METROVATION

October 18, 2012

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
Second Sub-Slab Soil Vapor Sampling Report dated October 18, 2012

OAKLAND IRONWORKS BUILDING
580 SECOND STREET, SUITE 260, OAKLAND CA 94607 TELEPHONE (510) 839-4000 FAX (510) 465-4472

BLUE ROCK ENVIRONMENTAL, INC.

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

October 18, 2012

Re: Second Sub-Slab Soil Vapor Sampling Report
Terradev Jefferson LLC Property
645 4th Street, Oakland, CA 94607
Fuel Leak Case No. RO0003001
Blue Rock Project No. ASE-1

Dear Mr. Wickham,

This report, prepared by Blue Rock Environmental, Inc. (Blue Rock) on behalf of Terradev Jefferson, LLC, presents the results of the second sub-slab vapor sampling at the referenced site which was conditionally approved by the Alameda County Health Care Services Agency – Environmental Health Services (ACHCSA) in a letter dated May 16, 2012.

Background

Site Description and UST History

The site is located southeast of the intersection of 4th Street and Martin Luther King Jr. Way in Oakland, California (Figure 1). 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 2). The UST is located on the upgradient edge of a developed city block.

In their *Tank Closure Report* dated September 21, 2006, Golden Gate Tank Removal, Inc. (GGT) 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 (Figure 2).

GGT abandoned the UST in place by triple washing followed by filling to capacity with concrete slurry because of structural considerations due to the proximity of the UST to the building foundation. Abandonment was performed with the permission and under the oversight of the City of Oakland Fire Prevention Bureau.

Two soil samples were collected from below the UST at a depth of 9 ft bgs during abandonment activities. Both samples contained elevated concentrations of total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene, and xylenes (BTEX); however, TPH as diesel (TPHd) and the five fuel oxygenates MTBE, TBA, ETBE, DIPE, and TAME were not detected (Table 2). No groundwater was encountered during abandonment activities, though the soil samples collected beneath the tank were reported as "wet".

Summary of Investigation Activities

Subsurface investigation began in 2009. A total of two soil borings have been drilled (B-1 and B-2) and 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. A summary of well construction details is included in Table 1, and summaries of soil, groundwater, and sub-slab soil vapor sample analytical data are included in Tables 2, 3, and 4, respectively.

Site Conceptual Model

The site conceptual model for the project was initially developed by Amicus in their September 13, 2009 correspondence. The following section presents a summary of the current site conceptual model, which will be modified as new information regarding site conditions is acquired.

The subject site is located in a commercial/industrial neighborhood along the San Francisco Bay-Margin. The site is underlain by sediments characterized as silty and clayey sand with some layers of sandy clay and sand to a depth of 20 ft bgs (the maximum depth previously explored) and groundwater is present in unconfined conditions at a depth of approximately 9 ft bgs. Groundwater flows generally to the southeast, towards the estuary, based on information from nearby sites.

Gasoline range hydrocarbons are present in soil and groundwater proximal to the abandoned UST. Interestingly, the contaminant signature also includes MTBE, a gasoline additive not used abundantly in California until the early/mid 1990s (MTBE became a mandated addition to California gasoline following passage of the Clean Air Act Amendments in 1990). Although it is uncertain when the subject UST was removed from service, it is expected that it was not in service during MTBE's lifespan as a gasoline additive.

The abandoned UST is located beneath the sidewalk along 4th Street, at the upgradient edge of a city block. The location of densely packed, low ceiling (occupied) buildings prohibits implementation of a traditional environmental investigation (i.e. an array of downgradient borings and wells). The nearest location for the construction of downgradient monitoring wells is the street or sidewalk along 3rd Street, on the other side of the city block. Review of the results of UST studies at nearby sites (Allen property at 345 Martin Luther King Jr. Way and Markus Hardware at 632-638 Second Street) suggest that a 3rd Street location for downgradient monitoring wells for would simply be too far from the expected downgradient edge of the plume to serve any practical purpose. Yet, the results of corrective action at nearby sites can be used to predict aspects of the subject case.

The Allen property, located across Martin Luther King Jr. Way (formerly Grove Street), provides a useful example. Contamination originating from a 10,000-gallon UST at that property extended approximately 75 feet downgradient. According to Allen property reports, a 10,000-gallon UST was used at that property to fuel fleet vehicles prior to its in-place abandonment. Available reports do not describe the installation date, throughput, or contents of the tank; however, the analytes detected in proximal groundwater suggest the tank may have held gasoline. It is notable that the UST at the subject site is much smaller than the Allen UST, and not obviously associated with a business employing a fleet of delivery trucks (implying a possibly lower throughput). Consequently, a conservative approximation of Terradev migratory extent may be the extent of migration of the Allen release (i.e. approximately 75 feet downgradient of the UST). This approximation is clearly far from the 3rd Street edge of the developed block, which is approximately 235 feet downgradient of the UST. 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. Residual hydrocarbons in soil and groundwater may represent an exposure risk to construction or utility workers, and serve as a source for vapor intrusion of adjacent buildings.

Blue Rock understands that an upgradient property at the corner of 5th Street and Martin Luther King Jr. Way was formerly used as a gas station, the tanks for which were removed many years ago under Alameda County oversight. Additional data is not currently available to evaluate if the downgradient extent of any impact from that property has encroached onto the subject site.

Recommended Source Area Remediation

Amicus evaluated investigative and remedial options available at the site in the 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 ACHCSA 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 extraction rate of nearly 35 lbs/day. A total of approximately 7,950 gallons of water were produced by the HVDPE remedial event, which were transported to the Seaport Environmental facility in Redwood City, California for disposal. The average water production rate was ~1.1 gpm.

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 (15days). 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 continued to be the most productive 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 8.5 to 9 ft bgs, and the no LNAPL was observed in any of the wells. The total influent TPHg level was 1,200 ppmv at the start of the event and declined to 430 ppmv by the end of the event. The ending mass recovery 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). CalClean estimates 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 HVDPE Treatment Results

The 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 would likely not be cost effective.

Initial Vapor Intrusion Evaluation

In June 2012, Blue Rock installed and sampled three sub-slab soil vapor points (VP-1 through VP-3) inside the building adjacent to the closed UST (Figure 2). The points are located between approximately 6 and 38 feet south to southeast of the UST. The initial results did not indicate a vapor intrusion risk based on comparison to Shallow Soil Gas ESLs from Table E of *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Interim 2007 (Revised 2008)* and 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 *Sub-Slab Soil Vapor Sampling Report* dated July 7, 2012.

