CONESTOGA-ROVERS & ASSOCIATES

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TRANSMITTAL

DATE: September 27, 2010

REFERENCE NO.: 540188

PROJECT NAME: 1432 Harrison Street, Oakland

TO: Mr. Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

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Alameda County
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QUANTITY	DESCRIPTION
1	Additional Offsite Assessment and Comprehensive Conduit Study Workplan

- ☐ As Requested
- ☐ For Your Use
- ☒ For Review and Comment
- ☐ For Signature and Return

COMMENTS:
Should you have any questions regarding the content of this document, please contact Robert Foss at (510) 420-3348.

Copy to: Est. of A. Bacharach/Barbara Jean Borsuk
c/o Mr. Mark Borsuk, Esq.

Completed by: Robert Foss [Please Print] Signed: Robert Foss

Filing: Correspondence File

With respect to:

Additional Offsite Assessment and Comprehensive Conduit Study Workplan
Dated September 27, 2010
ACEH Case No. RO0000266

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.

Sydney and Barbara Borsuk Trust & Sheila Siegel Trust

Barbara Jean Borsuk

Barbara Jean Borsuk, Trustee

trustee

ADDITIONAL OFFSITE ASSESSMENT AND COMPREHENSIVE CONDUIT STUDY WORKPLAN

ALLRIGHT PARKING
1432 HARRISON STREET
OAKLAND, CALIFORNIA

ACEH CASE NO. RO0000266

Prepared by:
Conestoga-Rovers & Associates

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SEPTEMBER 27, 2010
REF. NO. 540188 (10)
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1.0 INTRODUCTION

On behalf of the Estate of A. Bacharach/Barbara Jean Borsuk, Conestoga-Rovers & Associates (CRA) is submitting this *Additional OffSite Assessment Workplan* for the site located at 1432 Harrison Street. This workplan is submitted at the request of Alameda County Environmental Health Services (ACEH), as stated in their July 19, 2010 letter. A copy of this correspondence is included in Appendix A. The project site manager for ACEH is Mr. Jerry Wickham.

1.1 SITE INFORMATION

Site Address	1432 Harrison St, Oakland, CA
Site Use	Commercial Parking Business
Client and Contact	Estate of A. Bacharach /Barbara Jean Borsuk, c/o Mr. Mark Borsuk, Esq.
Consultant and Contact Person	CRA, Robert Foss, P.G.
Lead Agency and Contact Person	ACEH, Mr. Jerry Wickham, P.G.
Agency Case No.	RO0000266

2.0 SITE BACKGROUND

2.1 SITE DESCRIPTION

The subject site is located at 1432 Harrison Street, in Oakland, California, as identified on Figures 1 and 2, and is currently used for ground-level commercial parking. The general area is developed with a mix of commercial and high-density, multi-story residential housing.

2.2 HISTORICAL SITE USES

The site was residential from as early as 1889 through at least 1911. Sometime after 1911, the residence was removed and commercial development and use included automotive servicing and repair, as well as car rental and leasing, through at least 1986. From some time preceding 1998 through the present, the site has been used for commercial parking.

2.3 GEOLOGY AND HYDROGEOLOGY

2.3.1 GEOLOGY

The site resides along the eastern shore of San Francisco Bay, a broad depression between the San Andreas and Hayward fault systems. Regionally, this area is located in California's Coast Range Physiographic Province, characterized by northwest-southeast trending valleys and ridges, and lying between the Pacific Ocean to the west and the Great Valley to the east. The oldest known bedrock in the Coast Range Province is marine sedimentary and volcanic rocks that form the Franciscan Assemblage. Geologic formations in the San Francisco Bay Region vary in age from Jurassic to recent Holocene. Specifically, the site is located to the west of the Oakland-Berkeley Hills on the East Bay Plain, sloping gently to the west towards San Francisco Bay. Unconsolidated sediments in the East Bay Plain vary in thickness, with some areas up to 1,000 feet (ft) thick. From oldest to youngest, the unconsolidated sediments are 1/ Santa Clara Formation, 2/ Alameda Formation, 3/ Temescal Formation, and 4/ artificial fill. The Early Pleistocene Santa Clara Formation consists of alluvial fan deposits inter-fingered with lake, swamp, river channel, and flood plain deposits, ranging from 300 to 600 ft thick. The Late Pleistocene Alameda Formation was deposited primarily in an estuarine environment and consists of alluvial fan deposits bound by mud deposits on the top and bottom of the formation. The Alameda Formation ranges from 26 to 245 ft thick and is subdivided into the Yerba Buena Mud, San Antonio, Merritt, and Young Bay Mud Members. The Early Holocene Temescal Formation is an alluvial fan deposit consisting primarily of silts and clays with some gravel layers. The Temescal Formation ranges from 1 to 50 ft thick, thinning toward the bay. Below any sub-base and fill, shallow sand, silt, and clay at the site are likely part of the Temescal Formation. The site lithology is slightly heterogeneous consisting of sediments grading between silty sand, sand, and sandy silt to the maximum explored depth of 50 ft. Near the surface, fill includes gravel and concrete road base.

2.3.2 HYDROGEOLOGY

The site is located in the East Bay Plain Sub-Basin, Groundwater Basin No. 2-9.04 (DWR 2003). The East Bay Plain Sub-Basin is a northwest trending alluvial basin, bounded on the north by San Pablo Bay, on the east by the contact with Franciscan basement rock, and on the south by the Niles Cone Groundwater Basin. The East Bay Plain Sub-Basin extends beneath San Francisco Bay to the west. The East Bay Plain Sub-Basin aquifer system consists of unconsolidated sediments of Quaternary age.

These include the Santa Clara Formation, Alameda Formation, Temescal Formation, and artificial fill. In the project area most rainfall occurs between November and March and the average annual rainfall is approximately 23 inches. Throughout most of the East Bay Plain regional water level contours show that the direction of groundwater flow is generally east to west, towards San Francisco Bay, with some localized variations. Groundwater flow direction typically correlates with topography.

From 1860 to 1930 groundwater from the East Bay Plain was the major water supply of the East Bay, before Sierra water was imported into the area. By the late 1920's the groundwater supply was too small to meet the growing population and the wells often became contaminated by seepage or saltwater intrusion. By 1929, East Bay Municipal Utility District (EBMUD) provided imported water to East Bay communities via the Mokelumne Aqueduct. This high-quality, reliable supply soon eliminated the need for local groundwater wells. In 1996, the Regional Board reviewed General Plans for Oakland and other communities. They found that Oakland and most other cities did not have any plans to develop local groundwater resources for drinking water, due to existing or potential saltwater intrusion, contamination, or poor and/or limited quality (Regional Board 1999).

The first encountered water is typically observed at approximately 20 ft bgs. Depths to groundwater in monitoring wells associated with the site have historically ranged from 18 to 21 ft bgs, although well MW-1 has recorded shallower groundwater during air sparge/soil vapor extraction remediation from December 2001 through April 2005. Historical depth to water measurements and groundwater elevation calculations are presented in Table 2. Groundwater beneath the site flows primarily towards the north, with some apparent localized flow toward the south. Any vertical hydraulic gradient is currently undefined.

2.4 PREVIOUS ACTIVITIES AND INVESTIGATIONS

July 1990 through May 1993 - Soil Boring Investigations: In July and September 1990, Subsurface Consultants (SCI) of Oakland, California drilled seven soil borings near the gasoline USTs and between the hydraulic lift area, the wash rack, and the sump. Soil samples were analyzed and petroleum hydrocarbons were detected. Geophysical investigation performed by JR Associates (JRA) was preformed in August of 1990. JRA detected anomalies in the subsurface near the hydraulic lift area.

In January and February 1992, RGA Environmental Consulting (RGA) of Emeryville, California drilled 11 soil borings and analyzed soil samples from various depths near the

gasoline USTs, the pump island, and between the hydraulic lift area, the wash rack, and the Sump. In the *Preliminary Site Assessment Report,* dated April 2, 1992, RGA stated the site was once a "Chevron Service Station". During the review of the September 2007 EDR and prior investigation documentation, CRA was unable to verify this statement.

In May 1993, Levine-Fricke, Inc. (Levine-Fricke) of Emeryville, California drilled two soil borings near the gasoline UST area and analyzed soil samples down to a depth of 24.5 feet below ground surface (ft bgs).

December 1993 – UST Removal: In December 1993, Levine-Fricke removed two underground storage tanks (USTs) from the site. The two 1,000-gallon, single-walled, steel, gasoline USTs were located under the sidewalk on Harrison Street, with gasoline dispensers located about 20 ft east of the USTs. According to Levine-Fricke, three hydraulic lifts, one vault, one wash rack sump, and associated piping, were also excavated and removed, and approximately 240 cubic yards of hydrocarbon-impacted soil was removed from these areas.

