global ID T0600108713) is located at the southwest corner of 4th Street and MLK Jr. Way. The Allen Property UST (10,000-gallon capacity) was abandoned in-place in 1993 (Figure 2a). The site received regulatory case closure in 2014. The lateral extent of the Allen Property dissolved-phase fuel plume was delineated in the direction of the subject site by Allen well MW-2.

A database records search map also shows an "Oil/Gas" pipeline running down the west side of MLK Jr. Way; however, the specific product conveyed in the pipeline is unknown.

Secondary Source Removal

Amicus Environmental evaluated investigative and remedial options available at the site in their September 13, 2009 correspondence. It was noted that corrective actions would be necessarily constrained by the location of the abandoned UST relative to existing development - i.e. assessment proximally downgradient is prohibited, inadequate space to build a traditional fixed in-situ remediation system, and remedial excavation would undermine the existing building. Yet the persistence of elevated concentrations of gasoline range hydrocarbons in the subsurface merited remedial action. As a result, the use of mobile high-vacuum extraction (HVDPE) equipment was recommended as an aggressive approach to reduce the remaining gasoline mass in the vicinity of the UST for which details were proposed in the *Removal Action Workplan* dated February 3, 2010, which was conditionally approved by the ACEHS in a letter dated February 19, 2010.

First High-Vacuum Dual-Phase Extraction Event (September-October 2010)

An initial mobile HVDPE remedial event was performed at the site from September 28 to October 3, 2010 (5 days). The event was completed using a truck-mounted unit consisting of a 25-horsepower oil sealed liquid-ring pump capable of producing 29 "Hg vacuum, and a thermal oxidizer capable of treating an air flow of approximately 450 ACFM. Wells DPE-1, DPE-2, and DPE-3 were used as extraction wells. A stinger hose was lowered into each well through a vacuum tight cap and placed approximately one foot off the bottom of each well. Depth to water at the beginning of the event was approximately 9.5 ft bgs in all three wells. At the beginning of the event, influent TPHg levels at individual wells ranged from 1,700 ppmv to 3,530 ppmv; however, they dropped to less 1,000 ppmv by the end of the event. The total average hydrocarbon mass recovered was **174 lbs** (based on 122 lbs calculated from field PID data and 225 lbs calculated from lab data), which equates to an average removal rate of nearly 35 lbs/day.

Second High-Vacuum Dual-Phase Extraction Event (July 2012)

A second mobile HVDPE remedial event was performed at the site from July 9 to 24, 2012 (15 days). The event was completed using a truck-mounted unit consisting of a 25-horsepower oil sealed liquid-ring pump capable of producing 29 "Hg vacuum, and a thermal oxidizer capable of treating an air flow of approximately 450 ACFM. Wells DPE-1 and DPE-2 were used as primary extraction wells, as they proved to be the most productive. A stinger hose was lowered into each well through a vacuum tight cap and placed approximately one foot off the bottom of each well. Depth to water at the beginning of the event was approximately 9 ft bgs, and the no free-product was observed in any of the wells. At the start of event, the total influent TPHg level was 1,200 ppmv and declined to 430 ppmv by the end. The ending mass removal rate was estimated to be approximately 11 lbs/day. Blue Rock estimated the total average hydrocarbon mass recovered was approximately **249 lbs** (based on 199 lbs calculated from field PID data and 298 lbs calculated from lab data). The HVDPE unit provider (CalClean) estimated the total average hydrocarbon mass recovered was approximately **166 lbs** (based on 130 lbs calculated from field PID data and 191 lbs calculated from lab data). The difference between the mass removal estimates appears to be due to the fact that Blue Rock used flowrates from the manufacturer's blower curve based on the measured vacuum and Calclean used flowrates measured in the field with an inline flowmeter.

Cumulative Secondary Source Removal Efforts

A total hydrocarbon mass of approximately **340 to 423 lbs** has been removed by both the 2010 and 2012 events. At the beginning of the 2010 event, total inlet concentrations were 1,660 ppmv resulting in an extraction rate of approximately 90 lbs/day. By the end of the 2012 event, total inlet concentrations had declined to 430 ppmv and the extraction was approximately 10 lbs/day. Based on these data, it appears the use mobile HVDPE may have reached its effective limit and the mass appears to have been removed to the extent practicable. Additional use of mobile HVDPE may not be cost effective.

Free-Product Occurrence and Removal

Free-product was measured once in DPE-3 at a thickness of 0.13-feet in January 2011. However, following the second HVDPE event, no measurable thicknesses of free product have been observed in any of the wells.

Evaluation of Secondary Source Removal / Reduction

As presented in Blue Rock's March 11, 2013 report, a comparison of pre- and post-remedial soil quality proximal to the abandoned UST was intended to serve as a proxy for removal / reduction of the secondary source mass. The results of confirmation soil sampling are shown below.

West Side of UST			
Sample ID	Pre-remedial TPHg (mg/kg)	Post-Remedial TPHg (mg/kg)	CB-1 Sample ID
DPE-1-7.5'	6,500	<1.0	CB-1-7.5'
EX-W-9'	10,000	1,200	CB-1-9'
DPE-1-12'	2,300	14,000	CB-1-12'
DPE-1-15'	770	1,000	CB-1-15'

East Side of UST			
Sample ID	Pre-remedial TPHg (mg/kg)	Post-Remedial TPHg (mg/kg)	CB-2 Sample ID
DPE-2-6'	1.2	No sample	
EX-E-9'	920	840	CB-2-9'
DPE-2-11'	160,000	2,700	CB-2-11'
DPE-2-15'	430	380	CB-2-15'

TPHg concentrations in the upper 11 feet of soil were lower compared to pre-remedial levels, while concentrations at a depth of 12 feet and below were similar to, or higher, than pre-remedial levels. The reduction in concentrations in the upper 11 feet is expected based on historical depth to water and temporary local dewatering during the HVDPE events. Static depth to water is approximately 9 ft bgs and the intake hoses were placed at a depth of approximately 14 ft bgs in DPE-3 and 14 ft bgs in DPE-1 / DPE-2 during HVDPE extraction (i.e. one foot off the bottom of the well casing). The combined effect of the naturally occurring vadose zone and depressed water levels in each extraction well likely facilitated better vapor flow, and therefore mass removal, in the upper 11 feet of the soil column relative to soil deeper in the saturated zone. These results are indicative of secondary source reduction primarily in the upper 11 feet of the soil column.

Previous Evaluation of Risk to Potentially Sensitive Receptors

In September 2012 and January 2014, Blue Rock sampled three sub-slab soil vapor points (VP-1 through VP-3) inside the building adjacent to the closed UST (Figure 2a). The points are located between approximately 6 and 38 feet south to southeast of the UST. Tracer gas (helium) leakage was minimal (i.e. equal to or less than 1%) during these events. Results from both events did not indicate a vapor intrusion risk based on comparison to Shallow Soil Gas ESLs published in *User's Guide: Derivation of and Application of Environmental Screening Levels – Interim Final (SFBRWQCB 2013)* and Shallow Soil Gas CHHSLs published in *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties (CALEPA 2005)* for commercial / industrial land use scenarios. Details of this work were presented in Blue Rock's *Second Sub-Slab Soil Vapor Sampling Report* dated October 18, 2012 and *Additional Site Characterization Report* dated May 29, 2014. Sub-slab vapor data is summarized in Table 4.

Groundwater beneath this area of Oakland is not presently used for beneficial purposes (consumption or irrigation). Additionally, it is reasonable to assume that the shallowest water-bearing zone in the vicinity of the subject site will plausibly not be used for beneficial consumption for the indeterminate future, if ever (in terms of City habitation). The residual hydrocarbons in groundwater do not, therefore, pose a threat to human health via consumption. Drinking water is supplied to the site vicinity by East Bay Municipal Utility District.

Extent of Remaining Subsurface Impacts

Gasoline range hydrocarbons remain in soil and groundwater in the location of the subject UST. The upgradient extent of this impact remains undelineated beyond the center of 4th Street, where samples collected 30 to 40 feet upgradient of the closed UST contained TPHg concentrations of 250,000 µg/L (SB-7) and 180,000 µg/L (SB-8) (Figure 3). The ACEHS interpreted these concentrations to be the result of free-product that originated from the subject UST spreading laterally along the water table surface. While this mechanism of transport is possible, the observation that there is no attenuation of dissolved-phase concentrations from the subject UST to locations 30 to 40 feet ungradient suggests the possibility of a gasoline source further upgradient. Blue Rock recommends additional upgradient plume delineation to resolve this Conceptual Site Model uncertainty.

Information gathered from the passive soil gas sample survey appear to indicate that gasoline impact to the subsurface extends uninterrupted from the middle of 4th Street (i.e. SB-7 and SB-8) southerly (as documented by S-6, S-5, and S-3) to the interior atrium (where B-6 is located). Based on the widespread gasoline detections observed in the passive samplers, Blue Rock interprets this to be representative of gasoline plume in shallow groundwater, and possibly associated soil impact at the vadose zone/water table interface. The extent of this impact remains undefined south and southwest of boring B-6.

The lateral extent of groundwater impact has been defined to the southeast of the subject UST by grab groundwater samples from borings B-3, B-4, and B-5, which were drilled inside interior service hallways with concrete floors, and to the northwest by Allen Property well MW-2.

Subsurface Utilities in 4th Street

As requested in the ACEHS letter of April 22, 2015, Blue Rock researched the locations and depths of subsurface utilities in the area of closed UST and 4th Street that may serve as preferential pathways of plume migration.

The locations of utilities proximal to the closed UST were previously identified by subsurface investigation work and survey for potential nearby USTs (discussed above). The utilities mapped below the sidewalk adjacent to 645 4th Street are all located within the upper 5 feet based on the limitations of the geophysical survey equipment used. Utility burial depth within the upper 5 feet is typical for lateral or service utility lines below sidewalks. The depth to groundwater is approximately 9 ft bgs and the shallowest significant soil impact in the area of the closed tank is deeper than 5 ft bgs, therefore the utility conduits below the sidewalk do not appear to serve as preferential pathways for plume migration.