Second Sub-Slab Soil Vapor Sampling Event

Purpose and Scope

The site activities described below were designed to comply with the scope of work requested in the ACHCSA letter dated March 22, 2012 and conditionally approved in their May 16, 2012 letter to evaluate potential vapor intrusion risk associated with the closed UST.

Soil Vapor Point Sampling Equipment

The sample train for soil vapor sampling consists of tubing, connectors, valves, and vacuum source (Figure 3). All gauges and canisters were connected by laboratory-supplied stainless steel tubing and dedicated flexible Teflon or nylon tubing. The sample train was assembled using dedicated ¼-inch (outer diameter) tubing for all vapor sampling at this site. Swagelok® connectors were used for all connections between tubing and other sampling components. A flow regulator of 100 – 200 mL/min was placed in-line between the manifold and the downhole side Swagelok® valve. Sampling equipment was inspected to ensure tight fittings between all components. A shroud was placed over the wellhead and the entire sampling train.

Leak Testing and Tracer Gas

The sampling manifold was leak tested by inducing a vacuum on the manifold. In preparation for manifold leak testing, the downhole side Swagelok® valve remained closed, as did the valves going to the purge and sample ends of the sample train. To commence leak testing, an electric air pump was connected to the purge valve end of the sample train. The purge valve was opened and the air pump turned on to induce a vacuum of approximately 30" Hg on the assembly, and the purge valve was closed again. The vacuum on the manifold assembly was monitored for at

least 15 minutes. The manifold was 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 were tight, soil vapor purging and sampling activities were performed.

During sample collection, helium (He) was used as a tracer gas to test for air leakage into the sampling system. The inner-shroud environment was enriched with helium supplied by a cylinder. The helium concentration inside the shroud was maintained at a minimum of 5% to 10%, so as to have detectable levels of tracer gas should leakage into the sampling train occur.

Vapor Point Purging, Sampling Activities, and Analysis

The laboratory (Analytical Sciences) supplied the flow controller and sample canisters. The initial and final vacuum, start and finish times, and helium tracer gas percentages inside the shroud were documented (see attached field sheets).

Prior to collecting a vapor sample, the vapor points were purged to ensure that the vapor samples were representative of actual shallow soil vapor concentrations. The dead-space volume for each vapor probe is approximately 0.02-liters (i.e. the total volume of casing, annular pore space, and sample train tubing). For the purpose of this sampling, approximately three dead-space volumes (or 0.06–liters) were purged using an electric air pump and known flow limits of the manifold regulators. Three dead-space volumes were purged from each point after approximately 20 seconds. After purging was completed, the sample train purge valve was closed in preparation for sample collection.

All samples were collected in clean, laboratory-supplied 1-liter Summa® canisters immediately after purging. Each sample canister had a starting vacuum of approximately 30 "Hg. To collect a sample, the valve on the sample Summa® canister was opened and the time and initial vacuum documented. As the canister was being filled, the vacuum gauge on the flow controller was observed to ensure that the vacuum in the canister was decreasing over time. When the vacuum on the sample canister decreased to approximately 5 "Hg, the valve was closed and sampling ended. Helium tracer gas concentrations were monitored inside the shroud during sample collection using a field meter. Helium concentrations in the shroud for this entire sampling event ranged from 13.8% to 27.9%.

The samples were labeled, documented on a chain-of-custody form, and transported to Analytical Sciences for analysis.

The soil vapor samples were analyzed by Analytical Sciences for concentrations of:

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

Vapor Point Air Sample Analytical Results

Neither TPHg, BTEX, MTBE, naphthalene, 1,2-DCA, nor detected in any of the samples from the three vapor points (Table 4).

Very low levels of helium were detected in two of the three samples: VP-1 and VP-3 at concentrations of 0.19% and 0.036%, respectively. The concentration of helium in the sample divided by the concentration of helium in the shroud provides a measure of the proportion of the sample attributable to leakage. In this case that equates to 0.95% for VP-1 (0.19% in the sample divided by the 20.0% average in the shroud), and 0.23% for VP-3 (0.036% in the sample divided by the 15.7% average in the shroud). Small leaks may be considered acceptable, as long as the magnitude of the leak is small compared to other unavoidable sources of bias and variability in sampling and analytical data. Laboratories, for example, typically assign a relative percent difference of +/- 25% for duplicate samples as acceptable. Therefore, the apparent leaks in the VP-1 and VP-3 samples of less than 1% are considered to be insignificant. Sub-slab vapor sampling data are shown in Table 4, and copies of the laboratory report and chain-of-custody form are attached.

Vapor Intrusion Risk Evaluation

The sub-slab vapor data from both the June and September 2012 events were compared to Shallow Soil Gas ESLs from Table E of *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Interim 2007 (Revised 2008)* and CHHSLs published in *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties (CALEPA 2005)* for commercial / industrial land use scenarios. None of the constituents or detection limits (if the analyte was not detected) exceeded the screening levels, which preliminarily indicates no vapor intrusion risk is present. For the sake of being conservative, the concentrations or detection limits in VP-1 and VP-3 were also adjusted upward to account for the proportion of the sample that was attributable to leak volume. The upwardly adjusted values were still well below the aforementioned screening levels.

In accordance with the DTSC guidance, two sub-slab soil vapor sampling events were performed before a final risk determination was made. As discussed above, none of the applicable screening levels were exceeded in either event. Further, the HVDPE event performed in July appears to have significantly benefitted sub-slab soil vapor quality based on the observed decrease in TPHg, BTEX, and MTBE levels following the event. Based on these data, Blue Rock concludes there is no vapor intrusion risk related to the subject UST.

Project Status & Recommendations

In accordance with previous discussions with the ACHCSA, Blue Rock recommends performing one additional groundwater monitoring event to confirm post-remedial results and completion of confirmation soil sampling to document improvement of soil quality at the source area from remedial efforts.