January 1994 – Installation of Monitoring Well: Monitoring well MW-1 was installed by Levine-Fricke at the former gasoline tank area. No information regarding the installation of this well has been located at this time. However, the Levine-Fricke report, titled *Tank Closure Report on Removal of Underground Fuel Storage Tanks and Related Structures, Harrison Street Garage, 1432-1434 Harrison Street, Oakland, California*, dated February 22, 1994, states, "After removing water that infiltrated into the excavation from the gutter area, a 4-inch diameter well was installed by Levine-Fricke and a licensed drilling subcontractor in the utility box…" Apparently, no soil samples were collected or analyzed during this well installation.

July 1994 - Subsurface Investigation: In July 1994, Levine-Fricke conducted a subsurface investigation to assess the extent of hydrocarbons in soil and groundwater. One soil boring in Harrison Street was drilled and sampled and MW-2 was constructed in this boring.

July 1995 - Subsurface Investigation: In July 1995, Cambria Environmental Inc. (Cambria) conducted a subsurface investigation to further define the extent of hydrocarbons in soil and groundwater. Cambria drilled nine soil borings to collect soil samples and three boring to collect grab groundwater samples. Petroleum hydrocarbons were detected in both soil and groundwater.

August 1996 - Soil Vapor Extraction Test: In August 1996, Cambria conducted a soil vapor extraction pilot test using existing groundwater monitoring wells MW-1 and

MW-2. Results of the test suggested that the subsurface consists of moderately permeable materials such as sands and silty sands, and that soil vapor extraction could effectively remove hydrocarbons from subsurface soils.

October 1996 Subsurface Investigation: In October 1996, Cambria conducted an additional subsurface investigation for further definition of the extent of hydrocarbons in soil and groundwater. Five soil borings were drilled and three of the borings were converted to monitoring wells MW-4, MW-5, and MW-6. Two angled borings, SB-P and SB-Q, were drilled to investigate the presence of hydrocarbons beneath two closed-in-place tanks located directly up-gradient of the subject site. These upgradient USTs, located beneath the sidewalk at 1424 Harrison Street, are approximately 10 ft south of the former tankpit of the USTs removed from beneath the sidewalk in front of 1432 Harrison Street. To avoid drilling into the abandoned USTs, the surface location of these borings were outside the tankpit and the borings angled toward the tanks. Shallow samples collected at 3.75 feet below grade (fbg) in each contained TPHg at 3.8 and 4.3 milligrams per kilogram (mg/kg), respectively. These samples were collected laterally to the USTs and in native soil. The deeper samples, collected at 12.7 and 9.6 fbg, are representative of conditions beneath the closed-in-place USTs. Sample SB-P 12.7' contained 1,500 mg/kg TPHg and 0.55 mg/kg benzene. Sample SB-Q 9.6' contained 1,900 mg/kg TPHg and 0.95 mg/kg benzene. It is uncertain whether the depths of 9.6 and 12.7 ft were corrected for the angle of the borings, thereby representing true depth below grade, or if they were the actual depths of the borehole, regardless of angle. Either way, these deeper samples indicate conditions above the highest recorded water table elevation, beneath the closed-in-place USTs, with the exception of one measurement from MW-1 in December 2004 of 11.25 fbg, eight years after these borings and samples were collected. Noted also is that this measurement occurred during AS/SVE remediation which also accounts for the mounding effect observed in MW-1.

July 1999 – Coaxial Remediation Wells: In July 1999, Cambria installed four coaxial remediation wells near the former gasoline USTs for vapor extraction and air sparging.

December 2001 – April 2005 Soil Vapor Extraction/Air Sparge Remediation: In December 2001, Cambria supervised the installation and initiated active remediation with a site-specific soil vapor extraction (VES) and air sparging (AS) system. The system ran under a Bay Area Air Quality Management District (BAAQMD) permit. System influent, mid-influent, and effluent vapor samples were collected and analyzed. On April 30, 2005 remediation using the VES/AS system ceased due to low influent vapor concentrations and hydrocarbon mass removal rates. During operation of the SVE/AS system, approximately 9,939 pounds of hydrocarbons were extracted from the site. On June 2, 2005, the SVE/AS system was removed from the property.

August 2006 – Risk Assessment: A Tier 1 and 2 risk assessment was performed using existing data. Based on this analysis, it was determined that there is no significant commercial risk for indoor and outdoor vapor inhalation from benzene in soil and/or groundwater. Also, there is no significant residential risk from outdoor vapor inhalation from benzene. Some elevated concentrations of benzene in soil indicated that a potential may exist from indoor residential vapor inhalation. Currently no indoor residential receptors apparently exist in areas with elevated concentrations of benzene associated with the site. Because of this preliminary finding, Cambria presented a March 9, 2007 *Soil Gas Characterization Work Plan*.

March 2007 - Soil Gas Characterization Work Plan: In March 9, 2007, Cambria submitted a *Soil Gas Characterization Work Plan* to ACEH, as recommended in the August 2006 *Risk Assessment*. Cambria proposed six onsite soil gas sampling locations. ACEH did not allow implementation of *Soil Gas Characterization Work Plan*, apparently due to lack of an assigned ACEH project manager. The June 2008 *Additional Characterization Work Plan*, submitted by CRA, supersedes the previous March 9, 2007 *Soil Gas Characterization Work Plan*.

May 2010 – Sensitive Receptor Survey: On May 6, 2010, CRA submitted a *Sensitive Receptor Survey* to ACEH, as requested in a January 26, 2010 letter. CRA checked DWR and ACDPW well records to determine the presence and location of registered wells within a 1-mile radius of the subject site. CRA also mailed a questionnaire to all parcels within the 1-mile radius inquiring about wells, basements, elevator shafts and/or sumps at each address. Information gathered through these searches, along with a description of the nearest surface water body were compiled in the report and uploaded to the ACEH FTP website on May 7, 2010. Results of these record searches suggest that no wells are likely to be impacted by hydrocarbons emanating from the subject site and only one building basement, at 1445 Harrison Street, could potentially experience intrusion of hydrocarbon vapors volatilizing from the water table.

Groundwater Monitoring: Since May 1994, periodic monitoring and sampling of groundwater has been performed. The current sampling frequency is semi-annual during the first and third quarters of the year. Historical and recent groundwater analytical data are presented in Table 1.

3.0 HYDROCARBON DISTRIBUTION

3.1 HYDROCARBON DISTRIBUTION IN SOIL

Cambria Environmental conducted soil vapor extraction/air sparge (SVE/AS) remediation from December 2001 through April 2005. Pre-remediation hydrocarbon concentrations in soil are documented in Tables 2 and 3. Elevated soil hydrocarbon concentrations existed in the upper 30 ft near the former USTs and gasoline dispensers. These elevated concentrations were observed in both the vadose and saturated zones. With few exceptions, the occurrences of "pre-remediation" elevated hydrocarbons were observed between 18 and 27 ft bgs. The exceptions were observed in soil samples collected between 9 and 13 ft bgs from soil borings located around the USTs, reportedly closed in place, beneath the sidewalk at 1424 Harrison Street. The maximum TPHg concentration observed in these samples was 1,900 mg/kg in boring SB-Q at 9.6 ft bgs. One other shallow soil sample, collected at 10 ft bgs in boring B-22, near the former dispenser island, contained TPHg at 1,540 mg/kg. This was likely the result of a release associated with either the product piping or the dispenser itself. One additional soil sample from boring B-4, located adjacent to the former hydraulic lifts, near the eastern corner of the 1432 Harrison St property, collected at 10 ft bgs contained 1,700 mg/kg TPH as diesel (TPHd).

Elevated TPHg concentrations were reported down to 26.5 ft bgs in borings adjacent to the former USTs beneath the sidewalk in front of 1432 Harrison. No soil analytical data are available between 26.5 and 30 ft bgs, but reported concentrations of hydrocarbons decreased to below detection limits in the 30 ft samples from VES-2 and VES-4. Soil boring B-24, drilled during this investigation, reported TPHg concentrations of 1.5, 4,300 and 22 mg/kg in samples collected at 20, 25 and 29.5 ft bgs, respectively. This illustrates the normal decreasing concentrations with depth to 30 ft bgs. However, the two samples below 30 ft, at 35 and 49.5 ft bgs, reported concentrations of 1,400 and 890 mg/kg, respectively. This increase in reported concentrations with greater depth appears anomalous and contrary to the expected, based on historical depth to water across the site. One possible explanation may be the caving of sidewall material from the impacted zone above, at or just below the water table, as the direct push drilling tool was extracted and replaced into the borehole.