Several utility lines run below 4th Street and its northern sidewalk, which include water, electrical, high pressure natural gas, communication, and sanitary sewer lines. Due to the fact that the petroleum affected soil and groundwater interval in the area of SB-7 and SB-8 is greater than 5 ft bgs and that depth to groundwater is approximately 9 ft bgs, Blue Rock focused research on the utility that is typically the deepest: sanitary sewer lines. Blue Rock initially inquired with East Bay Municipal Utility District (EBMUD) regarding the depth of sanitary sewers in 4th Street. EBMUD staff indicated that they did not have that information and directed Blue Rock to the City of Oakland. Blue Rock visited City offices and obtained an image of the sanitary sewer map for the subject site (attached). A sanitary sewer main line runs below the center of 4th Street, with flow direction indicated as west-northwesterly to toward MLK Jr. Way. At each manhole, an apparent invert elevation is provided in nomenclature an example of which is “FL. 5.85”, where FL appears to mean “flow line” or “flow level” followed by an elevation in feet. The approximate surface elevation of the 4th Street is 16 ft msl and the apparent flow line elevations of the sanitary pipe are 5.85 feet, between MLK Jr. Way and Jefferson Street, falling west-northwesterly to -0.48 feet, at the intersection of MLK Jr. Way and 4th Street. These invert elevations suggest that the sewer main depth along 4th Street may range from approximately 10 to 15 ft bgs. Brief internet research suggests that a depth of 10 ft bgs is common for sanitary sewer main lines. It appears that the sanitary sewer line in 4th Street may intersect the petroleum affected soil and groundwater encountered in the area of SB-7 and SB-8. Additional inquiries will be made to the City to confirm the interpretation of the sewer map, as the counter staff was unable to provide any insight. Blue Rock recommends completion of the proposed investigation and sampling activities described below in this workplan before further evaluating potential preferential pathways of plume migration.

Additional Soil and Groundwater Plume Delineation

Blue Rock proposes to collect soil and grab groundwater samples from locations to aid in the lateral definition of the of previously detected subsurface petroleum impact.

Blue Rock proposes to drill two borings in the Bay Area Rapid Transit property, located upgradient of 4th street and borings SB-7 and SB-8, to further evaluate the extent of subsurface impact in that direction, and two borings in 3rd Street and one boring within the Oakland Metro Operahouse, to evaluate the extent of subsurface impact south and southwest of B-6 (Figure 2a).

Prior to drilling, Blue Rock will obtain right-of-entry agreements, as needed, and soil boring permits from the ACPWA. The drilling locations will be marked in white paint and Underground Service Alert will be notified to identify utilities proximal to the proposed drilling locations. Blue Rock will also prepare a site specific Health and Safety Plan.

Drilling and sampling will be completed using hand auger or direct-push drilling methods. At each drilling location, drill-rod, approximately 2.5-inches in diameter, will be used to advance a boring several feet into the water table (i.e. approximately 12 to 13 ft bgs). During drilling, soil types will be logged in accordance with the USCS, and field observations of potential petroleum presence will be noted. Blue Rock proposes to collect one soil sample from the capillary fringe for laboratory analysis (i.e. approximately 8 - 9 ft bgs). If petroleum impact is observed or suspected at other depths, soil samples from those intervals will also be collected. The sample tube will then be covered with Teflon lined plastic end caps, labeled, documented on a chain-of-custody form, and placed on ice in an insulated cooler for transport to the laboratory.

Following advancement of the each boring to the desired depth, a new SCH40 PVC well screen will be placed in each boring to help facilitate collection of a water sample. A new disposable polyethylene bailer will be used to collect a groundwater samples from each boring. Water samples will be transferred to laboratory supplied containers, labeled, documented on a chain-of-custody form, and placed on ice in an insulated cooler for transport to the project laboratory.

A California DHS-certified will analyze the soil and groundwater samples for concentrations of:

- TPHd by EPA Method 8015M with silica-gel clean-up
- TPHg by EPA Method 8260B
- BTEX by EPA Method 8260B
- MTBE and TBA by EPA Method 8260B
- 1,2-DCA and EDB by EPA Method 8260B
- Naphthalene by EPA Method 8260B

Upon completion of sampling, all boreholes will backfilled to the surface with cement and finished at the surface with concrete. Drill-rod, hand-augers, and sampling devices will be decontaminated in an Alconox® wash followed by double rinse in clean tap water to prevent cross-contamination. Soil cutting and rinseate will be stored in labeled 55-gallon drums on-site pending removal and disposal.

Additional Sub-Slab Soil Vapor Sampling

Purpose and Scope

The proposed site activities described below are designed to comply with the scope of work requested in the ACEHS letter dated April 22, 2015. In that letter, the ACEHS requested sampling of sub-slab soil vapor in locations within the building.

Proposed Sub-Slab Soil Vapor Point Locations

Blue Rock proposes to install two additional sub-slab soil vapor points at the site: VP-4 and VP-5 (Figure 2a). Soil vapor point VP-4 will be located in center of 645 4th Street interior space, centered within the locations of passive sample points S-2, S-3, and S-5, which recorded elevated benzene concentrations. Soil vapor point VP-5 will be located in center of 380 MLK Jr. Way interior space, adjacent to passive sample point S-8, which recorded elevated benzene concentrations. All proposed points are located within buildings currently occupied by commercial tenants. It is expected that all vapor point installation and sampling activities will occur on the weekends, so as to minimize disruption to the tenants' businesses.

Proposed Drilling and Soil Vapor Point Installation

Prior to vapor point installation, Blue Rock and drilling personnel will review and sign a Site Safety Plan.

The location of each vapor point will be cleared of flooring material (i.e. carpet) to expose the concrete floor. A 1-5/8-inch diameter hole will be drilled through the concrete slab in each location. The slab thickness was found to range between approximately 4 to 6 inches during previous work. The vapor probes will consist of ¼-inch diameter stainless steel tubing with a 3-inch long stainless steel screened interval at the bottom. Thus, the total probe depths will be approximately 9 inches below surface. A rubber plug will placed on tubing near the top of the probe screen to hold the sealing cement grout above the probe screen. A thick mixture of cement grout will be placed in the remaining annular space to seal the probe. The surface of each probe will be protected by a flush-mounted, tamper-resistant stainless steel top cap. Each probe will be allowed to equilibrate for at least two days prior to purging and sampling.

Precipitation Conditions Suitable for Vapor Point Sampling

Sub-slab soil vapor sampling will not be performed during or within 5 days of a significant rainfall event of a half inch or greater.

Sub-Slab Soil Vapor Sampling Equipment

The sample train for soil vapor sampling will consist of tubing, connectors, valves, and vacuum canisters (Figure 4). All gauges and canisters will be connected by laboratory-supplied stainless steel tubing and dedicated flexible Teflon or nylon tubing. The sample train will be assembled using dedicated ¼-inch (outer diameter) tubing for all vapor sampling. Swagelok® connectors will be used for all connections between tubing and other sampling components. A flow regulator of 100 – 200 mL/min will be placed in-line between the manifold and the downhole side Swagelok® valve. Sampling equipment will be inspected to ensure tight fittings between all components. A transparent shroud will be placed over the vapor point and sampling train.

Leak Testing and Tracer Gas

The sampling manifold will be leak tested by inducing a vacuum on the manifold. In preparation for manifold leak testing, the downhole side Swagelok® valve will remain closed, as will the valves going to the purge and sample ends of the sample train. To commence leak testing, an electric air pump will be connected to the purge valve end of the sample train. The purge valve will be opened and the air pump turned on to induce a vacuum on the assembly, and the purge valve will be closed again. The vacuum on the manifold assembly will be monitored for at least 15 minutes. The manifold will be considered to have passed the leak test if vacuum was maintained for at least 15 minutes with <0.2" Hg vacuum loss. After ensuring that all connections between the purge and sample valves, flow controller, and sample manifold are tight, soil vapor purging and sampling activities will commence.

During sample collection (discussed below), helium (He) will be used as a tracer gas to test for air leakage into the sampling system. The shroud will be filled with helium, which will be supplied by a cylinder. The helium concentration inside the shroud will be maintained at a minimum of 5% to 10%, so as to have detectable levels of tracer gas should leakage into the sampling train occur. The helium concentration inside the shroud will be determined using a He field meter. Laboratory analysis for helium in the collected vapor sample will be used to assess if leakage occurred during sampling.

Vapor Point Purging

Prior to collecting a vapor sample, the sub-slab vapor points will be purged to ensure that the vapor samples are representative of actual sub-slab concentrations. The dead-space volume for each vapor probe will be approximately 0.02-liters (i.e. the total volume of casing, annular pore space, and sample train tubing). Although a purge step-test is recommended by guidance documents, it cannot be practically completed in a single field day with the proposed sub-slab due to the comparatively small dead-space volume of 0.02-liters relative to the sample canister volume of 1-liter. In other words, the collection of a single sample volume is significantly greater than the commonly used step-test purge volumes. For the purpose of this sampling, approximately three dead-space volumes (or 0.06–liters) will be purged using an electric air pump and known flow limits of the manifold regulators. Based on the flow limiter parameters described above, three dead-space volumes will be purged from each point after approximately 20 to 35 seconds. After purging is completed, the sample train purge valve will be closed in preparation for sample collection.

Sub-Slab Vapor Point Sampling

All samples will be collected in certified clean 1-liter Summa® canisters provided by the analytical laboratory. Each canister will be field verified to have a starting vacuum of at least 25 "Hg before sampling. Sample collection from the soil vapor well will begin immediately after purging. Leak testing will be performed concurrently with sampling as described above. To begin sampling, the valve on the sample Summa® canister will be opened and the time and initial vacuum documented. As the canister fills, the vacuum gauge on the flow controller is observed to ensure that the vacuum in the canister is decreasing over time. When the vacuum on the sample canister decreases to approximately 5 "Hg, sampling will end and the valve will be shut.

The samples will be labeled, documented on a chain-of-custody form, and transported to the project laboratory for analysis.