Blue Rock recommends completing the groundwater monitoring event with the same methods and procedures for the previous event. Blue Rock originally proposed to perform the groundwater monitoring event in the first quarter 2012 based on the premise of monitoring on a semi-annual basis to account to seasonal variability in subsurface conditions. The biggest seasonal variation typically observed in the Bay Area and Northern California manifests in fluctuating groundwater levels – i.e. high water levels in winter/spring and low water levels in the summer/fall. It is reasonable to assume that these fluctuations would affect the results of groundwater samples as the water table moves comes into, and out of, contact with soil containing residual gasoline concentrations. However, this condition does not appear to be present at this site. The water table below the site is typically about 8.6 to 9.3 ft bgs in DPE-1 and displays little to no seasonal fluctuation. Given that there is minimal fluctuation in the water table below the site, Blue Rock recommends performing the recommended groundwater monitoring event in the near future so that closure evaluation follows sooner than later.

Blue Rock recommends performing the recommended confirmation soil sampling and destruction of the wells at the same time. For the purpose of documenting source area mass reduction, Blue Rock recommends drilling two borings adjacent to DPE-1 and DPE-2 (designated CB-1 and CB-2 respectively, Figure 4) to collect and analyze soil samples from depths of previously documented impact. The comparison of pre- and post-HVDPE concentrations of fuel hydrocarbons in the soil will serve as a proxy for mass reduction. Blue Rock recommends re-evaluating soil quality on the west and east side of the abandoned UST at depths where pre-remedial TPHg concentrations exceeded 100 mg/kg. The recommended soil sampling program is shown in the table below.

West Side of UST			East Side of UST		
Sample ID	Pre-remedial TPHg (mg/kg)	Proposed CB-1 Sample	Sample ID	Pre-remedial TPHg (mg/kg	Proposed CB-2 Sample
DPE-1-7.5’	6,500	X	DPE-2-6’	1.2	
EX-W-9’	10,000	X	EX-E-9’	920	X
DPE-1-12’	2,300	X	DPE-2-11’	160,000	X
DPE-1-15’	770	X	DPE-2-15’	430	X

These samples will be collected using similar methods as those previously collected for DPE-1 through DPE-3, and analyzed by a DHS-certified laboratory for TPHg, BTEX, MTBE, 1,2-DCA, and EDB by EPA Method 8260B and TPHd by EPA Method 8015M.

Due to the nature of administrative and logistical hurdles (i.e. permitting and performing drilling in the City sidewalk), it will be more efficient to (1) sawcut open the sidewalk flag where each well is located, (2) drill confirmation soil borings adjacent to the wells DPE-1 and DPE-2, (3) destroy wells DPE-1, DPE-2, and DPE-3, and (4) replace each sidewalk flag with new concrete.

References

Amicus Strategic Environmental Consulting, 2009, letter regarding Terradev Jefferson, LLC Property, 645 Fourth Street, Oakland, September 13.

Blue Rock, 2010, *Removal Action Workplan*, 645 Fourth Street, Oakland, California, February 3.

Blue Rock, 2010, *Well Installation and Removal Action Report*, 645 Fourth Street, Oakland, California, October 29.

Blue Rock, 2011, *Groundwater Monitoring Report – First Quarter 2011*, 645 Fourth Street, Oakland, California, February 1.

Blue Rock, 2012, *Sub-Slab Soil Vapor Sampling Workplan and Project Schedule*, 645 Fourth Street, Oakland, California, April 23.

Blue Rock, 2012, *Sub-Slab Soil Vapor Sampling Report*, 645 Fourth Street, Oakland, California, July 7.

Blue Rock, 2012, *Second Removal Action and Groundwater Monitoring Report*, 645 Fourth Street, Oakland, California, August 16.

California EPA - DTSC. 2004. *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air.* December 15 (Revised February 7, 2005).

California EPA. 2005. *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties.* January.

California EPA - DTSC. 2010. *Advisory – Active Soil Gas Investigation.* March

Ninyo & Moore, 2009, *Limited Phase II Environmental Site Assessment*, 645 Fourth Street, Oakland, California, July 24.

Golden Gate Tank Removal, Inc. 2006, *Tank Closure Report*, 645 Fourth Street, Oakland, California, September 21.

San Francisco Bay RWQCB. 2008. *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater - Interim Final November 2007 (Revised May 2008).* May.

Certification

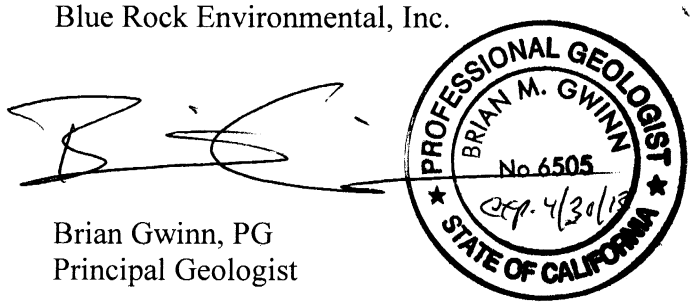
This report was prepared under the supervision of a California Professional Geologist at Blue Rock. All statements, conclusions, and recommendations are based upon published results from past consultants, field observations by Blue Rock, and analyses performed by a state-certified laboratory as they 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 2: Site Plan
Figure 3: Soil Gas Sampling Apparatus
Figure 4: Proposed Confirmation Borings