Improvements to the site, including the USTs, fuel dispensers, three hydraulic lifts, a subsurface vault, a wash rack sump and associated piping were removed in December 1993. Approximately 240 cubic yards of backfill and over-excavated hydrocarbon-impacted soil were removed along with the improvements. The SVE/AS system was designed to primarily remediate the area of the former USTs and gasoline

dispensers. The removal of the USTs, piping, dispensers and associated impacted soil, along with the removal of a calculated 9,939 pounds of hydrocarbons by SVE/AS, should have significantly decreased residual hydrocarbon concentrations in soil. Current residual hydrocarbon concentrations in soil are unknown in these areas, but as described above, are likely reduced by remediation activities.

3.2 HYDROCARBON DISTRIBUTION IN GROUNDWATER

Historically, elevated concentrations of gasoline-range hydrocarbons occur in groundwater sampled from monitoring well MW-1, constructed at the location of the southern former gasoline UST, and monitoring wells MW-2, MW-4, and MW-5, located to the north and downgradient of the former USTs. Dissolved hydrocarbon concentrations in MW-1 were stable from August 1994 through December 2001. These concentrations exhibited a significant decrease with the implementation of active SVE/AS remediation between December 2001 and April 2005, despite showing a rebound after termination of active remediation in April 2005. The most recent analysis of groundwater from well MW-1 was March 2008, and reported 10,000 micrograms per liter (µg/l) TPHg and 510 µg/l benzene. Since that time, large volumes of silt in the well have made collection of groundwater samples impossible. This well was redeveloped on September 24, 2010. Well MW-1 will be sampled along with the new well proposed in this worklplan. Additionally, CRA will measure depth to water and calculate groundwater elevations for all wells at that time. The sampling results and a revised potentiometric elevation map will be included in the report documenting field activities.

Groundwater concentrations associated with downgradient well MW-4 have significantly decreased, becoming apparent during the first quarter of 2006. This appears to be the effect of upgradient groundwater remediation. Well MW-5 exhibited very low to non-detected concentrations of dissolved hydrocarbons from October 1996 through December 2003. Beginning in March 2004, groundwater concentrations in MW-5 increased to a maximum of 57,000 µg/l TPHg and 16,000 µg/l benzene, in March 2010. In September 2010, reported concentrations decreased to 35,000 and 12,000 µg/l, respectively. The extent of groundwater impacted by petroleum hydrocarbons downgradient of wells MW-4 and MW-5 is undefined. A potentiometric map of groundwater elevations measured on September 7, 2010 is included as Figure 3.

As mentioned above, local groundwater conditions may be influenced by other sources, possibly hydrocarbons associated with the USTs closed in-place beneath the sidewalk at 1424 Harrison Street. Historical commercial operations on nearby sites may also impact groundwater in wells associated with the 1432 Harrison Street site. On April 22, 2008, a

letter report titled *Neighboring Sites* was submitted to ACEH documenting the historical presence of other commercial operations that could impact groundwater in the immediate and local vicinity of the site.

3.3 HYDROCARBON DISTRIBUTION IN SOIL GAS

During the August 2009 investigation, six soil vapor probes were installed on and near the site. Three probes were installed on the property at 1432 Harrison Street, two were installed in the subsurface parking garage at 1439 Alice Street and one was installed in the sidewalk on the west side of Harrison Street. Sampled on September 9, 2009, all six vapor samples reportedly contained concentrations of TPHg between 440 $\mu g/m^3$ (SV-3) and 1,900 $\mu g/m^3$ (SV-6). Benzene ranged from below detection limits of <3.8 $\mu g/m^3$ (SV-6) to 6.2 $\mu g/m^3$ (SV-7). These concentrations are substantially below the established RWQCB Region 2 Shallow Soil Gas Screening Levels for commercial/industrial land use for TPHg of 29,000 $\mu g/m^3$ and benzene of 280 $\mu g/m^3$.

4.0 PROPOSED SCOPE OF WORK

As requested in the July 19, 2010 ACEH letter, CRA proposes to conduct additional investigation downgradient of well MW-2 to determine the extent of light, non-aqueous phase liquid (LNAPL). The ACEH letter refers to this as "free product," and the two terms are used interchangeably. The first observance of LNAPL referenced in the ACEH letter was March 1, 2010 during purging and sampling, and was present on September 7, 2010 during the most recent gauging and sampling. A sample of LNAPL was collected on March 1, 2010 and analyzed by McCampbell Analytical Laboratory. The laboratory fingerprinted the LNAPL and described it, having "a significant hydrocarbon pattern between C6 and C12 that resembles unmodified to weakly modified gasoline." Retail sales of gasoline at the site ceased in approximately 1988 and the presence of "unmodified to weakly modified gasoline" would suggest a source other than the former USTs removed from the subject site and the closed-in-place USTs at 1424 Harrison Street. Therefore, a parallel objective to the definition of LNAPL downgradient of well MW-2 is to investigate alternate sources of this LNAPL. To accomplish this goal, CRA proposes to advance two additional soil borings along Harrison Street based on the findings of a comprehensive conduit study along Harrison and 15th Streets. Additionally, the presence of LNAPL in MW-2 prompted ACEH to request investigation of potential intrusion of hydrocarbon vapors into the basement of the downgradient building located at 1445 Harrison Street. The proposed scope of work

is described in the following sections and proposed boring locations are shown on Figure 2.

Aquifer Sciences, Inc. provides environmental services to Mr. Spencer, the RP of the adjacent property at 1424 Harrison Street. In a report submitted to ACEH, dated January 15, 2010, Aquifer Sciences, Inc makes the accusation that CRA changed the wording of ACEH inspector Paul Smith on a Hazardous Materials Inspection Form dated April 29, 1991, referring to the in-place abandonment of USTs associated with 1424 Harrison Street. All available copies of this form are of poor quality and difficult to read. To dispel this accusation, CRA will review the ACEH files to locate the original form from which the cited copies were made. CRA is a professional company and greatly values its reputation. We intend to resolve this accusation and present the results of the file review in the report documenting this investigation.

4.1 SITE HEALTH AND SAFETY PLAN

CRA will update the site health and safety plan (HASP) to protect site workers, visitors and the public from potential hazards associated with the proposed scope of work. The plan will be kept onsite during all field activities and signed by each site worker and visitor.

4.2 PERMITS

CRA will obtain a drilling permit from the Alameda County Department of Public Works (ACDPW) prior to conducting fieldwork. Additionally, an encroachment permit will be required from the City of Oakland to drill in Harrison Street. An approved traffic control plan will be required to obtain the encroachment permit. If drilling in the western sidewalk of Harrison Street appears warranted, CRA will attempt to locate appropriate drilling locations in compliance with CRA's utility clearance safety protocols. If such locations are available, an encroachment permit will be acquired through the City of Oakland to advance soil borings and construct vapor probes. If soil borings cannot be safely located in the sidewalk, discussions regarding the placement of vapor probes in the basement of 1445 Harrison Street will occur with the property owners.

4.3 UTILITY CLEARANCE

The proposed drilling locations will be marked and Underground Service Alert will be notified of CRA's planned activities. CRA will contract a private subsurface utility locator to perform a comprehensive utility conduit study and to confirm the USA findings. The proposed boring locations will be cleared to a depth between 6 and 8 fbg.

4.4 COMPREHENSIVE CONDUIT STUDY

CRA will check City of Oakland Department of Public Works records for utility locations and prepare an extended site plan indicating the locations of identified utility conduits nearby the site. CRA will instruct the private subsurface utility locator to perform a comprehensive utility conduit study along Harrison and 15th Streets, based on acquired information and USA mark outs. The information collected in this conduit study may result in modifications to the proposed boring locations as presented on Figure 2 of this workplan. CRA will include information from this conduit study in the report documenting field activities and analytic results of the proposed investigation.

4.5 SOIL BORINGS, MONITOR WELL INSTALLATION AND SOIL VAPOR PROBE CONSTRUCTION

Below the utility clearance depth, CRA will advance soil borings using a hollow-stem auger drill rig to between 25 and 30 fbg, depending on conditions encountered. In soil borings constructed as vapor probes, the boring will be backfilled with neat cement up to approximately 17.5 fbg. The soil vapor probe will be constructed above the cement as described in the EPA's *Standard Operating Procedure for Installation of Sub-Slab Vapor Probes and Sampling Using EPA Method TO-15 to Support Vapor Intrusion Investigations*. Appendix A includes a copy of these procedures for your reference. The soil boring for construction of the additional monitor well will be advanced to a maximum of 30 fbg. Based on historical depth to groundwater measurements, CRA anticipates encountering groundwater in the range of 18 to 23 fbg. Considering the objectives of this site assessment, upon client approval, additional borings may be added to the scope based on field observations. Final depths will be determined in the field by the CRA Staff Geologist. Appendix B also includes CRA's *Standard Procedures for Soil Borings and Groundwater Well Installation* and *Standard Procedures for Hand Auger Soil Borings*.