Sub-Slab Vapor Sample Analysis

The sub-slab soil vapor samples will be analyzed by a certified laboratory for:

- TPHg by modified EPA Method TO-3
- BTEX, MTBE, Naphthalene, 1,2-DCA, and EDB by modified EPA Method TO-15
- Helium, Oxygen, Carbon Dioxide, and Methane by Modified ASTM D-1946

Data Evaluation

The sub-slab vapor data will be compared to the Shallow Soil Gas ESLs published in *User's Guide: Derivation of and Application of Environmental Screening Levels – Interim Final (SFBRWQCB 2013)* and Shallow Soil Gas CHHSLs published in *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties (CALEPA 2005)* for commercial / industrial land use scenarios. Blue Rock recommends that at least two sub-slab soil vapor sampling events occur before a potential risk determination is made, in order to account for seasonal and temporal variability.

Constituent	***ESLs Comm./Indus. Soil Gas ($\mu g/m^3$)***	***CHHSLs Comm./Indus. Soil Gas ($\mu g/m^3$)***
TPHg	50,000	NA
Benzene	420	122
Toluene	1,300,000	378,000
Ethylbenzene	4,900	NA
Xylenes	220,000	879,000
MTBE	47,000	13,400
Naphthalene	360	106
1,2-DCA	580	167
EDB	170	NA

Contingency for Indoor Air Sampling

If a potential risk is indicated by sub-slab vapor sample data, Blue Rock recommends performance of indoor air sampling as discussed in Steps 8 and 9 of the DTSC's *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance) (CALEPA 2011).*

Building Inventory Survey

As recommended in DTSC guidance, a building inventory will be performed prior to indoor air sampling activities. The survey will be completed using the "Appendix L - Building Survey Form" included in the DTSC guidance document. Performance of the building survey will aid in the interpretation of indoor air sampling results.

Indoor Air Sampling and Outdoor Air Control Sampling

There are two distinct interior spaces associated with the building of interest. One space is associated with 645 4th Street, and the other space is associated with 380 MLK Jr. Way. Air samples will be collected from the center of each interior space where a potential risk may be suggested by sub-slab vapor samples data. Oakland Children's Hospital Early Childhood Mental Health Program is the tenant at both units, which appear to be occupied during normal administrative hours. Therefore, for the purposes of this indoor air assessment, Blue Rock proposes to collect the samples over an 8-hour time span.

Blue Rock proposes to collect two outdoor air samples as control data for the indoor air assessment. Tentatively, the samples will be collected from upwind locations relative to the subject building, which would include sample locations along the eastern side of MLK Jr. Way due to winds predominantly originating from the west and northwest; however, the final outdoor control sampling locations will be based on dominant wind conditions observed at the time of actual sample collection.

Indoor Air Sampling Equipment

The samples will be collected in 6-liter Summa canisters. These canisters will be certified clean and placed under vacuum by the analytical laboratory prior to shipment. The sample train for indoor air sampling will consist of connectors, valves, and vacuum canisters. All gauges and canisters will be connected by laboratory-supplied stainless steel tubing. A flow regulator set to limit flow to fill the canister over an 8-hour period will be placed in-line between air inlet and canister. Sampling equipment will be inspected to ensure tight fittings between all components.

Before actual sampling begins, a shut in test will be performed. This test will check for leaks in sampling equipment prior to its use. The test will consist of assembling all equipment mentioned in the previous sampling apparatus section. The Summa canisters typically arrive from the laboratory with at least 25 "Hg vacuum. The vacuum on the manifold assembly will be monitored for at least 15 minutes. The manifold will be considered to have passed the leak test if vacuum was maintained for at least 15 minutes with <0.2" Hg vacuum loss.

Air Sampling Procedures

Summa canister samples will be obtained by opening the valve regulator on the Summa canister and collecting air into the Summa vessel, which is under vacuum. Samples will be collected over a period of 8-hours, at a flow rate of approximately 12.5 mL/min. This rate and duration will yield 6 liters or 6,000 mL. The canisters will be placed approximately three feet above the floor and more than 25 feet from any exterior door or window. Additionally, all exterior doors and windows will be shut and the HVAC system will continue to operate as normal during the sample collection period.

Sampling start time, sampling ending time, initial starting pressure, and ending pressure readings for the Summa canisters will be recorded on sample forms. At the end of sampling, the samples will be labeled, documented on a chain-of-custody form, and transported to the project laboratory for analysis.

Air Sample Analysis

The air samples will be analyzed by a certified laboratory for:

- TPHg by modified EPA Method TO-3
- BTEX, MTBE, Naphthalene, 1,2-DCA, and EDB by modified EPA Method TO-15

Data Evaluation

The air sample data will be compared to the Indoor Air ESLs published in *User's Guide: Derivation of and Application of Environmental Screening Levels – Interim Final (SFBRWQCB 2013)* and Indoor CHHSLs published in *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties (CALEPA 2005)* for commercial / industrial land use scenarios. Blue Rock recommends that at least two air sampling events occur before a potential risk determination is made, in order to account for seasonal and temporal variability.

Constituent	***ESLs Comm./Indus. Indoor Air ($\mu g/m^3$)***	***CHHSLs Comm./Indus. Indoor Air ($\mu g/m^3$)***
TPHg	100	NA
Benzene	0.42	0.141
Toluene	1,300	438
Ethylbenzene	4.9	NA
Xylenes	440	1,020
MTBE	47	16
Naphthalene	0.36	0.12
1,2-DCA	0.58	0.195
EDB	0.17	NA

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Certification

This workplan was prepared under the supervision of a California Professional Geologist at Blue Rock. All statements, conclusions, and recommendations are based upon published results from past consultants, field observations by Blue Rock, and analyses performed by a state-certified laboratory as they relate to the time, location, and depth of points sampled by Blue Rock. Interpretation of data, including spatial distribution and temporal trends, are based on commonly used geologic and scientific principles. It is possible that interpretations, conclusions, and recommendations presented in this report may change, as additional data become available and/or regulations change.

Information and interpretation presented herein are for the sole use of the client and regulating agency. The information and interpretation contained in this document should not be relied upon by a third party.

The service performed by Blue Rock has been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the area of the site. No other warranty, expressed or implied, is made.

If you have any questions regarding this project, please contact us at (650) 522-9292.

Sincerely,
Blue Rock Environmental, Inc.

Brian Gwinn, PG
Principal Geologist

Attachments:

Figure 1: Site Location Map
Figure 2a: Site Plan
Figure 2b; Detailed Site Plan with Utility Lines
Figure 3: Benzene in Groundwater – Dec. 2014
Figure 4: Soil Gas Sampling Apparatus

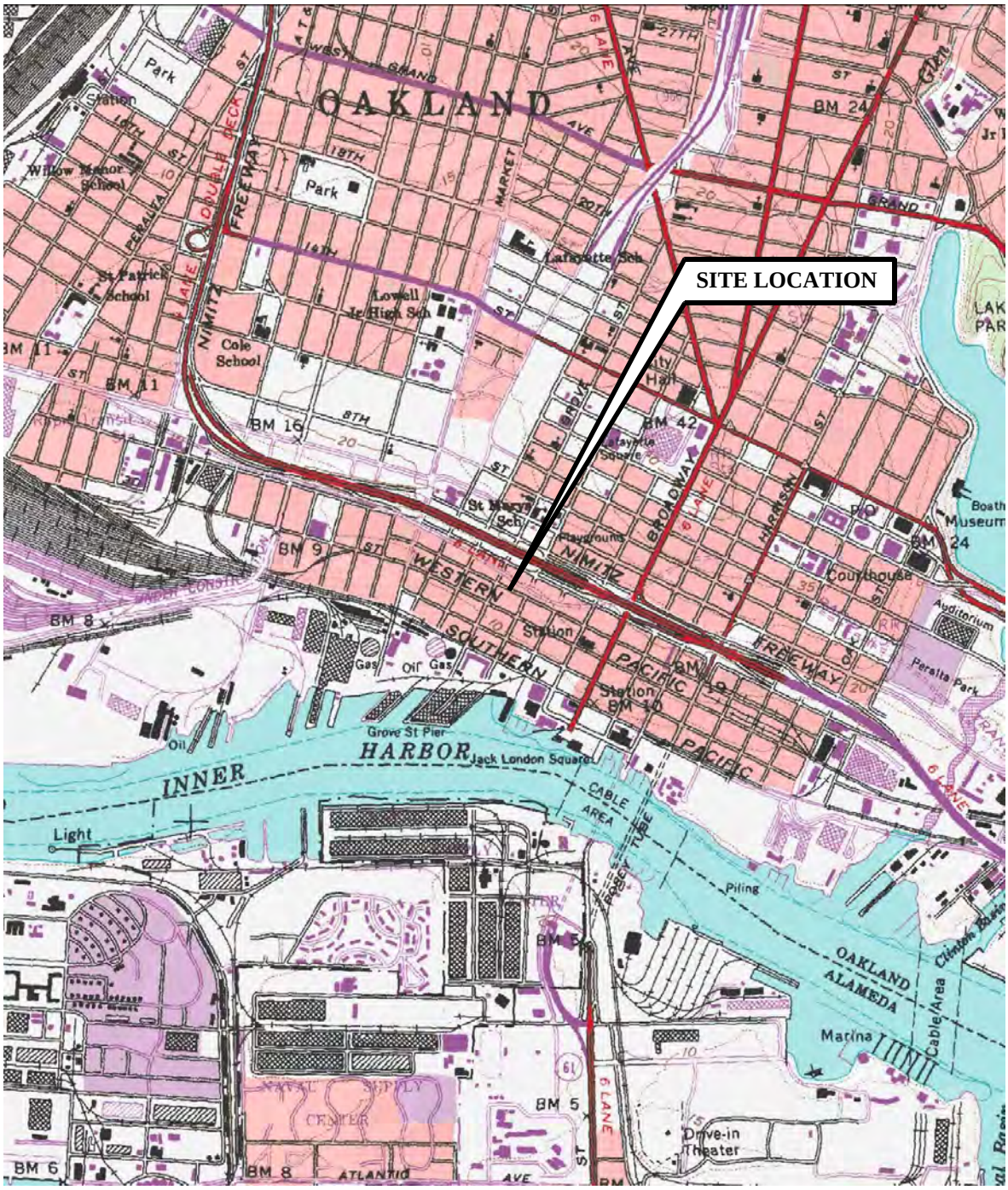
Table 1: Well Construction Data
Table 2: Soil Sample Analytical Data
Table 3: Groundwater Analytical Data
Table 4: Sub-Slab Vapor Sample Analytical Data
Table 5: Passive Soil Gas Sample Analytical Data