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

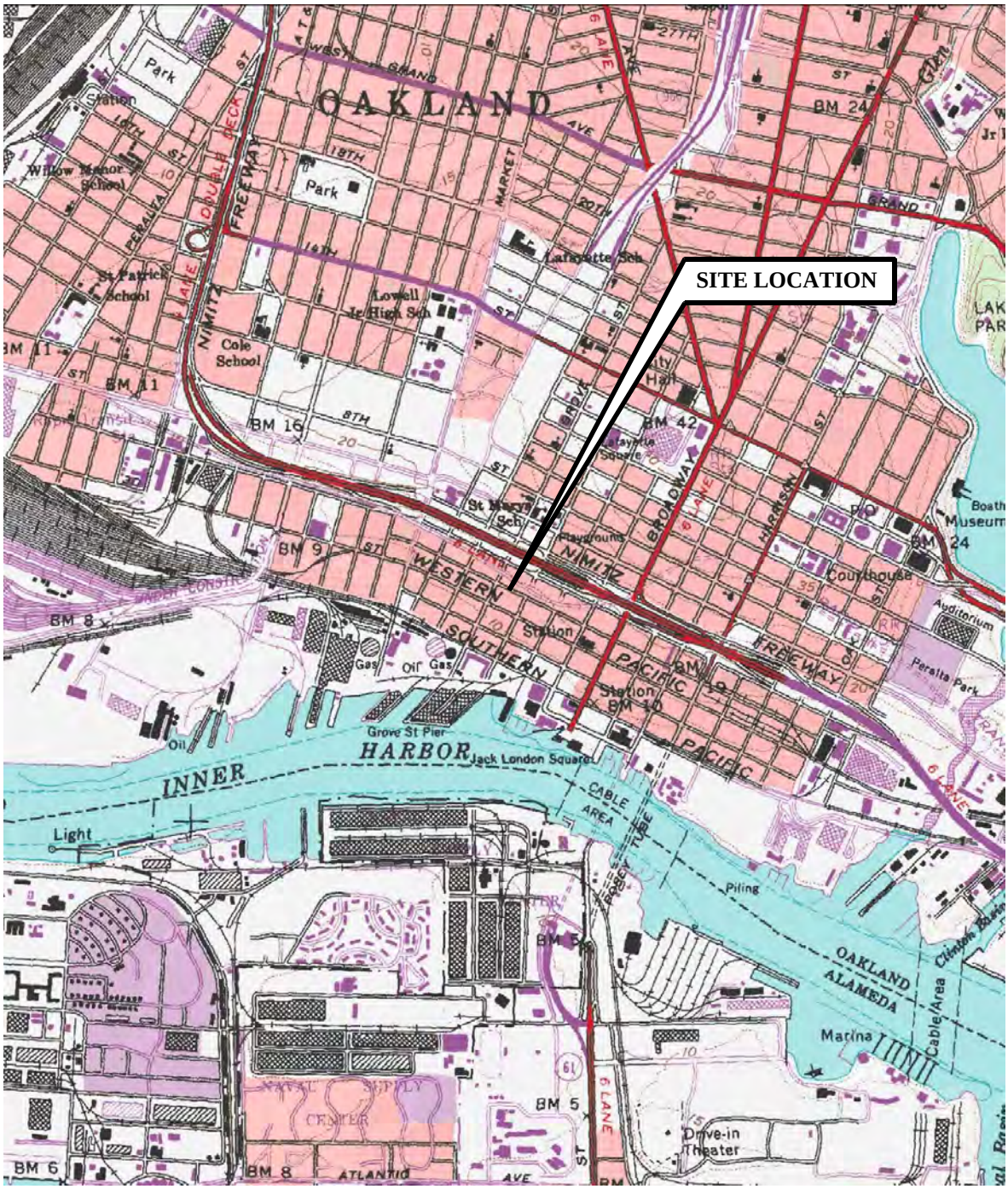
Field Data Sub-Slab Vapor Sampling Forms

Chain-of-Custody Forms and Laboratory Reports

Distribution:

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

Mr. Markus Niebanck, Amicus Strategic Environmental Consulting
580 Second St. Suite 260, Oakland, CA 94607



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APPROX. SCALE IN FEET

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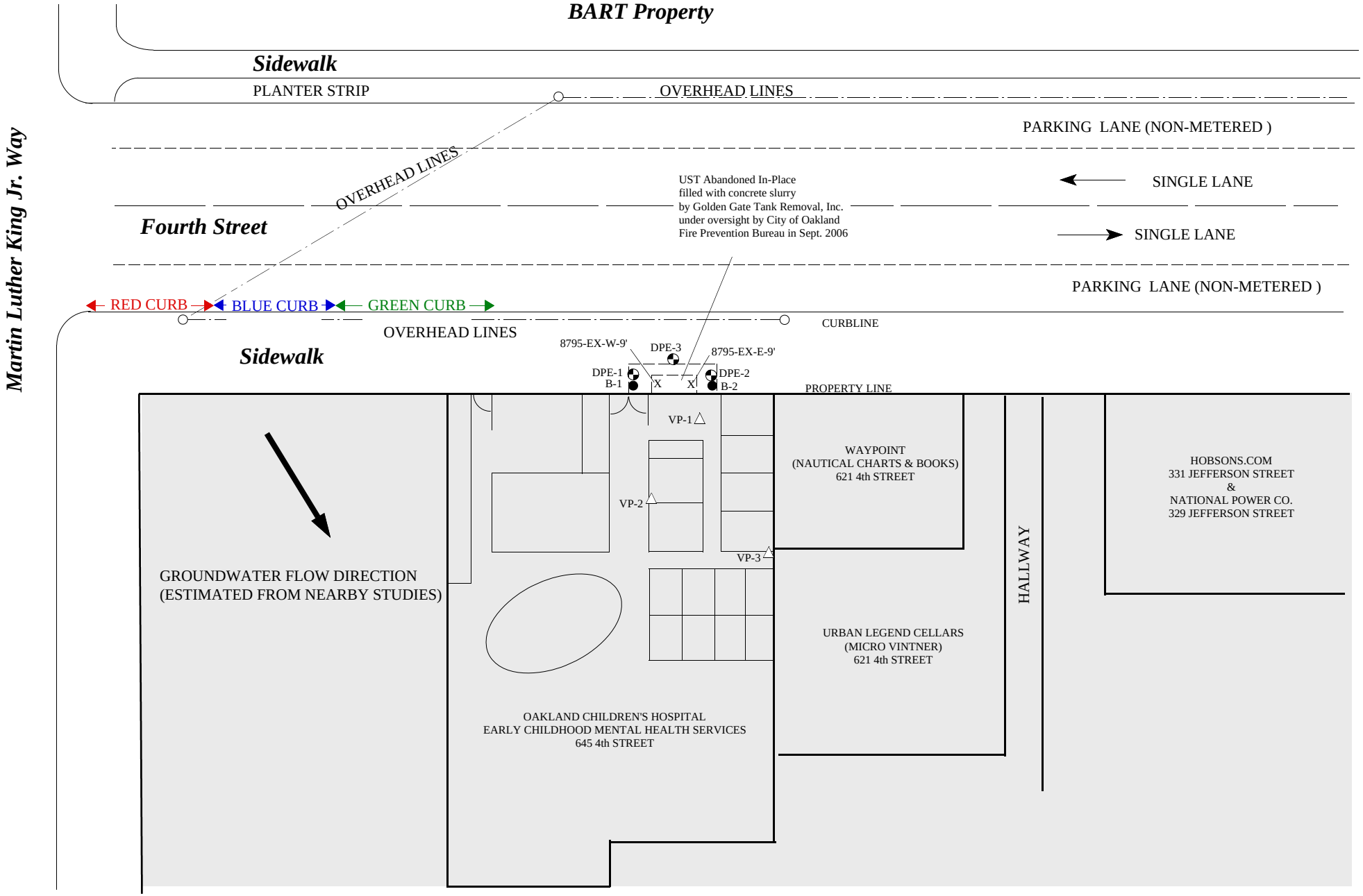
SOURCE: MyTopo.com