4.6 SOIL SAMPLING AND ANALYSIS

During drilling, soil samples will be collected where staining, odor or elevated photo-ionization detector (PID) readings occur, and at the anticipated smear zone of the water table based on depth to water measurements in nearby site wells. Field screening of hydrocarbons will include PID readings, as well as visual and olfactory observations. CRA's *Standard Procedures for Soil Boring and Groundwater Well Installation* contains a description of soil sampling techniques. If no indications of hydrocarbons are detected, soil samples will be collected at intervals of 5 ft for possible analysis. A California-certified analytical laboratory will analyze select soil samples for TPHg and BTEX by EPA Method 8015/8021B (see table below).

TABLE 4.6
SOIL SAMPLE ANALYSIS, SAMPLING CONTAINERS, PRESERVATIVES, DETECTION LIMITS, AND HOLDING TIMES

Analysis and Method	*Sampling Containers*	*Preservatives*	*Detection Limit (mg/kg)*	*Holding Times*
TPHg and BTEX (8015/8021B)	Tube or Glass Container	Ice	1.0 and 0.005	14 days

4.7 GROUNDWATER SAMPLING AND ANALYSIS

CRA field staff will collect grab groundwater samples from the borings. CRA will sample the new well after its development. A California-certified analytical laboratory will analyze groundwater samples for TPHg and BTEX by EPA Method 8015/8021B (see table below).

TABLE 4.7
GROUNDWATER ANALYSIS, SAMPLING CONTAINERS, PRESERVATIVES, DETECTION LIMITS, AND HOLDING TIMES

Analysis and Method	*Sampling Containers*	*Preservatives*	*Detection Limit (µg/L)*	*Holding Times*
TPHg and BTEX (8015/8021B)	2-40ml Vials	Ice, HCL	<50 & <0.5	14 days

4.8 VAPOR SAMPLING AND ANALYSIS

At least 24 hours after vapor probe installation, CRA field staff will return to the site to collect vapor samples from the probes following the EPA's Standard Operating

Procedure for Installation of Sub-Slab Vapor Probes and Sampling Using EPA Method TO-15 to Support Vapor Intrusion Investigations. A California-certified analytical laboratory will analyze vapor samples for TPHg and BTEX by EPA Method TO-15. ASTM Method D-1946 will analyze the vapor samples for helium, carbon monoxide, methane and oxygen. Helium is a tracer gas for leak detection to insure the integrity of the samples (see table below).

TABLE 4.8
VAPOR ANALYSIS, SAMPLING CONTAINERS, PRESERVATIVES, DETECTION LIMITS, AND HOLDING TIMES

Analysis and Method	*Sampling Containers*	*Preservatives*	*Detection Limit)*	*Holding Times*
TPHg and BTEX (TO-15)	1-Liter Summa Canister	None	410, 16, 19, 22 & 22 µg/m^3	30 days
Helium, Carbon Monoxide, Methane and Oxygen (ASTM D-1946)	1-Liter Summa Canister	None	0.05, 0.010, 0.0001 and 0.10 percent	30 days

4.9 INVESTIGATION DERIVED WASTE (IDW)

Investigation derived waste (IDW) generated during field activities will be temporarily stored in the former onsite remediation enclosure in DOT-approved 55-gallon steel drums. Following a review of analytical results and disposal profiling, the IDW will be transported to an appropriate facility for disposal/recycling.

5.0 REPORTING

Upon receipt of analytical results, CRA will prepare and submit an *Additional Site Assessment Report* to the ACEH that, at a minimum, will contain:

- Results of the comprehensive conduit study,
- Descriptions of the soil, groundwater and vapor sampling methods,
- Tabulated soil, groundwater and vapor analytical results,
- Boring log details,
- Figures depicting the location of all borings, soil/groundwater/vapor analytical results and distribution,
- Laboratory reports and chain-of-custody forms,
- An evaluation of the analytical results and distribution of hydrocarbons, and

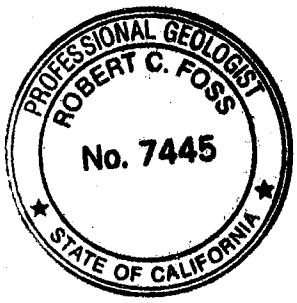
- Conclusions and recommendations.

6.0 SCHEDULE

CRA will begin implementation of this scope of work upon receipt of written approval of this workplan from the ACEH. CRA will submit an *Additional Offsite Assessment and Comprehensive Conduit Study Report* to ACEH approximately 60 days after the completion of field activities and receipt of all laboratory results.

All of Which is Respectfully Submitted,
CONESTOGA-ROVERS & ASSOCIATES

Calvin Hee



Robert Foss, P.G.

FIGURES

04/11/07

H:\SB-2004\OAK188\FIGURES\VICINITY-MAP.AI

0 1/8 1/4 1/2 1

SCALE 1:1/4 MILE

FIGURE 1

Allright Parking
1432 Harrison Street
Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

Vicinity Map

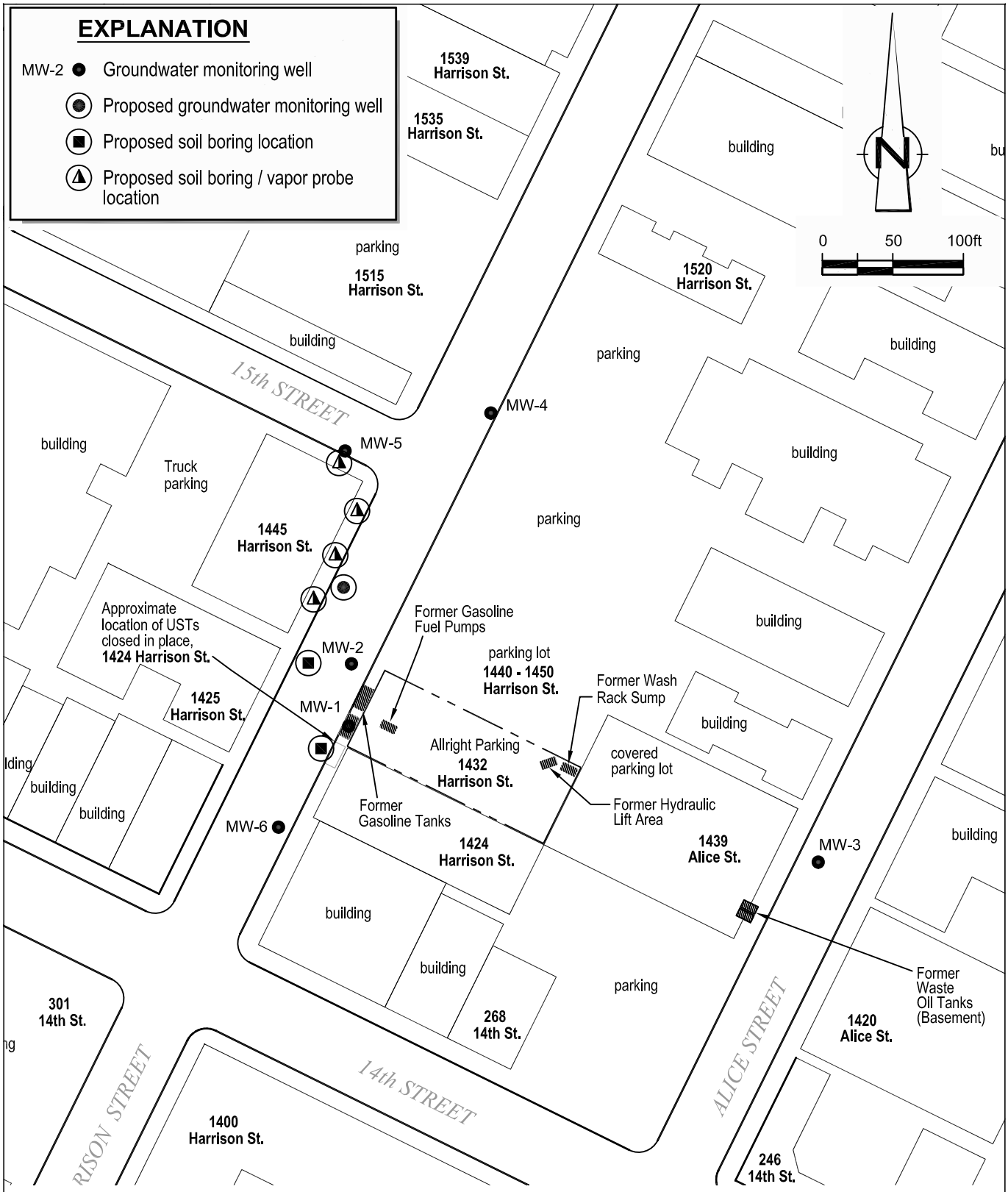


FIGURE 2

SITE MAP
ALLRIGHT PARKING
1432 HARRISON STREET
Oakland, California

I:\IR\6-chars\5401--\540188\540188-Borsuk - Oakland\540188-FIGURES\540118-SITEPLAN.DWG