ACEHS Letter dated April 22, 2015

Image from City of Oakland Sewer Map #183

Distribution:

Ms. Sara May, Metrovation, 580 Second St. Suite 260, Oakland, CA 94607



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APPROX. SCALE IN FEET

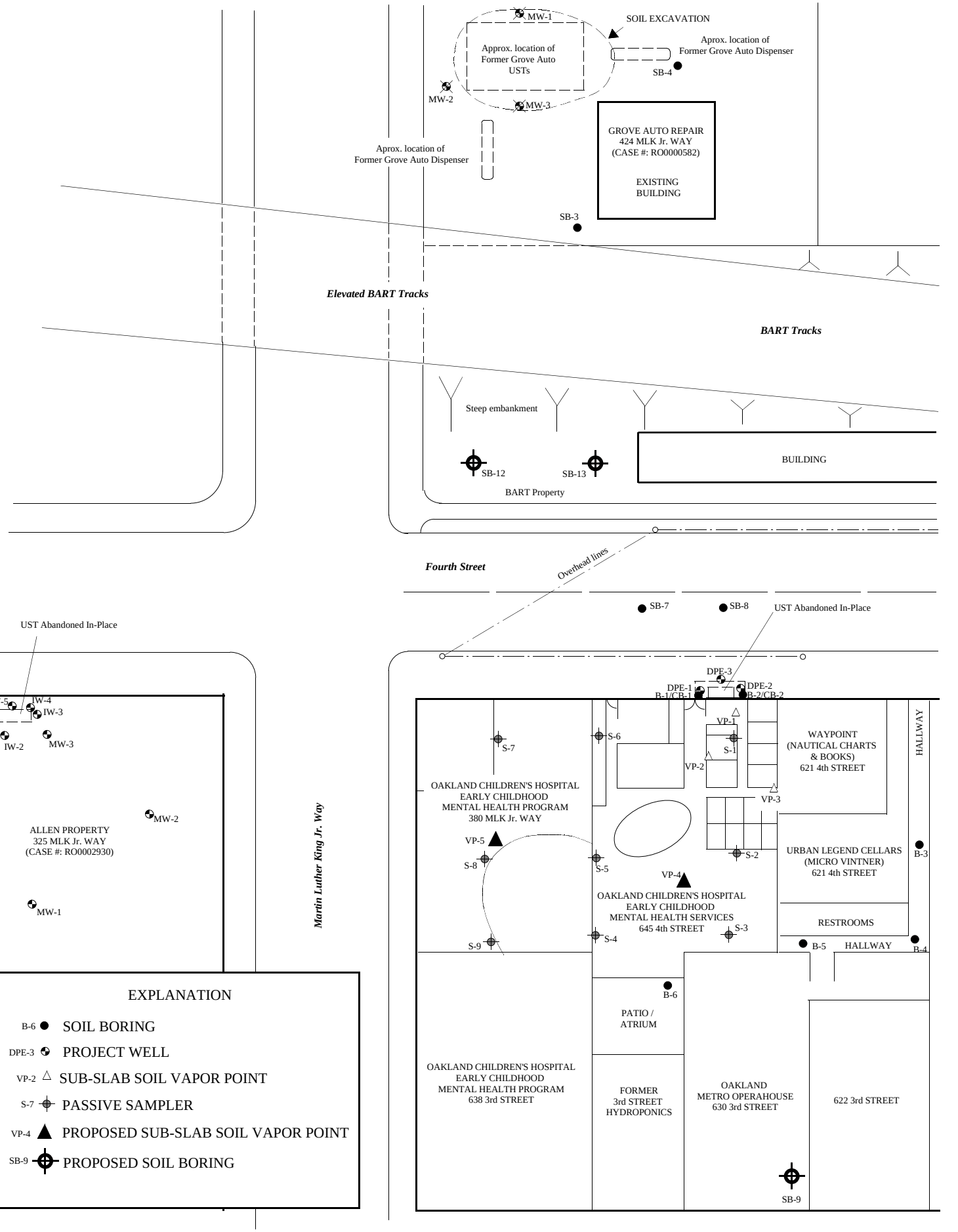
N

SOURCE: MyTopo.com

SITE LOCATION MAP
Terradev Jefferson LLC Property
645 Fourth St.
Oakland, CA

BLUE ROCK ENVIRONMENTAL, INC.

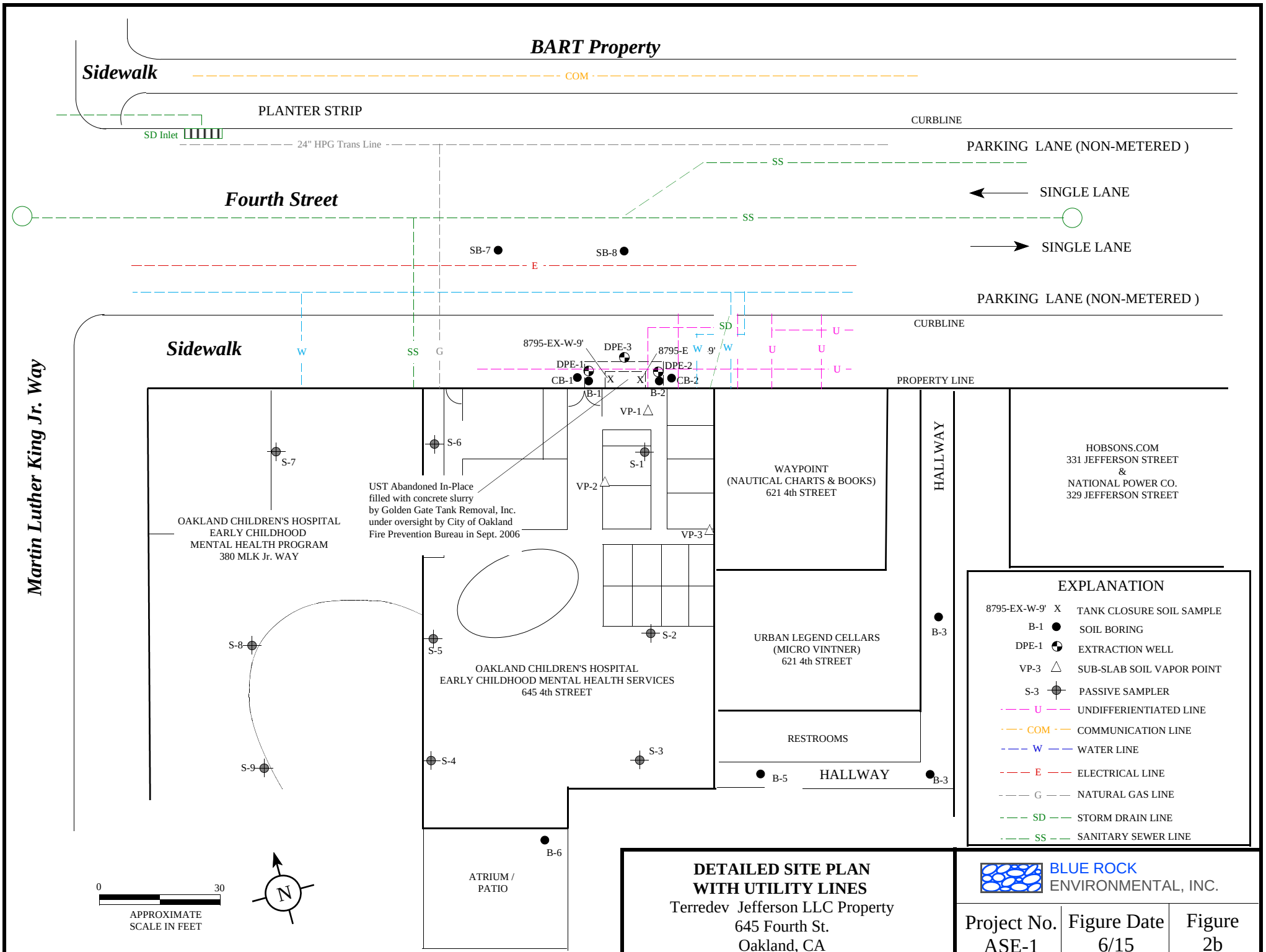
Project No.	Figure Date	Figure
ASE-1	10/10	1



SITE PLAN
Terredev Jefferson LLC Property
645 Fourth St.
Oakland, CA

BLUE ROCK ENVIRONMENTAL, INC.

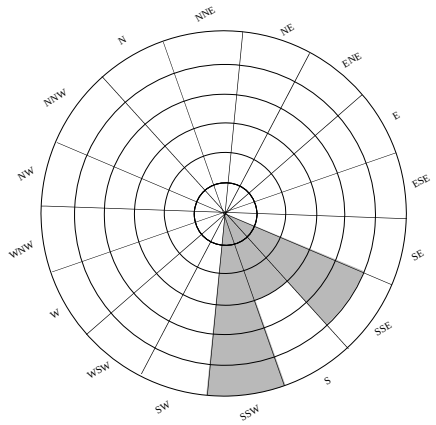
Project No.	Figure Date	Figure
ASE-1	6/15	2a



DETAILED SITE PLAN
WITH UTILITY LINES
Terredev Jefferson LLC Property
645 Fourth St.
Oakland, CA

BLUE ROCK
ENVIRONMENTAL, INC.