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



EXPLANATION

- 8795-EX-W-9' X — TANK CLOSURE SOIL SAMPLE
- B-1 ● — SOIL BORING
- DPE-1 ⊕ — EXTRACTION WELL
- VP-3 △ — SUB-SLAB SOIL VAPOR POINT

0 30

APPROXIMATE
SCALE IN FEET

N

SITE PLAN

Terredev Jefferson LLC Property
645 Fourth St.
Oakland, CA

BLUE ROCK
ENVIRONMENTAL, INC.

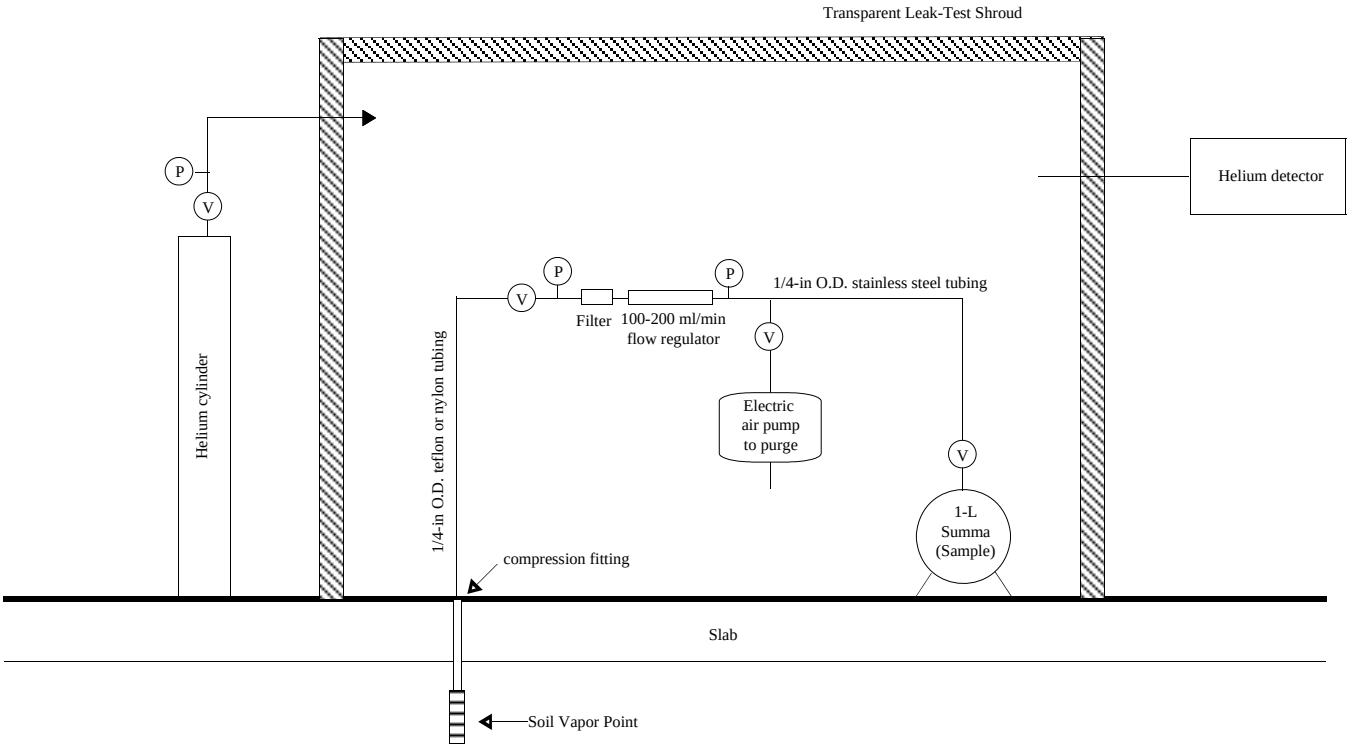
Project No.	Figure Date	Figure
ASE-1	10/12	2