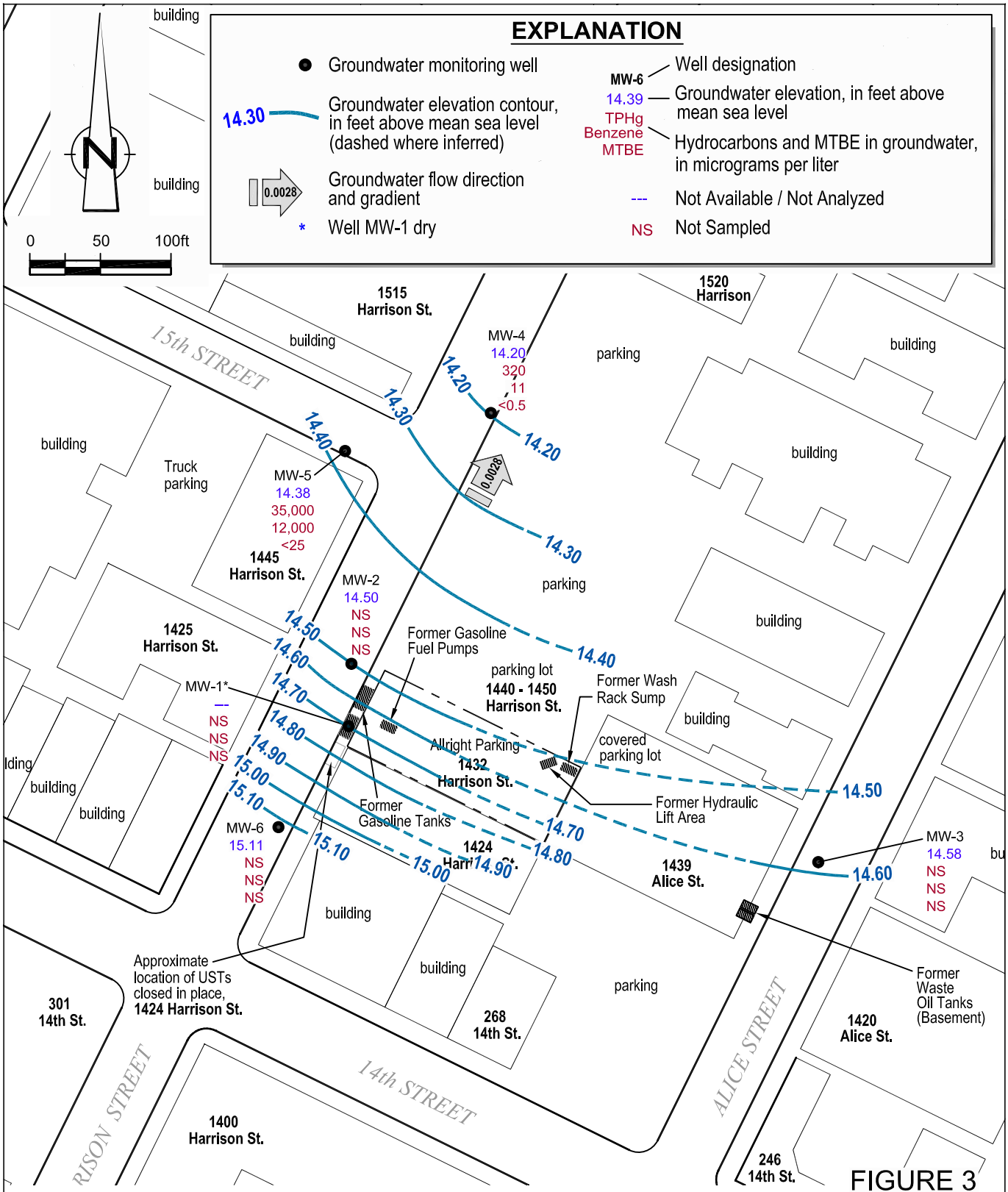


FIGURE 3

GROUNDWATER ELEVATION AND HYDROCARBON CONCENTRATION MAP
ALLRIGHT PARKING
1432 HARRISON STREET
Oakland, California
September 7, 2010

I:\IR\6-chars\5401--\540188\540188-Borsuk - Oakland\540188-FIGURES\540118-3Q10-HCGW.DWG

TABLES

TABLE 1

GROUNDWATER ELEVATION AND ANALYTICAL DATA
ALLRIGHT PARKING
1432 HARRISON STREET
OAKLAND, CALIFORNIA

Well ID / *Sample ID* / *TOC (ft amsl)*	*Date*	*Depth to Groundwater* (ft below TOC)	*SPH Thickness* (feet)	*TOC Groundwater Elevation* (ft amsl)	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*Notes*
					← (µg/L) →						
Monitoring Well Sample Results:											
MW-1	8/1/1994	--	--	--	170,000	35,000	51,000	2,400	13,000	--	--
34.95	12/21/1994	19.53	--	15.42	180,000	41,000	64,000	3,100	100,000	--	--
	3/13/1995	18.66	--	16.29	150,000	31,000	45,000	2,500	17,000	--	--
	6/27/1995	18.20	--	16.75	71,000	17,000	18,000	1,600	7,700	--	--
	7/7/1995	18.35	--	16.60	71,000	17,000	18,000	1,600	7,700	--	--
	9/28/1995	18.20	--	16.75	110,000	27,000	34,000	1,700	14,000	--	--
	12/20/1995	19.96	--	14.99	120,000	33,000	43,000	2,300	15,000	--	--
	3/26/1996	19.27	--	15.68	140,000	29,000	36,000	1,900	13,000	<200*	d
	6/20/1996	18.64	--	16.31	110,000	30,000	38,000	2,200	13,000	<200*	--
	9/26/1996	19.35	--	15.60	170,000	28,000	40,000	2,200	15,000	ND**	--
	10/28/1996	19.58	--	15.37	--	--	--	--	--	--	--
	12/12/1996	19.68	--	15.27	110,000	36,000	47,000	2,500	16,000	ND*	--
	3/31/1997	18.80	--	16.15	160,000	24,000	39,000	1,900	13,000	ND*	--
	6/27/1997	19.26	--	15.69	130,000	25,000	36,000	2,000	14,000	ND*	--
	9/9/1997	19.70	--	15.25	99,000	22,000	27,000	1,600	13,000	270*	--
	12/18/1997	19.25	--	15.70	160,000	30,000	44,000	2,200	15,000	ND***	--
	3/12/1998	17.52	--	17.43	190,000	20,000	49,000	2,500	18,000	ND***	--
	6/22/1998	18.63	--	16.32	90,000	19,000	40,000	2,100	16,000	--	--
	9/18/1998	18.60	--	16.35	190,000	29,000	48,000	2,400	17,000	--	--
	12/23/1998	19.18	--	15.77	140,000	24,000	44,000	2,000	8,200	--	--
	3/29/1999	18.52	--	16.43	181,000	22,200	40,100	1,844	12,200	--	--
	6/23/1999	18.60	--	16.35	80,000	20,000	33,000	1,600	11,000	--	--
	9/24/1999	19.05	--	15.90	117,000	15,100	20,700	1,550	11,800	--	--
	12/23/1999	19.95	--	15.00	186,000	25,900	39,000	1,990	12,400	--	--
	3/21/2000	18.48	--	16.47	210,000	35,000	42,000	2,200	13,000	<3,000	a
	7/3/2000	18.95	--	16.00	200,000	33,000	46,000	2,200	15,000	<200*	a
	9/7/2000	19.45	Sheen [Field]	15.50	--	--	--	--	--	--	--
	12/5/2000	19.90	--	15.05	220,000	42,000	57,000	2,700	17,000	<200	a
	3/6/2001	18.20	--	16.75	180,000	27,000	39,000	2,000	13,000	<1200* / <20***	a,l
	6/8/2001	20.14	--	14.81	170,000	28,000	40,000	1,900	13,000	<200	a
	8/27/2001	21.19	--	13.76	130,000	24,000	33,000	1,600	11,000	<350	a
	10/25/2001	21.74	--	13.21	160,000	22,000	28,000	1,500	10,000	<350	a
	3/1/2002	21.39	0.41	13.84[x]	--	--	--	--	--	--	--
	6/10/2002	22.30	--	12.65	210,000	30,000	51,000	3,100	22,000	<1,000*	a
34.96	9/3/2002	21.40	--	13.56	2,500,000	31,000	170,000	29,000	170,000	2,500,000*	a
	12/22/2002	20.50	--	14.46	89,000	2,600	9,300	530	28,000	<1,700	a,m
	1/23/2003	18.57	Sheen [Lab]	16.39	130,000	600	1,600	<100	41,000	<50***	a,b,l
	6/12/2003	19.10	0.07	15.91[x]	--	--	--	--	--	--	--
	7/23/2003	19.42	0.07	15.59[x]	--	--	--	--	--	--	--
35.37#	12/22/2003	17.09	0.01	18.29[x]	--	--	--	--	--	--	--
	3/10/2004	13.82	--	21.55	22,000	190	250	<10	5,100	<100	a,c
	6/16/2004	14.75	--	20.62	2,700	23	160	13	520	<25	a
	9/27/2004	18.02	Sheen [Field]	17.35	27,000	580	2,000	56	6,800	<10***	a,m
	12/22/2004	11.25	--	24.12	250	3.5	18	<0.5	47	<0.5***	a,m
	3/3/2005	14.42	--	20.95	320	5.2	13	3.2	46	<5.0	a
34.96##	6/9/2005	17.80	--	17.16	--	--	--	--	--	--	+
	9/9/2005	18.26	--	16.70	--	--	--	--	--	--	+
	12/20/2005	18.68	--	16.28	--	--	--	--	--	--	+
	3/26/2006	16.96	--	18.00	23,000	270	400	65	4,400	<50	a
	6/23/2006	17.55	--	17.41	30,000	340	680	170	6,900	<500	a,m
	9/7/2006	18.53	--	16.43	34,000	540	630	190	7,000	<500	a
	12/29/2006	19.43	Sheen [Field]	15.53	20,000	550	55	130	4,700	<100*/<0.5***	a,m
	3/21/2007	18.92	Sheen [Field]	16.04	23,000	910	210	140	5,900	<250*	a
	6/7/2007	19.22	Sheen [Field]	15.74	24,000	680	61	190	4,300	<100*	a,b
	9/28/2007	20.19	--	14.77	--	--	--	--	--	--	+
	12/9/2007	20.40	--	14.56	--	--	--	--	--	--	+