Project No.	Figure Date	Figure
ASE-1	6/15	2b



ROSE DIAGRAM OF GROUNDWATER FLOW DIRECTION AT ALLEN PROPERTY FROM 8/07 TO 7/13 (FROM GW MON REPORT FIGS)

MW-1
SOIL EXCAVATION
Approx. location of Former Grove Auto USTs
Aprox. location of Former Grove Auto Dispenser
SB-4
MW-2
MW-3
Aprox. location of Former Grove Auto Dispenser
GROVE AUTO REPAIR
424 MLK Jr. WAY
(CASE #: RO0000582)
EXISTING BUILDING
SB-3
Elevated BART Tracks
BART Tracks
Steep embankment
BART Property
BUILDING
Fourth Street
UST Abandoned In-Place
IW-5
IW-4
IW-3
IW-2
MW-3
ALLEN PROPERTY
325 MLK Jr. WAY
(CASE #: RO0002930)
MW-2^
TPHg <50
B <0.50
MTBE <5.0
MW-1^
TPHg <50
B <0.50
MTBE <5.0
Martin Luther King Jr. Way
SB-7
TPHg = 250,000
B = 15,000
MTBE <40
SB-8
TPHg = 180,000
B = 9,100
MTBE <40
UST Abandoned In-Place
DPE-1^
TPHg = 98,000
B = 14,000
MTBE = 240
DPE-2^
TPHg = 100,000
B = 17,000
MTBE = 120
DPE-3
B-1/CB-1
B-2/CB-2
10,000 µg/L
1,000 µg/L
100 µg/L
10 µg/L
1 µg/L
VP-1
VP-2
VP-3
S-1
S-2
S-3
S-4
S-5
S-6
S-7
S-8
S-9
HALLWAY
OAKLAND CHILDREN'S HOSPITAL
EARLY CHILDHOOD
MENTAL HEALTH SERVICES
645 4th STREET
B-3^
TPHg <50
B <0.50
MTBE <0.50
B-5^
TPHg = 110
B = 1.2
MTBE = 2.7
B-4^
TPHg <50
B <0.50
MTBE <0.50
B-6^
TPHg = 84,000
B = 1,800
MTBE = 5,100
Third Street

EXPLANATION

B-6 ●	SOIL BORING
DPE-3	PROJECT WELL
VP-2 △	SUB-SLAB SOIL VAPOR POINT
S-7 ⊕	PASSIVE SAMPLER
B-6^ TPHg = 84,000 B = 1,800 MTBE = 5.100	TPHg, BENZENE, MTBE (µg/L) ^ INDICATES MOST RECENT AVAILABLE DATA
10 µg/L	ESTIMATED BENZENE ISO-CONCENTRATION (IN µg/L) PASSIVE SAMPLER DATA USED TO INTERPRET PLUME GEOMETRY

BENZENE IN GROUNDWATER MAP - DEC. 2014

Terredev Jefferson LLC Property
645 Fourth St.
Oakland, CA

BLUE ROCK ENVIRONMENTAL, INC.

Project No.	Figure Date	Figure
ASE-1	6/15	3

0 50
APPROXIMATE SCALE IN FEET

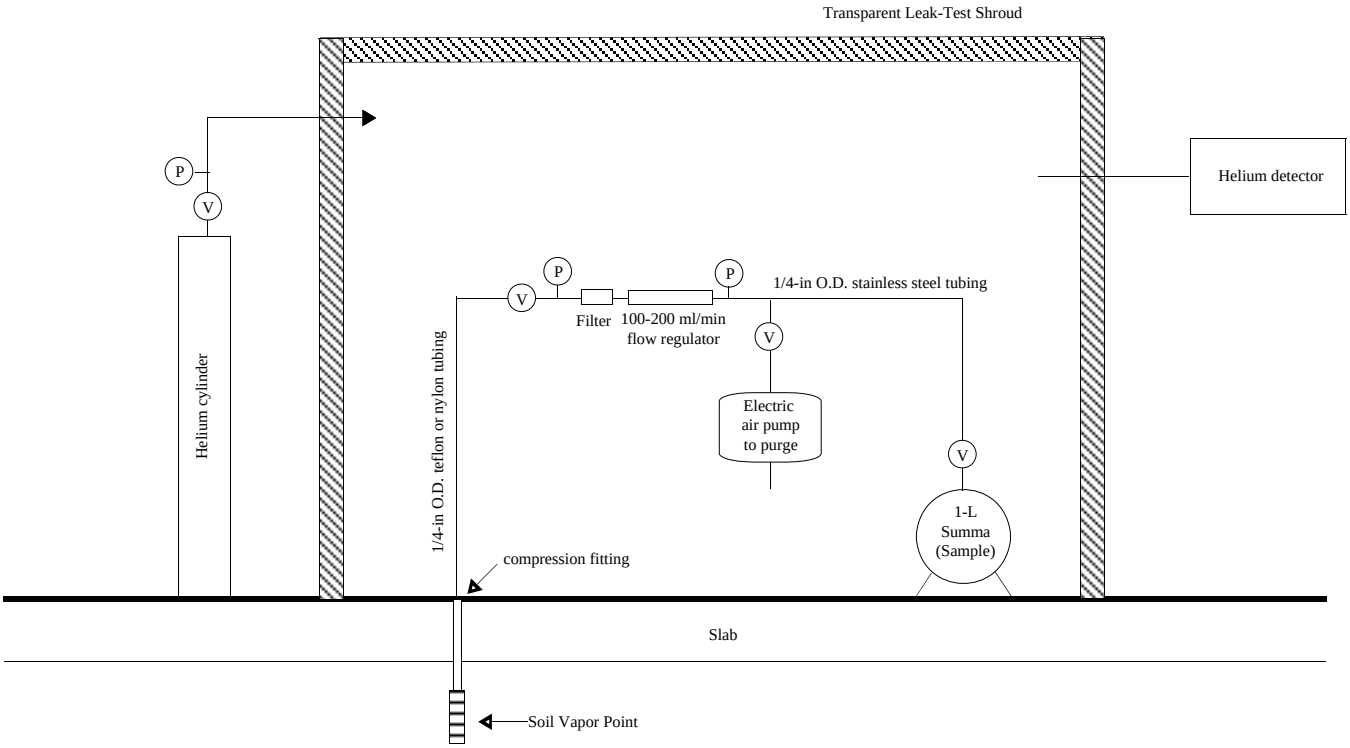
N

EXPLANATION

P PRESSURE/VACUUM GAUGE

V VALVE

NOTE: ALL SAMPLE TRAIN TUBE CONNECTIONS AND VALVES ARE SWAGELOK



NOT TO SCALE

SOIL GAS SAMPLING APPARATUS
Terradev Jefferson LLC
645 4th St.
Oakland, California

BLUE ROCK ENVIRONMENTAL, INC.

Project No.	Figure Date	Figure
ASE-1	6/15	4

TABLE 1
Well Construction Data
Terradev Jefferson, LLC Property
645 Fourth Street
Oakland, CA

Extraction Wells

Well ID	Date Installed	Total Boring Depth (ft bgs)	Casing Diameter (inches)	Screen Depth (ft bgs)	Sandpack Depth (ft bgs)	Bentonite Depth (ft bgs)	Cement Grout Depth (ft bgs)
DPE-1	9/20/10	15	2	8 - 15	7 - 15	5 - 7	0 - 5
DPE-2	9/20/10	15	2	8 - 15	7 - 15	5 - 7	0 - 5
DPE-3	9/20/10	10	2	6 - 10	5 - 10	3 - 5	0 - 3

Vapor Probes

Well ID	Date Installed	Total Probe Depth (in bgs)	Tubing Diameter (inches)	Slab Thickness (in bgs)	Screen Depth (in bgs)	Rubber Plug (in bgs)	Cement Depth (in bgs)
VP-1	6/16/12	9	0.25	6.0	~ 6 - 9	~5.0 - 6.0	0 - 5
VP-2	6/16/12	9	0.25	4.5	~ 6 - 9	~3.5 - 4.5	0 - 3.5
VP-3	6/16/12	9	0.25	4.0	~ 6 - 9	~3.0 - 4.0	0 - 3

Notes:
ft bgs Feet below ground surface.
in bgs Inches below ground surface.

TABLE 2
Soil Sample Analytical Data
Terradev Jefferson, LLC Property
645 Fourth Street
Oakland, CA

Sample ID	Depth (ft bgs)	Sample Date	TPHd (mg/kg)	TPHd w/SGCU (mg/kg)	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE, ETBE, TAMI (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	Napht. (mg/kg)
UST Removal Samples															
8795-EX-W-9'	9	8/23/06	<120	---	**10,000**	**130**	**1,000**	**230**	**1,200**	<12	<100	all<12	---	---	---
8795-EX-E-9'	9	8/23/06	<25	---	**920**	**6.8**	**55**	**18**	**110**	<1.2	<10	all<1.2	---	---	---
Investigation Samples															
DPE-1-7.5	7.5	9/20/10	**810^**	---	**6,500**	**14**	**320**	**180**	**980**	<0.50	<2.5	---	<0.50	**0.50**	---
DPE-1-12	12	9/20/10	**260^**	---	**2,300**	**26**	**160**	**45**	**240**	**0.71**	<1.5	---	<0.30	<0.30	---
DPE-1-15	15	9/20/10	**92^**	---	**770**	**10**	**53**	**15**	**80**	**0.39**	<0.50	---	**0.11**	<0.090	---
DPE-2-6	6	9/20/10	**15**	---	**1.2**	<0.0050	**0.0054**	<0.0050	**0.021**	<0.0050	<0.0050	---	<0.0050	<0.0050	---
DPE-2-11	11	9/20/10	**1,200^**	---	**160,000**	**1,400**	**10,000**	**3,300**	**19,000**	<0.25	<1.5	---	<0.25	**1.8**	---
DPE-2-15	15	9/20/10	**66^**	---	**430**	**3.8**	**25**	**8.3**	**47**	<0.50	<2.5	---	<0.050	<0.50	---
DPE-3-7	7	9/20/10	**260^**	---	**860**	**2.1**	**37**	**19**	**100**	<0.10	<0.50	---	<0.10	<0.10	---
DPE-3-10	10	9/20/10	**800^**	---	**8,900**	**78**	**580**	**180**	**980**	<0.25	<1.5	---	<0.25	**0.82**	---
CB-1-7.5	7.5	2/18/13	**1.2***	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	<0.0050	<0.0050	---
CB-1-9	9	2/18/13	**110^**	---	**1,200**	**2.8**	**55**	**27**	**150**	<0.25	---	---	<0.25	<0.25	---
CB-1-12	12	2/18/13	**880^**	---	**14,000**	**100**	**850**	**180**	**1,400**	**0.53**	---	---	<0.25	**0.86**	---
CB-1-15	15	2/18/13	**89^**	---	**1,000**	**8.4**	**62**	**15**	**100**	<0.050	---	---	<0.050	<0.050	---
CB-2-9	9	2/18/13	**120^**	---	**840**	**0.44**	**17**	**20**	**110**	<0.15	---	---	<0.15	<0.15	---
CB-2-11	11	2/18/13	**110^**	---	**2,700**	**23**	**160**	**48**	**260**	<0.40	---	---	<0.40	<0.40	---
CB-2-15	15	2/18/13	**45^**	---	**380**	**3.9**	**18**	**6.6**	**34**	<0.050	---	---	<0.050	<0.050	---
B-6-6'	6.5	1/11/14	**340^**	**350^**	**1,700**	**0.13**	**8.0**	**12**	**91**	<0.050	<0.25	---	<0.050	<0.050	---
B-6-10.5'	10.5	1/11/14	**280^**	**280^**	**1,500**	**4.1**	**48**	**26**	**130**	<0.25	<1.5	---	<0.25	<0.25	---
SB7-8.5/9	8.5-9	12/29/14	**1.2^**	---	**4.0**	**0.16**	**0.50**	**0.081**	**0.50**	<0.0050	<0.0050	---	<0.0050	**0.0070**	**0.043**
SB7-10.5/11	10.5-11	12/29/14	**1,400^**	---	**19,000**	**150**	**1,100**	**330**	**1,800**	<0.25	<1.5	---	<0.25	**2.5**	**99**
SB7-12.5/13	12.5-13	12/29/14	**310^**	---	**3,600**	**29**	**200**	**59**	**330**	<0.090	<1.5	---	<0.090	**0.46**	**23**
SB-8-8.5/9	8.5-9	12/29/14	**750^**	---	**6,600**	**30**	**290**	**120**	**580**	<0.25	<1.5	---	<0.25	**0.38**	**38**
SB-8 11.5/12	11.5-12	12/29/14	**170^**	---	**1,400**	**6.4**	**54**	**22**	**130**	<0.25	<1.5	---	<0.25	<0.25	**10**
SB-8 14.5	14.5	12/29/14	<1.0	---	<1.0	**0.026**	**0.060**	**0.011**	**0.065**	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050