EXPLANATION

P PRESSURE/VACUUM GAUGE

V VALVE

NOTE: ALL SAMPLE TRAIN TUBE CONNECTIONS AND VALVES ARE SWAGELOK

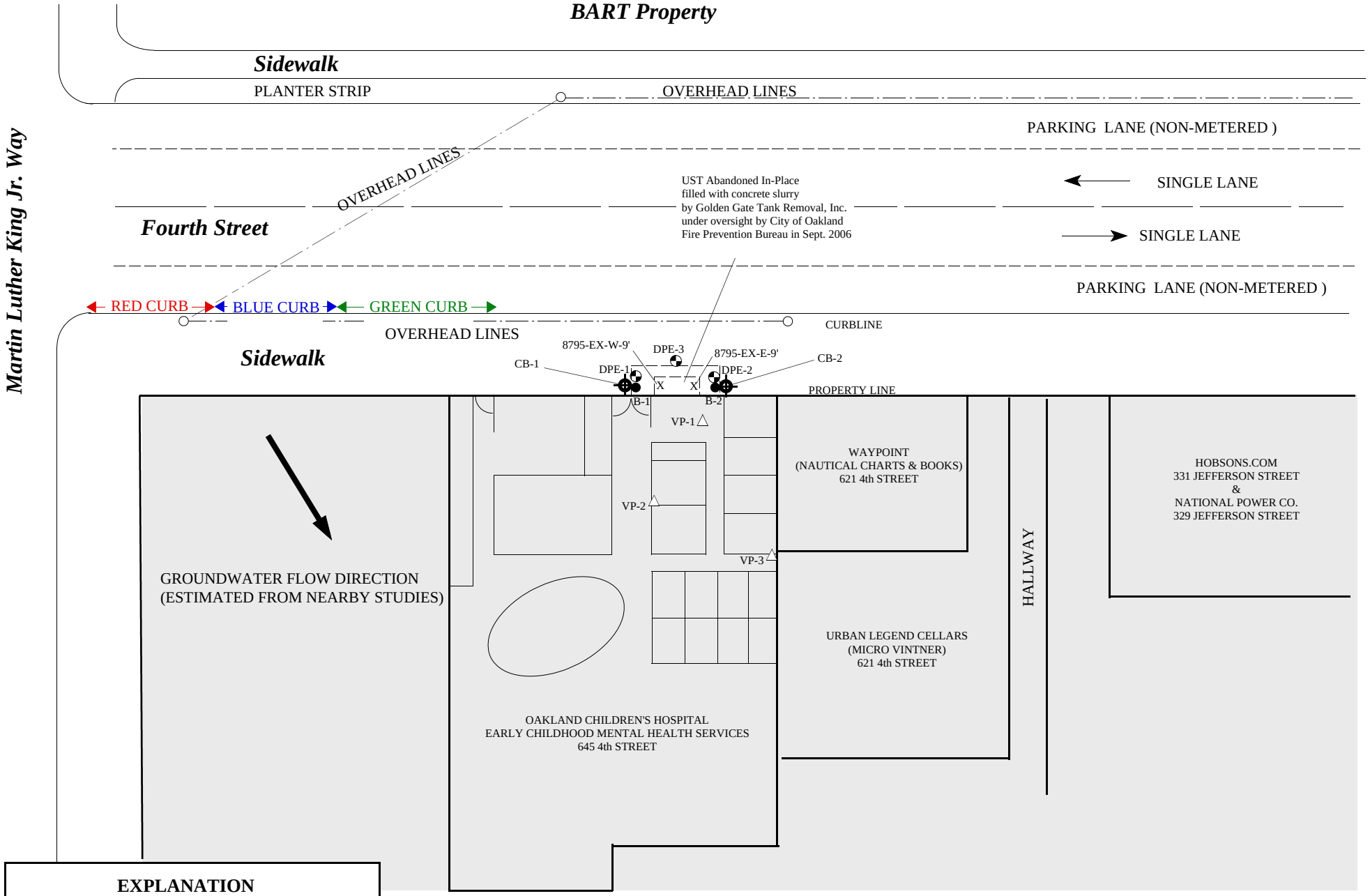


NOT TO SCALE

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

BLUE ROCK ENVIRONMENTAL, INC.

Project No.	Figure Date	Figure
ASE-1	7/12	3



PROPOSED CONFIRMATION BORINGS
Terredev Jefferson LLC Property
645 Fourth St.
Oakland, CA

BLUE ROCK
ENVIRONMENTAL, INC.

Project No.	Figure Date	Figure
ASE-1	10/12	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)	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE, ETBE, TAME (mg/kg)	1,2-DCA (mg/kg)	EDB (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**

Notes:

ft bgs	feet below ground surface
mg/kg	milligrams per kilogram
TPHd	total petroleum hydrocarbons as diesel by EPA Method 8015M or 8015B
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
---	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)	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)
Grab Groundwater Samples															
B-1-GW*	7/10/09	--	~10 - 20	--	--	**5,300**	**78,000**	**15,000**	**13,000**	**1,700**	**10,500**	**570**	--	--	--
B-2-GW*	7/10/09	--	~10 - 20	--	--	**2,300**	**60,000**	**13,000**	**13,000**	**890**	**4,800**	**120**	--	--	--
Monitoring Well Data															
DPE-1	9/22/10	15.81	9.21	0.00	6.60	<4,000^	**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^	**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^	**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^	**71,000**	**7,500**	**9,800**	**1,000**	**6,500**	**280**	**89**	**190**	<15
DPE-2	9/22/10	16.01	9.44	0.00	6.57	<4,000^	**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^	**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^	**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^	**70,000**	**9,900**	**16,000**	**1,700**	**9,600**	**54**	<200	**160**	**56**
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^	**190,000**	**1,400**	**7,800**	**3,700**	**29,000**	**27**	**120**	**40**	**130**

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.
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.
^	Method detection limit increased due to ineterference from gasoline range hydrocarbons
---	Data not available, not monitored, or not sampled

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

		air volume		Consituent Concentrations									Soil Gas Concentrations			Tracer Gas		Sample Can Vacuum	
Sample I.D.	Sample Date	dead space vols. purged	sample container	TPHg ($\mu g/m^3$)	B ($\mu g/m^3$)	T ($\mu g/m^3$)	E ($\mu g/m^3$)	X ($\mu g/m^3$)	MTBE ($\mu g/m^3$)	Naphthalene ($\mu g/m^3$)	1,2-DCA ($\mu g/m^3$)	EDB ($\mu g/m^3$)	O_2 (%)	CO_2 (%)	CH_4 (%)	In Sample He (%)	In Shroud He - Avg (%)	End of Sampling ("Hg)	Arrival at Lab ("Hg)
VP-1	6/16/12	3.0	1-L	1,300	38	120	21	138	7.3	<0.09	<0.14	<0.050	15	0.096	<0.008	2.4	22.2	~8	~6
Data corrected for 10.8% of leak volume in sample				1,457	43	135	24	155	8.2	<0.10	<0.16	<0.056	---	---	---	---	---	---	---
VP-1	9/22/12	3.0	1-L	<330	<8.0	<9.4	<11	<22	<9.0	<13	<10	<3.8	19	0.78	<0.008	0.19	20.0	~5	~6
Data corrected for 0.95% of leak volume in sample				<333	<8.1	<9.5	<11	<22	<9.1	<13	<10	<3.8	---	---	---	---	---	---	---
VP-2	6/16/12	3.0	1-L	1,200	66	25	2.6	8.2	<6.3	<0.090	<0.14	<0.050	11	1.3	<0.009	<0.003	13.8	~8	~7
VP-2	9/22/12	3.0	1-L	<330	<8.0	<9.4	<11	<22	<9.0	<13	<10	<3.8	14	4.0	<0.008	<0.003	19.0	~7	~6
VP-3	6/16/12	3.0	1-L	960	16	19	2.9	20	<5.8	<0.08	<0.13	<0.050	16	0.029	<0.008	2.6	23.6	~5	~5
Data corrected for 11.0% of leak volume in sample				1,079	18	21	3.3	22	<6.5	<0.09	<0.15	<0.056	---	---	---	---	---	---	---
VP-3	9/22/12	3.0	1-L	<330	<8.0	<9.4	<11	<22	<9.0	<13	<10	<3.8	20	0.46	<0.008	0.036	15.7	~5	~6
Data corrected for 0.23% of leak volume in sample				<331	<8.0	<9.4	<11	<22	<9.0	<13	<10	<3.8	---	---	---	---	---	---	---
ESLs Comm/Indus Soil Gas				*29,000*	*280*	*180,000*	*3,300*	*58,000*	*31,000*	*240*	*310*	*14*							
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
$\mu g/m^3$	Micrograms per cubic meter
<#.##	Compound not detected at or above the reported laboratory detection limit
ESLs	Environmental Screening Levels for Soil Vapor in Commercial/Industrial or Residential setting (SFBRWQCB 2008).
CHHSLs	California Human Health Screening Levels for Soil Vapor in Commercial/Industrial or Residential setting (CalEPA/OEHHA2005)
Tracer Gas in Shroud	Concentration range of tracer gas in shroud recorded during sample collection. Average = (Max - Min) / 2