GROUNDWATER ELEVATION AND ANALYTICAL DATA
ALLRIGHT PARKING
1432 HARRISON STREET
OAKLAND, CALIFORNIA

Well ID Sample ID TOC (ft amsl)	Date	Depth to Groundwater (ft below TOC)	SPH Thickness (feet)	TOC Groundwater Elevation (ft amsl)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
					←			(µg/L)		→	
MW-1 cont.	3/3/2008	19.16	Sheen [Lab]	15.80	10,000	510	28	<10	1,700	<2.5***	a,b,m,l
	6/4/2008	20.05	--	14.91	--	--	--	--	--	--	--
	9/9/2008	20.40	--	14.56	--	--	--	--	--	--	--
	12/5/2008	20.42	--	14.54	--	--	--	--	--	--	--
	3/2/2009	20.39	--	14.57	--	--	--	--	--	--	--
	9/15/2009	Well Dry	--	--	--	--	--	--	--	--	--
	3/1/2010	Well Dry	--	--	--	--	--	--	--	--	--
	9/7/2010	**Well Dry**	--		--	--	--	--	--	--	--
MW-2	8/1/1994	--	--	--	130,000	28,000	35,000	3,000	12,000	--	--
35.18	12/21/1994	19.91	--	15.27	200	140,000	200,000	3,500	22,000	--	--
	3/13/1995	19.15	--	16.03	500	9,200	23,000	7,000	36,000	--	--
	6/27/1995	18.74	--	16.44	120,000	23,000	30,000	2,700	13,000	--	--
	7/7/1995	18.80	--	16.38	120,000	23,000	30,000	2,700	13,000	--	--
	9/28/1995	19.30	--	15.88	110,000	23,000	29,000	2,500	11,000	--	--
	12/20/1995	20.24	--	14.94	83,000	980	1,800	2,200	10,000	--	--
	3/26/1996	19.69	--	15.49	150,000	23,000	32,000	2,800	12,000	<200*	d
	6/20/1996	19.20	--	15.98	94,000	15,000	23,000	2,400	12,000	<200*	--
	9/26/1996	19.80	--	15.38	150,000	20,000	29,000	2,800	12,000	ND**	--
	10/28/1996	20.18	--	15.00	--	--	--	--	--	--	--
	12/12/1996	20.17	--	15.01	58,000	3,100	11,000	1,700	8,100	220*	--
	3/31/1997	19.67	--	15.51	38,000	6,000	7,900	690	3,300	ND*	--
	6/27/1997	19.68	--	15.50	62,000	13,000	16,000	1,300	6,000	ND*	--
	9/9/1997	20.20	--	14.98	81,000	16,000	18,000	1,800	8,600	ND***	--
	12/18/1997	19.80	--	15.38	110,000	18,000	26,000	2,200	9,500	ND***	--
	3/12/1998	18.07	--	17.11	120,000	16,000	26,000	2,200	9,400	ND***	--
	6/22/1998	18.29	--	16.89	38,000	9,800	9,500	1,500	6,000	--	--
	9/18/1998	19.09	--	16.09	68,000	12,000	16,000	1,400	5,900	--	--
	12/23/1998	19.67	--	15.51	180,000	16,000	22,000	2,200	8,300	--	--
	3/29/1999	18.97	--	16.21	16,600	1,380	1,920	373	1,840	--	--
	6/23/1999	18.25	--	16.93	41,000	10,000	9,400	1,100	5,000	--	--
	9/24/1999	19.60	--	15.58	40,600	4,880	3,490	1,090	4,560	--	--
	12/23/1999	20.21	--	14.97	61,900	6,710	9,320	1,150	5,360	--	--
	3/21/2000	18.93	--	16.25	98,000	14,000	21,000	1,600	6,900	<1600	a
	7/3/2000	19.38	--	15.80	140,000	18,000	33,000	2,600	11,000	<200*	a
	9/7/2000	19.83	--	15.35	110,000	17,000	21,000	2,200	9,700	<100***	a,l
	12/5/2000	20.30	--	14.88	130,000	19,000	28,000	2,500	11,000	<200	a
	3/6/2001	19.57	--	15.61	32,000	3,400	3,400	580	2,500	<200	a
	6/8/2001	20.59	--	14.59	72,000	9,400	9,200	1,300	5,800	<200	a
	8/27/2001	21.79	--	13.39	110,000	17,000	28,000	2,600	11,000	<950	a
	10/25/2001	22.05	--	13.13	110,000	15,000	18,000	2,000	8,700	<350	a
	3/1/2002	21.80	--	13.38	3,100	370	180	62	330	<5.0*	a
	6/10/2002	22.83	--	12.35	7,800	2,000	1,100	76	570	<100*	a
35.21	9/3/2002	22.03	--	13.18	21,000	2,400	2,900	320	1,400	<500	a
	12/22/2002	22.70	--	12.51	630	48	56	19	82	<5.0	a
	1/23/2003	20.49	--	14.72	1,100	27	32	19	150	<25	a
	6/12/2003	21.03	--	14.18	10,000	2,100	1,600	150	660	<250	a
	7/23/2003	21.40	--	13.81	28,000	4,800	4,800	380	1,700	<500	a
	12/22/2003	19.33	--	15.88	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	3/10/2004	19.33	--	15.88	3,100	460	290	38	240	<50	a
	6/16/2004	19.90	--	15.31	9,100	1,600	1,200	220	830	<400	a
	9/27/2004	22.08	--	13.13	14,000	2,800	490	340	1,600	<350	a
	12/22/2004	21.74	--	13.47	1,100	300	28	22	71	<15	a
	3/3/2005	19.60	--	15.61	340	12	4.4	9.1	28	<10	a
	6/9/2005	18.65	--	16.56	240	22	2.7	6.4	27	<10	a
	9/9/2005	19.27	--	15.94	7,800	1,100	170	380	690	<160	a
	12/20/2005	19.70	--	15.51	150	10	1.9	2.8	10	<5.0	a