Notes:

ft bgs	feet below ground surface
mg/kg	milligrams per kilogram
TPHd	total petroleum hydrocarbons as diesel by EPA Method 8015M or 8015B, w/SCGCU = analysis performed after silica-gel clean-up.
TPHg	total petroleum hydrocarbons as gasoline by EPA Method 8260B
BTEX	benzene, toluene, ethylbenzene, and xylenes by EPA Method 8260B
MTBE, TBA, ETBE, DIPE, TAME	methyl tert-butyl ether, tert-butanol, ethyl tert-butyl ether, di-isopropyl ether, tert-amyl methyl ether by EPA Method 8260B,
1,2-DCA, EDB	1,2-dichloroethane, 1,2-dibromoethane by EPA Method 8260B.
µg/L	Micrograms per liter.
<###	Not detected at or above the indicated reporting limit.
^	Laboratory Flag: Hydrocarbons are lower-boiling than typical Diesel Fuel
*	Laboratory Flag: Hydrocarbons are higher-boiling than typical Diesel Fuel
---	Data not available, not monitored, or not sampled

TABLE 3
Groundwater Analytical Data
Terradev Jefferson, LLC Property
645 Fourth Street
Oakland, CA

Sample ID	Sample Date	TOC (ft MSL)	DTW (ft)	LNAPL (ft)	GWE (ft MSL)	TPHd (µg/L)	TPHd w/SGCU (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Napht. (µg/L)
Grab Groundwater Samples																	
B-1-GW*	7/10/09	--	~9.5	--	--	**5,300**	--	**78,000**	**15,000**	**13,000**	**1,700**	**10,500**	**570**	--	--	--	--
B-2-GW*	7/10/09	--	~9.5	--	--	**2,300**	--	**60,000**	**13,000**	**13,000**	**890**	**4,800**	**120**	--	--	--	--
B-3	1/10/14	--	~12	--	--	**58#**	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	--
B-4	1/10/14	--	~12	--	--	**67#**	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	--
B-5	1/10/14	--	~12	--	--	**110#**	<50	**110**	**1.2**	**1.4**	**0.65**	**4.5**	**2.7**	**200**	**43**	<0.50	--
B-6 (2)	1/11/14	--	~11	--	--	**5,200^**	**360^**	**84,000**	**1,800**	**7,600**	**2,400**	**12,000**	**5,100**	**180J**	**110**	<20	--
SB-7	12/29/14	--	~9	--	--	**60,000^**	--	**250,000**	**15,000**	**34,000**	**4,000**	**20,000**	<40	<200	**130**	**240**	**1,000**
SB-8	12/29/14	--	~9	--	--	**16,000^**	--	**180,000**	**9,100**	**22,000**	**3,000**	**16,000**	<40	<200	**130**	**140**	**1,200**
Monitoring Well Data																	
DPE-1	9/22/10	15.81	9.21	0.00	6.60	<4,000 (1)	--	**120,000**	**25,000**	**18,000**	**3,300**	**17,000**	**320**	**320**	**620**	<40	--
Screen	9/28-10/3/10	15.81	--	--	--	5-day HVDPE Remedial Event											
~8' - 15'	10/18/10	15.81	9.26	sheen	6.55	<4,000 (1)	--	**97,000**	**15,000**	**20,000**	**1,600**	**11,000**	**490**	**270**	**390**	<40	--
	1/20/11	15.81	8.56	sheen	7.25	<3,000 (1)	--	**83,000**	**12,000**	**16,000**	**2,000**	**11,000**	**270**	<200	**220**	<40	--
	7/6/12	15.81	8.85	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/9-7/24/12	15.81	--	--	--	15-day HVDPE Remedial Event											
	8/12/12	15.81	9.03	0.00	6.78	<2,000 (1)	--	**71,000**	**7,500**	**9,800**	**1,000**	**6,500**	**280**	**89**	**190**	<15	--
	2/11/13	15.81	8.74	0.00	7.07	<3,000 (1)	--	**81,000**	**9,400**	**14,000**	**1,800**	**10,000**	**240**	**110**	**210**	<15	--
	1/10/14	15.81	9.84	0.00	5.97	**1,600^**	**56^**	**98,000**	**14,000**	**13,000**	**2,100**	**12,000**	**270**	**200**	**270**	<25	--
DPE-2	9/22/10	16.01	9.44	0.00	6.57	<4,000 (1)	--	**110,000**	**21,000**	**18,000**	**3,100**	**14,000**	**200**	**260**	**540**	**110**	--
Screen	9/28-10/3/10	16.01	--	--	--	5-day HVDPE Remedial Event											
~8' - 15'	10/18/10	16.01	9.48	sheen	6.53	<5,000 (1)	--	**84,000**	**11,000**	**16,000**	**1,600**	**9,200**	**77**	<200	**220**	**77**	--
	1/20/11	16.01	8.77	sheen	7.24	<5,000 (1)	--	**94,000**	**12,000**	**19,000**	**2,500**	**13,000**	**64**	<200	**220**	**88**	--
	7/6/12	16.01	9.06	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/9-7/24/12	16.01	--	--	--	15-day HVDPE Remedial Event											
	8/12/12	16.01	9.27	0.00	6.74	<2,000 (1)	--	**70,000**	**9,900**	**16,000**	**1,700**	**9,600**	**54**	<200	**160**	**56**	--
	2/11/13	16.01	8.95	0.00	7.06	<4,000 (1)	--	**60,000**	**7,300**	**9,500**	**1,400**	**7,000**	**34**	<90	**120**	<20	--
	1/10/14	16.01	10.08	0.00	5.93	**2,800^**	<50	**100,000**	**17,000**	**15,000**	**2,400**	**11,000**	**120**	**100**	**220**	**27**	--
DPE-3	9/22/10	15.87	9.43	0.00	6.44	insufficient water column for sampling (i.e. <0.5-ft)											
Screen	9/28-10/3/10	15.87	--	--	--	5-day HVDPE Remedial Event											
~6' - 10'	10/18/10	15.87	9.35	0.00	6.52	insufficient water column for sampling (i.e. <0.5-ft)											
	1/20/11	15.87	8.51	**0.13**	7.36	no groundwater sample collected, LNAPL present.											
	7/6/12	15.87	8.65	0.00	--												
	7/9-7/24/12	15.87	--	--	--	15-day HVDPE Remedial Event											
	8/12/12	15.87	9.02	sheen	6.85	<200,000 (1)	--	**190,000**	**1,400**	**7,800**	**3,700**	**29,000**	**27**	**120**	**40**	**130**	--
	2/11/13	15.87	8.34	sheen	7.53	<40,000 (1)	--	**130,000**	**4,700**	**9,000**	**1,900**	**25,000**	<40	<200	**54**	**80**	--
	1/10/14	15.87	Dry	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

Screen	Well screen depth interval.
TOC	Top of casing relative to feet above mean sea level (ft MSL) (ref NAVD88).
DTW	Depth to water (for borings DTW shows "depth to water" and "depth to bottom of boring")
LNAPL	Light non-aqueous phase liquid petroleum, "sheen" is an immeasurable thickness (i.e. <0.01-ft)
GWE	Groundwater Elevation (TOC-DTW) in ft MSL. (This does not account for LNAPL thickness, if present).
TPHd	Total petroleum hydrocarbons as diesel by EPA Method 8015M, *8015B. SGCU = Silica-gel cleanup prior to analysis.
TPHg	Total petroleum hydrocarbons as gasoline by EPA Method 8260B, *8015B.
BTEX	Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8260B, *8021B.
	Note: total xylenes equal the sum of sepearate isomers reported for the 7/09 samples.
MTBE	Methyl tert-butyl ether by EPA Method 8260B, * 8021B.
TBA	Tert-butanol by EPA Method 8260B.
1,2-DCA, EDB	1,2-dichloroethane, 1,2-dibromoethane by EPA Method 8260B.
µg/L	Micrograms per liter.
<###	Not detected at or above the indicated reporting limit.
---	Data not available, not monitored, or not sampled
^	Laboratory Flag: Hydrocarbons are lower-boiling than typical Diesel Fuel
#	Laboratory Flag: Discrete peaks in Diesel range, atypical for Diesel Fuel
J	Laboratory Flag: TBA concentration may be biased slightly high due to conversion of a small fraction of MTBE to TBA during water sample analysis.
(1)	Method detection limit increased due to ineterference from gasoline range hydrocarbons
(2)	Repeat analysis by Method 8260B yielded inconsistent results. The concentrations appear to vary between bottles. The highest valid result is reported.