If helium was detected in the sample, the percentage measured in the sample divided by the average percentage in the shroud represents the proportion of the sample attributable to leakage.
The data were adjusted to account for that proportion by the following: Corrected value ($\mu g/m^3$) = Analyte ($\mu g/m^3$) * [100% / (100% - leak%)]
and rounded to the significant digit of original lab data.

Date: 9/22/12
Technician: LT/SR
Job No.: ~~AGE~~-1

WELL ID: VP-1		Manifold ID#:
~~Purge Suma ID#:~~	Volume:	Start Presure:
Sample Suma ID#: 319	Volume: 1L	Start Presure: 29.5"Hg
Shut-in Test Start Time/Pressure: 0726/29.5 Fail 0737		Shut-in Test End Time/Pressure:

	Time (24 Hr)	Pre-Regulator Presure (-"H_2O)	Post-Regulator Presure (-"Hg)	He Tracer (%)
	Purged 29.5/25"Hg	0	0845	27
Start Sample	0904	29		27.9
	0905	26		26.5
	0906	25		24.4
	0907	23		22.7
	0908	20		20.7
	0909	19		19.2
	0910	16		17.5
	0911	14		16.0
	0912	11		15.6
	0913	7		16.0
	0914	8		18.2
	0915	6		17.7
	0915	5		17.3

Notes: 2nd test start 0737/29.25"Hg stop 0749/29.25"Hg Pass

Date: 9/22/17
Technician: LT/SR
Job No.: ASE-1

WELL ID: VP-2		Manifold ID#:
~~Purge~~ Suma ID#:	Volume:	Start Presure:
Sample Suma ID#: 317	Volume: 1L	Start Presure: 30"Hg
Shut-in Test Start Time/Pressure: 0731 / 30"Hg		Shut-in Test End Time/Pressure: 0741 / 30"Hg Pass

	Time (24 Hr)	Pre-Regulator Presure (-"H_2O)	Post-Regulator Presure (-"Hg)	He Tracer (%)
Purge	0831	20" Vac — 30 seconds		KT
	0847	2		
Start sample	0848	30		22.1
	0849	29		21.2
	0850	26		18.9
	0851	24		16.7
	0852	22		21.2
	0853	19		20.4
	0854	16		19.3
	0855	13		18.2
	0856	11		17.0
	0857	9		17.2
End Sample	0858	7		16.8

Notes:

Date: 9/22/12
Technician: LT/SR
Job No.: ASE-1

WELL ID: VP-3		Manifold ID#:	
~~Purge Suma ID#~~: Vac Pump	Volume:		Start Presure:
Sample Suma ID#: 309	Volume: 1L		Start Presure: 30"Hg
Shut-in Test Start Time/Pressure: 29.5 / 07:24		Shut-in Test End Time/Pressure: 7:37 / 29.5 Pass	

	Time (24 Hr)	Pre-Regulator Presure (-"H_2O)	Post-Regulator Presure (-"Hg)	He Tracer (%)
Purge—	30 sec. Purge	Done @ 0814		
	~~0826~~	0		
start sample	0828	30		19.3
	0829	25		16.9
	0830	22		14.9
	0831	20		15.8
	0832	18		15.9
	0833	14		15.2
	0834	12		16.2
	0835	10		15.2
	0836	7		14.1
End Sample	0837	5		13.8

Notes:

Analytical Sciences

October 12, 2012

Loren Taylor
Blue Rock Environmental
1169 Chess Drive, Ste. C
Foster City, CA 94404

Dear Loren,

Enclosed you will find Analytical Sciences' final report 2092401 for your Terradev Jefferson LLC project. An invoice for this work is enclosed.

Should you or your client have any questions regarding this report please contact me at your convenience. We appreciate you selecting Analytical Sciences for this work and look forward to serving your analytical chemistry needs on projects in the future.

Sincerely,

Analytical Sciences

Mark A. Valentini

Mark A. Valentini, Ph.D.

Laboratory Director

P.O. Box 750336
Petaluma, CA 94975-0336
Telephone: (707) 769-3128

110 Liberty Street
Petaluma, CA 94952

Analytical Sciences

Report Date: October 12, 2012

Laboratory Report

Loren Taylor
Blue Rock Environmental
1169 Chess Drive, Ste. C
Foster City, CA 94404

Project Name: **Terradev Jefferson LLC** **ASEI**

Lab Project: **2092401**

This 7 page report of analytical data has been reviewed and approved for release.

Mark A. Valentini, Ph.D.