GROUNDWATER ELEVATION AND ANALYTICAL DATA
ALLRIGHT PARKING
1432 HARRISON STREET
OAKLAND, CALIFORNIA

Well ID / Sample ID / TOC (ft amsl)	Date	Depth to Groundwater (ft below TOC)	SPH Thickness (feet)	TOC Groundwater Elevation (ft amsl)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
					← (µg/L) →						
MW-2 cont.	3/26/2006	18.51	--	16.70	2,200	93	19	66	130	<50	a
	6/23/2006	18.47	--	16.74	8,800	1,600	110	500	480	<500	a,m
	9/7/2006	18.97	--	16.24	29,000	4,800	280	940	1,000	<500	a
	12/29/2006	19.76	--	15.45	4,500	720	54	250	480	75*[1]/<0.5***	a
	3/21/2007	19.59	--	15.62	34,000	9,100	500	890	2,500	<1,100*	a
	6/7/2007	19.74	Sheen [Lab]	15.47	46,000	7,100	410	870	2,400	<800*	a,b
	9/28/2007	20.23	--	14.98	44,000	9,400	630	1,400	3,600	<0.5***	a
	12/9/2007	20.68	--	14.53	37,000	8,400	550	1,400	4,500	<17***	a,l
	3/3/2008	20.11	--	15.10	40,000	7,700	490	1,400	4,400	<17***	a,l
	6/4/2008	20.40	--	14.81	56,000	7,400	600	1,500	4,100	<25***	a,j
	9/9/2008	20.85	--	14.36	65,000	7,800	510	1,700	4,700	<25***	a,l
	12/5/2008	← Well Inaccessible →									
	3/2/2009	← Well Inaccessible →									
	9/15/2009	21.22	--	13.99	48,000	6,400	600	1,900	2,800	<2.5***	a,l
	3/1/2010	21.00	0.22	14.21	← SPH Observed During Purging →						--
	9/7/2010	**20.71**	0.29	14.50	← SPH Observed During Purging →						--
MW-3	8/1/1994	--	--	--	<50	<0.5	<0.5	<0.5	<2.0	--	--
33.97	12/21/1994	18.82	--	15.15	<50	<0.5	<0.5	<0.5	<0.5	--	--
	3/13/1995	17.86	--	16.11	<50	<0.5	<0.5	<0.5	<0.5	--	e
	7/7/1995	18.25	--	15.72	--	--	--	--	--	--	f,g
	9/28/1995	18.00	--	15.97	--	--	--	--	--	--	h
	12/20/1995	18.74	--	15.23	--	--	--	--	--	--	--
	3/26/1996	18.25	--	15.72	--	--	--	--	--	--	--
	6/20/1996	18.35	--	15.62	--	--	--	--	--	--	--
	9/26/1996	19.12	--	14.85	--	--	--	--	--	--	--
	10/28/1996	19.11	--	14.86	--	--	--	--	--	--	--
	12/12/1996	18.61	--	15.36	--	--	--	--	--	--	--
	3/31/1997	18.35	--	15.62	--	--	--	--	--	--	--
	6/27/1997	18.81	--	15.16	--	--	--	--	--	--	--
	9/9/1997	19.18	--	14.79	--	--	--	--	--	--	--
	12/18/1997	18.64	--	15.33	--	--	--	--	--	--	--
	3/12/1998	17.56	--	16.41	--	--	--	--	--	--	--
	6/22/1998	18.64	--	15.33	--	--	--	--	--	--	--
	9/18/1998	18.33	--	15.64	--	--	--	--	--	--	--
	12/23/1998	18.60	--	15.37	--	--	--	--	--	--	--
	3/29/1999	17.85	--	16.12	--	--	--	--	--	--	--
	6/23/1999	18.67	--	15.30	--	--	--	--	--	--	--
	9/24/1999	18.64	--	15.33	--	--	--	--	--	--	--
	12/23/1999	19.32	--	14.65	--	--	--	--	--	--	--
	3/21/2000	17.89	--	16.08	--	--	--	--	--	--	--
	7/3/2000	18.40	--	15.57	--	--	--	--	--	--	--
	9/7/2000	18.75	--	15.22	--	--	--	--	--	--	--
34.01	12/5/2000	19.03	--	14.94	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	3/6/2001	18.12	--	15.85	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	6/8/2001	20.02	--	13.95	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	8/27/2001	21.09	--	12.88	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	10/25/2001	21.29	--	12.68	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	3/1/2002	21.14	--	12.83	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	--
	6/10/2002	21.99	--	11.98	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	--
	9/3/2002	21.17	--	12.84	--	--	--	--	--	--	--
	12/22/2002	21.94	--	12.07	--	--	--	--	--	--	--
	1/23/2003	20.08	--	13.93	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	6/12/2003	20.95	--	13.06	--	--	--	--	--	--	--
	7/23/2003	21.28	--	12.73	--	--	--	--	--	--	--
	12/22/2003	19.05	--	14.96	--	--	--	--	--	--	--
	3/10/2004	18.22	--	15.79	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--

GROUNDWATER ELEVATION AND ANALYTICAL DATA
ALLRIGHT PARKING
1432 HARRISON STREET
OAKLAND, CALIFORNIA

Well ID Sample ID TOC (ft amsl)	Date	Depth to Groundwater (ft below TOC)	SPH Thickness (feet)	TOC Groundwater Elevation (ft amsl)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
					←			(µg/L)		→	
MW-3 cont.	6/16/2004	18.82	--	15.19	--	--	--	--	--	--	--
	9/27/2004	21.03	--	12.98	--	--	--	--	--	--	--
	12/22/2004	20.69	--	13.32	--	--	--	--	--	--	--
	3/3/2005	17.94	--	16.07	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	6/9/2005	18.00	--	16.01	--	--	--	--	--	--	--
	9/9/2005	18.43	--	15.58	--	--	--	--	--	--	--
	12/20/2005	18.18	--	15.83	--	--	--	--	--	--	--
	3/26/2006	17.42	--	16.59	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	6/23/2006	17.77	--	16.24	--	--	--	--	--	--	--
	9/7/2006	18.20	--	15.81	--	--	--	--	--	--	--
	12/29/2006	18.49	--	15.52	--	--	--	--	--	--	--
	3/21/2007	18.44	--	15.57	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	--
	6/7/2007	18.68	--	15.33	--	--	--	--	--	--	--
	9/28/2007	19.19	--	14.82	--	--	--	--	--	--	--
	12/9/2007	19.31	--	14.70	--	--	--	--	--	--	--
	3/3/2008	18.68	--	15.33	<50	<0.5	<0.5	<0.5	<0.5	<0.5***	--
	6/4/2008	19.11	--	14.90	--	--	--	--	--	--	--
	9/9/2008	19.65	--	14.36	--	--	--	--	--	--	--
	12/5/2008	19.96	--	14.05	--	--	--	--	--	--	--
	3/2/2009	19.19	--	14.82	<50	<0.5	<0.5	<0.5	<0.5	<0.5***	
	9/15/2009	19.90	--	14.11	--	--	--	--	--	--	--
	3/1/2010	19.20	--	14.81	<50	<0.5	<0.5	<0.5	<0.5	<0.5***	
	9/7/2010	**19.43**	--	**14.58**	--	--	--	--	--	--	--
MW-4	10/28/1996	19.32	--	14.43	10,000	3,900	420	400	360	<200*	n
33.75	12/12/1996	19.42	--	14.33	11,000	4,200	410	420	260	32*	--
	3/31/1997	18.67	--	15.08	ND	ND	ND	ND	ND	ND*	--
	6/27/1997	19.08	--	14.67	160	49	1.2	ND	5.9	ND*	--
	9/9/1997	19.33	--	14.42	7,400	5,000	410	230	470	33*	--
	12/18/1997	19.17	--	14.58	710	170	8.0	ND	39	ND***	--
	3/12/1998	17.68	--	16.07	1,300	410	21	ND	57	ND***	--
	6/22/1998	17.63	--	16.12	ND	ND	ND	ND	ND	--	--
	9/18/1998	18.58	--	15.17	ND	42	1.6	ND	4.8	--	--
	12/23/1998	19.01	--	14.74	1,900	1,000	76	50	120	--	--
	3/29/1999	18.35	--	15.40	ND	ND	ND	ND	ND	--	--
	6/23/1999	17.58	--	16.17	ND	ND	ND	ND	ND	--	--
	9/24/1999	19.05	--	14.70	9,150	3,270	131	34	537	--	--
	12/23/1999	19.41	--	14.34	12,200	5,360	275	424	592	--	--
	3/21/2000	18.42	--	15.33	45,000	16,000	1,100	1,400	1,900	1400* / <35***	a,l
	7/3/2000	18.82	--	14.93	33,000	10,000	720	840	1,800	<200*	a
	9/7/2000	19.21	--	14.54	26,000	8,800	800	740	1,500	<50***	a,c,l
	12/5/2000	19.60	--	14.15	41,000	11,000	840	930	1,900	<200	a
	3/6/2001	18.24	--	15.51	1,100	400	5.7	<0.5	20	<5.0	a
	6/8/2001	20.91	--	12.84	92	19	<0.5	<0.5	1	<5.0	a
	8/27/2001	21.63	--	12.12	49,000	17,000	1700	1,700	3,200	<260	a
	10/25/2001	21.70	--	12.05	57,000	16,000	1,500	1,600	2,600	<300	a
	3/1/2002	21.53	--	12.22	400	140	2.3	<0.5	12	<5.0*	a
	6/10/2002	22.23	--	11.52	<50	2.5	<0.5	<0.5	<0.5	<5.0*	--
	9/3/2002	21.85	--	11.90	31,000	9,700	300	650	1,100	<1,000	a
	12/22/2002	22.39	--	11.36	35,000	13,000	310	1,100	1,800	<1,500	a
	1/23/2003	20.61	--	13.14	51,000	18,000	430	1,500	2,200	<5.0***	a,l
	6/12/2003	21.20	--	12.55	80	12	<0.5	<0.5	1.0	<10	a
	7/23/2003	21.51	--	12.24	20,000	7,600	100	65	660	<250	a
	12/22/2003	19.60	--	14.15	26,000	9,500	200	380	1,100	<150	a
	3/10/2004	18.81	--	14.94	14,000	4,800	150	320	530	<400	a
	6/16/2004	19.32	--	14.43	2,800	1,100	24	17	100	<50	a
	9/27/2004	21.45	--	12.30	45,000	16,000	260	1,700	2,000	<25***	a