Table 4
SUB-SLAB VAPOR SAMPLE ANALYTICAL DATA
Terradev Jefferson LLC Property
645 Fourth St.
Oakland, CA

			Consituent Concentrations									Soil Gas Concentrations			Tracer Gas			Sample Can Vacuum	
Sample I.D.	Sample Date	sample container	TPHg (µg/m^3)	B (µg/m^3)	T (µg/m^3)	E (µg/m^3)	X (µg/m^3)	MTBE (µg/m^3)	Naphthalene (µg/m^3)	1,2-DCA (µg/m^3)	EDB (µg/m^3)	O_2 (%)	CO_2 (%)	CH_4 (%)	In Shroud He - Avg (%)	In Sample He (%)	Leak Percent^ Leak (%)	End of Sampling ("Hg)	Arrival at Lab ("Hg)
VP-1	6/16/12	1-L	1,300	38	120	21	138	7.3	<0.09	<0.14	<0.050	15	0.096	<0.008	22.2	2.4	10.8%	~8	~6
VP-1	9/22/12	1-L	<330	<8.0	<9.4	<11	<22	<9.0	<13	<10	<3.8	19	0.78	<0.008	20.0	0.19	1.0%	~5	~6
VP-1	1/25/14	1-L	<330	<8.0	<9.4	<11	<22	<9.0	<13	<10	<3.8	14	4.7	<0.008	5.7	0.023	0.40%	~5	~5
VP-2	6/16/12	1-L	1,200	66	25	2.6	8.2	<6.3	<0.090	<0.14	<0.050	11	1.3	<0.009	13.8	<0.003	<0.02%	~8	~7
VP-2	9/22/12	1-L	<330	<8.0	<9.4	<11	<22	<9.0	<13	<10	<3.8	14	4.0	<0.008	19.0	<0.003	<0.02%	~7	~6
VP-2	1/25/14	1-L	<330	<8.0	<9.4	<11	<22	<9.0	<13	<10	<3.8	12	7.4	<0.008	6.6	<0.003	<0.05%	~5	~5
VP-3	6/16/12	1-L	960	16	19	2.9	20	<5.8	<0.08	<0.13	<0.050	16	0.029	<0.008	23.6	2.6	11%	~5	~5
VP-3	9/22/12	1-L	<330	<8.0	<9.4	<11	<22	<9.0	<13	<10	<3.8	20	0.46	<0.008	15.7	0.036	0.23%	~5	~6
VP-3	1/25/14	1-L	<330	<8.0	<9.4	<11	<22	<9.0	<13	<10	<3.8	19	1.5	<0.008	6.6	0.012	0.18%	~5	~5
ESLs Comm/Indus Soil Gas			*50,000*	*420*	*1,300,000*	*4,900*	*220,000*	*47,000*	*360*	*580*	*170*								
CHHSLs Comm /Indus Soil Gas			*NA*	*122*	*378,000*	*NA*	*879,000*	*13,400*	*106*	*167*	*NA*								

Notes:

TPHg	Total Petroluem Hydrocarbons as gasoline by EPA Method TO-15
BTEX, MTBE	Benzene, Toluene, Ethylbenzene, and Total Xylenes, Methyl tert-Butyl Ether by EPA Method TO-15(M) GC/MS (note: Xylene number shown in table is the sum of xylene isomers reported by lab)
Naphthalene	Naphthalene by EPA Method TO-15
1,2-DCA, EDB	1,2-dichloroethane, 1,2-dibromoethane by EPA Method TO-15
O_2, CO_2, CH_4, He	Oxygen, Carbon Dioxide, Methane, and Helium by modified ASTM D-1946
µg/m^3	Micrograms per cubic meter
<#.##	Compound not detected at or above the reported laboratory detection limit
ESLs	Environmental Screening Levels for Soil Vapor (SFBRWQCB 2013)
CHHSLs	California Human Health Screening Levels for Soil Vapor (CalEPA/OEHHA 2005)
Tracer Gas in Shroud	Concentration range of tracer gas in shroud recorded during sample collection. Average = (Max - Min) / 2
Tracer Gas in Sample	Concentration of tracer gas in sample as detected by lab analysis.
Tracer Gas Leak into Sample	If helium was detected in the sample, the concentration measured in the sample was divided by the average concentration in the shroud (and multiplied by 100 to convert to percent).
	^ a leak of less than 5% is considered acceptable for data evaluation.
	Shaded samples indicate a tracer gas leak of more than 5%.

TABLE 5
Passive Soil Gas Sample Analytical Data
Terradev Jefferson, LLC Property
645 Fourth Street
Oakland, CA

Sample ID	Sample Depth (ft bgs)	Install Date	Retrieval Date	TPH (µg)	DRPH (µg)	GRPH (µg)	B (µg)	T (µg)	E (µg)	X (µg)	MTBE (µg)	1,2-DCA (µg)	Napht. (µg)
S-1	~2 - 3	2/7/15	2/14/15	**13.33**	**2.90**	**10.86**	**0.04**	**0.03**	**0.02**	**0.17**	**0.25**	**0.13**	**0.20**
S-2	~2 - 3	2/7/15	2/14/15	**273.77**	**59.21**	**223.55**	**48.01**	**209.52**	**123.77**	**505.33**	<0.02	**3.97**	**35.44**
S-3	~2 - 3	2/7/15	2/14/15	**183.36**	**72.98**	**115.01**	**33.38**	**127.13**	**113.16**	**367.48**	<0.02	**2.35**	**37.35**
S-4	~2 - 3	2/7/15	2/14/15	**1.00**	<0.50	**0.66**	**0.02**	**0.02**	<0.02	**0.18**	<0.02	**2.35**	<0.50
S-5	~2 - 3	2/7/15	2/14/15	**220.53**	**107.91**	**117.33**	**20.23**	**90.58**	**24.79**	**369.71**	<0.02	**2.01**	**30.63**
S-6	~2 - 3	2/7/15	2/14/15	**169.75**	**54.69**	**119.88**	**15.94**	**29.38**	**31.45**	**337.65**	<0.02	**0.90**	**2.45**
S-7	~2 - 3	2/7/15	2/14/15	**1.03**	**0.74**	<0.50	**0.07**	**0.15**	**0.06**	**0.59**	<0.02	<0.02	<0.50
S-8	~2 - 3	2/7/15	2/14/15	**245.41**	**106.20**	**145.04**	**32.86**	**103.45**	**76.32**	**421.35**	<0.02	**2.53**	**36.09**
S-9	~2 - 3	2/7/15	2/14/15	<0.50	<0.50	<0.50	**0.36**	**0.36**	**0.03**	**0.16**	<0.02	**0.02**	<0.50

Notes:

ft bgs	feet below ground surface
µg	micrograms
TPH	Total petroleum hydrocarbons by SPG-WI-0292
DRPH	Diesel range petroleum hydrocarbons by SPG-WI-0292
GRPH	Gasoline range petroleum hydrocarbons by SPG-WI-0292
BTEX	benzene, toluene, ethylbenzene, and xylenes by SPG-WI-0292
MTBE	methyl tert-butyl ether by SPG-WI-0292
1,2-DCA	1,2-dichloroethane by SPG-WI-0292
Naphthalene	Naphthalene by SPG-WI-0292
<###	Not detected at or above the indicated reporting limit.

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

April 22, 2015

Ms. Sara May (*Sent via E-mail to: smay@metrovation.com*)
Terradev Jefferson LLC
c/o Metrovation
580 Second Street
Oakland, CA 94607

Subject: Case File Review for Fuel Leak Case No. RO0003001 and GeoTracker Global ID T10000001072, Terradev Jefferson LLC Property, 645 Fourth Street, Oakland, CA 94607

Dear Ms. May:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above referenced site including the recently submitted document entitled, "*Additional Site Characterization Report,"* dated March 27, 2015 and received by ACEH on March 31, 2015 (Report). The Report, which was prepared on your behalf by Blue Rock Environmental, Inc., presents results from two soil borings advanced in Fourth Street and passive soil vapor sampling at nine locations inside the building. Based on these results, the Report concludes that a gasoline source upgradient of the site appears to be present. The only known release of gasoline directly upgradient of the site is from a former underground storage tank (UST) and dispensers at the Grove Auto Repair site (ACEH fuel leak case RO0000582 closed on November 4, 1993) at 424 Martin Luther King Jr. Way near the intersection of Fifth Street and Martin Luther King Jr. Way. The former UST is approximately 250 feet from the closed-in-place UST at the site and the nearest dispenser is approximately 210 feet from the closed-in-place UST at the site. We have reviewed the Report and do not find sufficient basis to conclude that there is an upgradient gasoline source affecting the site. Although it cannot be definitively concluded that a gasoline source is not present north of the site, the nature and extent of contamination is much more consistent with a source of gasoline in the area of the closed in place UST at the site based on the following:

1. Light nonaqueous phase liquids (LNAPL) have been measured at thicknesses up to 0.13 feet in groundwater monitoring wells adjacent to the closed-in-place UST. Based on the highly elevated concentrations of hydrocarbons detected in soil and groundwater in upgradient borings SB-7 and SB-8, it appears that the capillary fringe in the area of these borings has been affected by LNAPL. LNAPL migrates downward until encountering a physical barrier or are affected by buoyancy near the water table. Once the capillary fringe is reached, the NAPL migrates laterally as a free-phase layer along the upper boundary of the water-saturated zone due to gravity and capillary forces. Although the principal migration may be in the direction of the maximum decrease in water table elevation, some migration may occur initially in the upgradient and cross gradient directions. As the LNAPL migrates laterally, infiltrating precipitation and passing groundwater in contact with the LNAPL will dissolve soluble components and form a dissolved phase plume. It appears that the petroleum hydrocarbons detected in borings SB-7 and SB-8 are from LNAPL migration north from the closed in place UST at the site. Please see technical comment 3 below regarding utilities in the area of the closed-in-place UST which potentially could act as conduits to utilities beneath Fourth Street and borings SB-7 and SB-8.

2. LNAPL was not reported at 424 Martin Luther King Jr. Way. Furthermore, it seems implausible that LNAPL would travel 250 feet from a former UST at 424 Martin Luther King Jr. Way to the specific area of the closed in place UST at the site.