Laboratory Director

P.O. Box 750336
Petaluma, CA 94975-0336
Telephone: (707) 769-3128

110 Liberty Street
Petaluma, CA 94952

Volatile Hydrocarbons by GC/MS in Air (µg/m³)

Lab#	Sample ID	Compound Name	Result (µg/m³)	RDL (µg/m³)
2092401-01	**VP-1**	Gasoline	ND	330
		1,2-Dichloroethane (EDC)	ND	10
		Benzene	ND	8.0
		Toluene	ND	9.4
		1,2-Dibromoethane (EDB)	ND	3.8
		Ethylbenzene	ND	11
		m,p-Xylene	ND	11
		o-Xylene	ND	11
		Naphthalene	ND	13
		Methyl tert-Butyl Ether (MTBE)	ND	9.0

Date Sampled:	09/22/12	Date Analyzed:	10/10/12	QC Batch: B011253
Date Received:	09/24/12	Method:	EPA TO-15	

Volatile Hydrocarbons by GC/MS in Air (µg/m³)

Lab#	Sample ID	Compound Name	Result (µg/m³)	RDL (µg/m³)
2092401-02	**VP-2**	Gasoline	ND	330
		1,2-Dichloroethane (EDC)	ND	10
		Benzene	ND	8.0
		Toluene	ND	9.4
		1,2-Dibromoethane (EDB)	ND	3.8
		Ethylbenzene	ND	11
		m,p-Xylene	ND	11
		o-Xylene	ND	11
		Naphthalene	ND	13
		Methyl tert-Butyl Ether (MTBE)	ND	9.0

Date Sampled:	09/22/12	Date Analyzed:	10/10/12	QC Batch: B011253
Date Received:	09/24/12	Method:	EPA TO-15	

Volatile Hydrocarbons by GC/MS in Air (µg/m³)

Lab#	Sample ID	Compound Name	Result (µg/m³)	RDL (µg/m³)
2092401-03	**VP-3**	Gasoline	ND	330
		1,2-Dichloroethane (EDC)	ND	10
		Benzene	ND	8.0
		Toluene	ND	9.4
		1,2-Dibromoethane (EDB)	ND	3.8
		Ethylbenzene	ND	11
		m,p-Xylene	ND	11
		o-Xylene	ND	11
		Naphthalene	ND	13
		Methyl tert-Butyl Ether (MTBE)	ND	9.0

Date Sampled:	09/22/12	Date Analyzed:	10/11/12	QC Batch: B011253
Date Received:	09/24/12	Method:	EPA TO-15	

Fixed Gases (%)

Lab#	Sample ID	Compound Name	Result (%)	RDL (%)
2092401-01	**VP-1**	Oxygen (O2)	19	0.008
		Carbon Dioxide (CO2)	0.78	0.008
		Methane	ND	0.008
		Helium	0.19	0.003

Date Sampled:	09/22/12	Date Analyzed:	09/28/12	QC Batch: B011136
Date Received:	09/24/12	Method:	ASTM 1946 D	

Fixed Gases (%)

Lab#	Sample ID	Compound Name	Result (%)	RDL (%)
2092401-02	**VP-2**	Oxygen (O2)	14	0.008
		Carbon Dioxide (CO2)	4.0	0.008
		Methane	ND	0.008
		Helium	ND	0.003

Date Sampled:	09/22/12	Date Analyzed:	09/28/12	QC Batch: B011136
Date Received:	09/24/12	Method:	ASTM 1946 D	

Fixed Gases (%)

Lab#	Sample ID	Compound Name	Result (%)	RDL (%)
2092401-03	**VP-3**	Oxygen (O2)	20	0.008
		Carbon Dioxide (CO2)	0.46	0.008
		Methane	ND	0.008
		Helium	0.036	0.003

Date Sampled:	09/22/12	Date Analyzed:	09/28/12	QC Batch: B011136
Date Received:	09/24/12	Method:	ASTM 1946 D	

Quality Assurance Report

Volatile Hydrocarbons by GC/MS in Air (µg/m³)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B011253 - Air prep GC/MS										
Blank (B011253-BLK1)				Prepared & Analyzed: 10/01/12						
Gasoline	ND	330	µg/m³							
1,2-Dichloroethane (EDC)	ND	10	µg/m³							
Benzene	ND	8.0	µg/m³							
Toluene	ND	9.4	µg/m³							
1,2-Dibromoethane (EDB)	ND	3.8	µg/m³							
Ethylbenzene	ND	11	µg/m³							
m,p-Xylene	ND	11	µg/m³							
o-Xylene	ND	11	µg/m³							
Naphthalene	ND	13	µg/m³							
Methyl tert-Butyl Ether (MTBE)	ND	9.0	µg/m³							

Fixed Gases (%)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B011136 - Air prep GC/MS										
Blank (B011136-BLK1)				Prepared: 09/05/12 Analyzed: 09/06/12						
Oxygen (O2)	ND	0.005	%							
Carbon Dioxide (CO2)	ND	0.005	%							
Methane	ND	0.005	%							
Helium	ND	0.002	%							

Notes and Definitions

RDL	Reporting Detection Limit
ND	Analyte NOT DETECTED at or above the reporting detection limit (RDL)
RPD	Relative Percent Difference
NR	Not Reported

P.O. Box 750336
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Telephone: (707) 769-3128

Analytical Sciences
P.O. Box 750336, Petaluma, CA 94975-0336
110 Liberty Street, Petaluma, CA 94952
(707) 769-3128

CHAIN OF CUSTODY

Lab Project Number: 2092401
Client's Project Name: Terrace Jefferson LLC
Client's Project Number: ASE-1

GeoTracker Required Yes No
GeoTracker Number:

CLIENT INFORMATION

Company Name: Blue Rock Environmental
Address: 1169Chess Dr., Suite C
Foster City, CA 94404
Contact: Loren Taylor
Phone #: (650) 522-9292
Fax #: (650) 522-9259
e-mail: loren@blueroackenv.com

TURNAROUND TIME (check one)

Same Day ____
48 Hours ____ 24 Hours ____
5 Days ____ Normal ✓

Page 1 of 1

ANALYSIS

Item	Client Sample ID	Date	Matrix	Canister ID #	Regulator ID #	Sample Start Time	Sample End Time	TO-15 BTEX/MTBE	TPHgasoline	Naphthalene, EDB TO-15 w/SIM	ASTM1946 He, O2, CO2, CH4					Comments	Lab Sample #
1	VP-1	9/22/12	Vapor	319	NA	0904	0915	X	X	X	X					2092401-01	
2	VP-2	9/22/12	"	317	NA	0847	0858	X	X	X	X					"	-02
3	VP-3	9/22/12	✓	309	NA	0826	0837	X	X	X	X					↓	-03
4																	
5																	
6																	
7																	
8																	
9																	
10																	

SIGNATURES

Sampled By: Loren Taylor 9/22/12 1055

Relinquished By: _____ Signature _____ Date _____ Time

Received By: _____ Signature _____ Date 9.24.12 Time 1000

110 Liberty Street
Petaluma, CA 94952