3. The maximum concentration of benzene detected in groundwater during the final sampling event at 424 Martin Luther King Jr. Way on March 7, 1988 was 13,000 micrograms per liter (µg/L). Benzene concentrations in groundwater at the site are similar to or higher than 13,000 µg/L. Some attenuation would be expected over this distance and time period.

4. There is no evidence of a migration pathway from the former UST and dispensers at 424 Martin Luther King Jr. Way to the site. Soil boring SB-3, which is located approximately 50 feet southeast of the former UST at 424 Martin Luther King Jr. Way, is located between the former UST and dispensers at 424 Martin Luther King Jr. Way and the site. If a plume migrated from 424 Martin Luther King Jr. Way to the site, some impacts would be observed in boring SB-3. Two soil samples collected at depths of 9-9.5 feet bgs and 14-14.5 feet bgs from boring SB-3 did not contain petroleum hydrocarbons at concentrations above reporting limits.

5. Two mobile dual-phase extraction (DPE) events were conducted at the site in October 2010 (5 days) and July 2012 (15 days). During the DPE events, an estimated 340 to 423 pounds of petroleum hydrocarbons were removed. Following the DPE events, groundwater concentrations rebounded indicating that a significant mass still remains. It appears highly unlikely that the significant mass of hydrocarbons removed and remaining following 20 days of DPE in the area of the closed in place UST is related to an off-site source more than 200 feet away.

6. A review of historic aerial photos for the site indicates that the current building was constructed sometime between 1980 and 1988. Prior to that time, the area adjacent to the closed in place UST appeared as an open yard area and it is possible the tank could have been in use. The UST at 424 Martin Luther King Jr. Way was removed in 1983. Therefore, both tanks may have been removed from service around the same time. MTBE detected in groundwater at the site may be from the closed in place UST at the site and does not necessarily indicate an off-site source. Lead scavengers have been detected at elevated concentrations in site groundwater indicating that releases also occurred prior to the early 1980s.

From the facts and observations above, it appears that the most likely source of gasoline beneath the site is the closed-in-place UST at the site. We have also located and reviewed additional information from the City of Oakland case files on the Grove Auto Repair site at 424 Martin Luther King Jr. Way. Those additional reports have been uploaded to the case file for ACEH case RO000582 and can be reviewed on the ACEH website (http://www.acgov.org/aceh/lop/ust.htm). If there is additional evidence to indicate that another UST was located closer to the site than the former UST at 424 Martin Luther King Jr. Way, please present that information.

Based on review of the passive soil vapor sample data, it appears that further evaluation of the potential for vapor intrusion is necessary as described in technical comment 1 below. The passive soil vapor data also appear to indicate that groundwater contamination may extend continuously from the closed in place UST at the site to boring B-6. Please see technical comment 2 below regarding further plume delineation.

TECHNICAL COMMENTS

1. **Passive Soil Vapor Sampling Results in Area of Previous Sub-slab Vapor Sampling.** The passive soil vapor sampling results within the building were variable with benzene concentrations ranging from 0.04 µg at S-1 to 48.01 µg at S-2. Passive sampling location S-1 is the nearest location to the closed-in-place UST and is also the nearest passive sampling location to previous active soil vapor sampling locations VP-1, VP-2, and VP-3. Based on a comparison of S-1 to other locations within the building, it is possible that sub-slab soil vapor samples collected within the area of S-1 may be biased low. Therefore, we request that you conduct additional evaluation of the potential for vapor intrusion within the building. Please present plans for the evaluation in a Work Plan no later than June 24, 2015. The evaluation should include additional sub-slab vapor sampling and indoor air sampling.

2. **Plume Delineation.** Passive soil vapor samples S-2, S-3, S-5, S-6, and S-8 within the interior portion of the building, had higher concentrations of total petroleum hydrocarbons and benzene that the other four passive soil vapor samples. This distribution of higher concentrations may indicate that the plume extends continuously from the closed-in-place UST to boring B-6. Elevated concentrations of TPHg and benzene were detected in groundwater at B-6. No sampling locations are located south of B-6 to define the extent of the plume. We request that you include plans in the Work Plan requested below to define the extent of the plume by collecting groundwater samples south of the building on Third Street.

3. **Utilities in Fourth Street.** A review of the Geophysical Survey Map in Appendix A of the "*Report for Geophysical Survey and Additional Site Characterization Workplan,"* dated September 18, 2014 indicates that the geophysical survey identified utility lines either below or above the closed-in-place UST at the site that appeared to extend beneath Fourth Street. These utility lines potentially could provide conduits between the closed-in-place UST and utilities beneath Fourth Street. Please review available information on the locations, size, and depths, of utility lines in the vicinity of the closed-ibn-place UST and present the results of your review in the Work Plan requested below. Please propose any recommended additional investigation of the utilities to evaluate the potential for the utilities to act as conduits.

TECHNICAL REPORT REQUEST

Please upload technical reports to the ACEH ftp site (Attention: Jerry Wickham), and to the State Water Resources Control Board's GeoTracker website according to the following schedule and file-naming convention:

- **June 24, 2015** – Work Plan
  File to be named: WP_R_yyyy-mm-dd RO3001

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org. Online case files are available for review at the following website: http://www.acgov.org/aceh/index.htm.

Sincerely,

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

Attachment: Responsible Party(ies) Legal Requirements/Obligations

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Markus Niebanck, Amicus, 580 Second Street, Suite 260, Oakland CA 94607 (*Sent via E-mail to: markus@amicusenv.com*)

Brian Gwinn, Blue Rock Environmental, Inc., 1169 Chess Drive, Suite C, Foster City, CA 94404 (*Sent via E-mail to: brian@bluerockenv.com*)

Michelle Heckle, Children's Hospital & Research Center, 747 52nd Street, Oakland, CA 94609

Jerry Wickham, ACEH (*Sent via E-mail to: jerry.wickham@acgov.org*)

GeoTracker, eFile

Attachment 1

Responsible Party(ies) Legal Requirements / Obligations

REPORT REQUESTS

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	**REVISION DATE:** May 15, 2014
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010, July 25, 2010
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- **Please do not submit reports as attachments to electronic mail.**
- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection**.
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- **Signature pages and perjury statements must be included and have either original or electronic signature.**
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted**.
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:

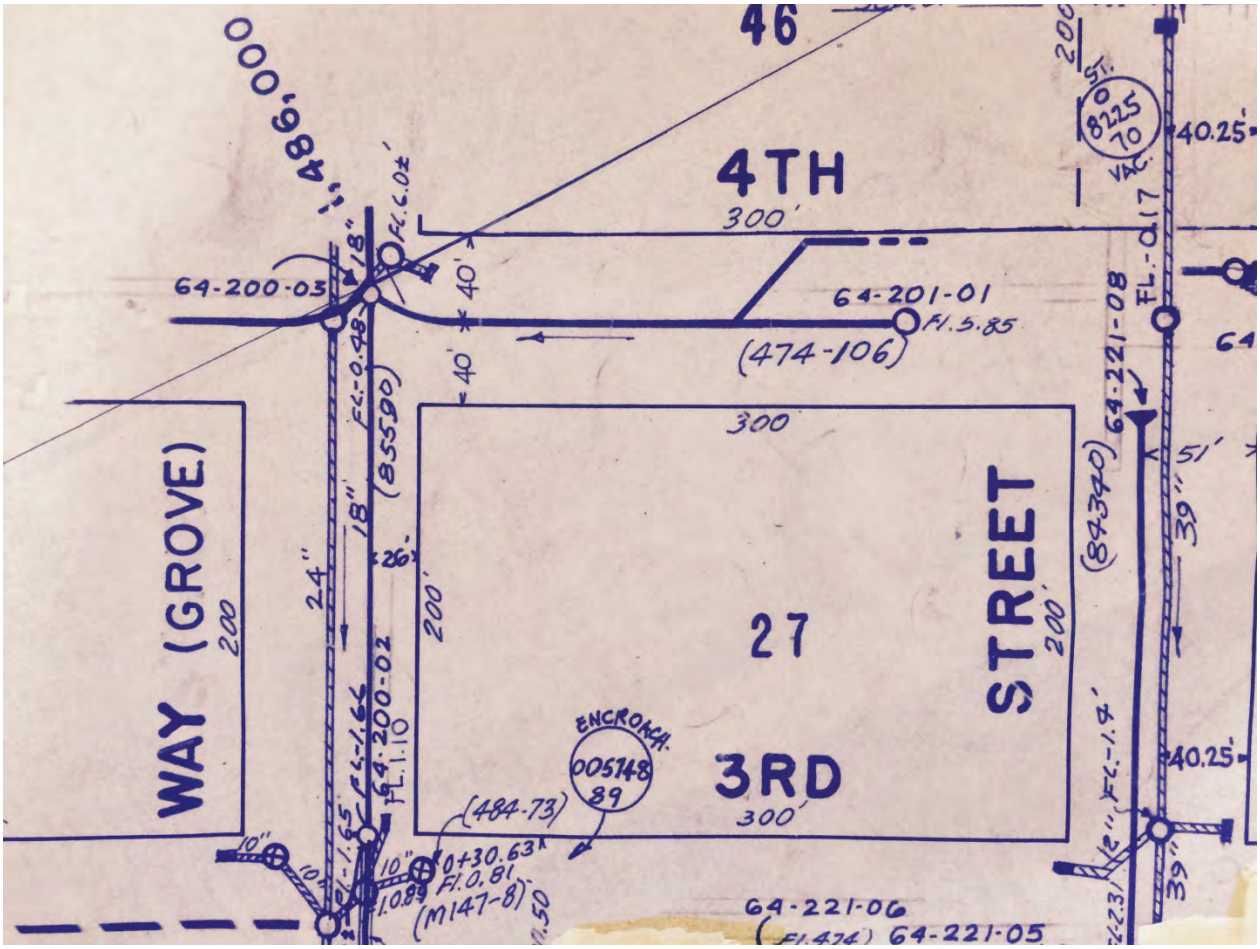
  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Submission Instructions

1) Obtain User Name and Password
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to deh.loptoxic@acgov.org
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for**.

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
   b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to deh.loptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
   d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.



City of Oakland Sewer Map #183