GROUNDWATER ELEVATION AND ANALYTICAL DATA
ALLRIGHT PARKING
1432 HARRISON STREET
OAKLAND, CALIFORNIA

Well ID Sample ID TOC (ft amsl)	Date	Depth to Groundwater (ft below TOC)	SPH Thickness (feet)	TOC Groundwater Elevation (ft amsl)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
					←			(µg/L)		→	
MW-4 cont.	12/22/2004	21.15	--	12.60	29,000	10,000	160	890	1,200	<5.0***	a,j
	3/3/2005	18.60	--	15.15	18,000	6,400	98	500	610	<600	a
	6/9/2005	18.11	--	15.64	20,000	6,100	110	460	580	<500	a
	9/9/2005	18.65	--	15.10	17,000	6,400	100	470	730	<250	a
	12/20/2005	19.01	--	14.74	26,000	8,500	160	640	800	<120	a
	3/26/2006	17.84	--	15.91	1,900	700	22	49	85	<50	a
	6/23/2006	17.96	--	15.79	12,000	3,400	130	370	510	260	a
	9/7/2006	18.29	--	15.46	8,600	1,800	100	170	220	<210	a,i
	12/29/2006	18.93	--	14.82	4,200	1,100	120	150	280	<150*/<0.5***	a
	3/21/2007	18.76	--	14.99	550	30	2.0	4.5	5.1	<30*	a
	6/7/2007	18.92	--	14.83	85	4.4	<0.5	0.77	0.82	<5.0*	a
	9/28/2007	19.41	--	14.34	140	7.0	<0.5	1.2	<0.5	<0.5***	a
	12/9/2007	19.86	--	13.89	120	4.5	<0.5	0.62	<0.5	<0.5	a
	3/3/2008	19.22	--	14.53	63	0.78	<0.5	<0.5	<0.5	<0.5***	i
	6/4/2008	19.58	--	14.17	86	2.2	<0.5	<0.5	0.58	<0.5***	a
	9/9/2008	20.01	--	13.74	460	9.4	0.95	3.1	19	<0.5***	a
	12/5/2008	20.29	--	13.46	290	4.3	1.4	3.0	14	<0.5***	a
	3/2/2009	19.86	--	13.89	520	6.0	2.2	6.5	9.2	<0.5***	a
	9/15/2009	20.23	--	13.52	370	2.2	1.1	2.8	3.3	<0.5***	a
	3/1/2010	19.70	--	14.05	220	1.8	<0.5	1.2	1.5	<0.5***	a
	9/7/2010	**19.55**	--	**14.20**	--	--	--	--	--	--	--
MW-5	10/28/1996	19.88	--	14.75	90	4.0	0.6	<0.50	<0.50	16*	
34.63	12/12/1996	20.09	--	14.54	230	5.6	0.9	ND	0.9	3.6*	n
	3/31/1997	19.24	--	15.39	90	3.1	ND	ND	ND	ND*	--
	6/27/1997	19.16	--	15.47	ND	ND	ND	ND	ND	ND*	--
	9/9/1997	19.93	--	14.70	ND	ND	ND	ND	ND	ND*	--
	12/18/1997	19.77	--	14.86	ND	ND	ND	ND	ND	ND***	--
	3/12/1998	19.77	--	14.86	79	2.3	ND	0.8	ND	ND*	--
	6/22/1998	18.08	--	16.55	ND	ND	ND	ND	ND	--	--
	9/18/1998	19.12	--	15.51	ND	ND	ND	ND	ND	--	--
	12/23/1998	19.60	--	15.03	ND	0.8	0.9	ND	ND	--	--
	3/29/1999	18.88	--	15.75	ND	ND	ND	ND	ND	--	--
	6/23/1999	18.05	--	16.58	ND	ND	ND	ND	ND	--	--
	9/24/1999	19.61	--	15.02	ND	ND	ND	ND	ND	--	--
	12/23/1999	20.01	--	14.62	ND	ND	ND	ND	ND	--	--
	3/21/2000	19.05	--	15.58	140	<0.5	<0.5	<0.5	<0.5	<5.0	--
	7/3/2000	19.40	--	15.23	85	8.1	3.1	1.6	7.8	<5.0*	k
	9/7/2000	19.62	--	15.01	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	a
	12/5/2000	20.25	--	14.38	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	3/6/2001	19.07	--	15.56	91	5.5	<0.5	<0.5	<0.5	<5.0	--
	6/8/2001	20.77	--	13.86	290	22.0	0.8	<0.5	<0.5	<5.0	--
	8/27/2001	21.33	--	13.30	660	24.0	2.2	1.3	4.0	<25	a
	10/25/2001	21.62	--	13.01	55	3.5	<0.5	<0.5	<0.5	<5.0	a
	3/1/2002	21.49	--	13.14	200	1.9	0.69	<0.5	<0.5	<5.0*	a
	6/10/2002	22.15	--	12.48	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	a
	9/3/2002	21.50	--	13.13	60	1.9	<0.5	<0.5	0.77	<5.0	--
	12/22/2002	22.19	--	12.44	82	0.57	<0.5	0.68	<0.5	<5.0	a
	1/23/2003	20.27	--	14.36	<50	2.1	<0.5	<0.5	<0.5	<5.0	a
	6/12/2003	21.10	--	13.53	<50	0.88	<0.5	<0.5	<0.5	<5.0	--
	7/23/2003	21.47	--	13.16	<50	4.0	<0.5	<0.5	<0.5	<5.0	--
	12/22/2003	19.57	--	15.06	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	3/10/2004	19.61	--	15.02	990	200	2.9	4.0	20	<70	--
	6/16/2004	20.15	--	14.48	250	42	<0.5	0.88	<0.5	<35	a
	9/27/2004	22.14	--	12.49	1,600	140	4.8	45	18	<110	a
	12/22/2004	21.81	--	12.82	<50	5.3	<0.5	<0.5	0.66	<5.0	--
	3/3/2005	19.35	--	15.28	2,000	330	4.4	63	39	<150	a

GROUNDWATER ELEVATION AND ANALYTICAL DATA
ALLRIGHT PARKING
1432 HARRISON STREET
OAKLAND, CALIFORNIA

Well ID / Sample ID / TOC (ft amsl)	Date	Depth to Groundwater (ft below TOC)	SPH Thickness (feet)	TOC Groundwater Elevation (ft amsl)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
					← (µg/L) →						
MW-5 cont.	6/9/2005	18.73	--	15.90	250	42	1.4	14	3.2	<5.0	a
	9/9/2005	19.30	--	15.33	2,000	390	5.0	71	38	<400	a
	12/20/2005	19.65	--	14.98	4,300	760	18	170	150	<35	a
	3/26/2006	18.58	--	16.05	1,600	460	3.3	35	32	<50	a
	6/23/2006	18.57	--	16.06	1,900	500	3.9	81	56	<17	a
	9/7/2006	18.98	--	15.65	8,800	1,900	12	350	220	<260	a,i
	12/29/2006	19.70	--	14.93	15,000	3,400	69	610	700	<450*/<0.5***	a
	3/21/2007	19.57	--	15.06	9,900	2,300	24	360	410	<240*	a
	6/7/2007	19.70	--	14.93	14,000	3,800	40	790	720	<550*	a
	9/28/2007	20.16	--	14.47	26,000	7,200	84	1,100	1,600	<25***	a,l
	12/9/2007	20.56	--	14.07	25,000	7,000	59	1,100	2,000	<17	a,l
	3/3/2008	19.97	--	14.66	30,000	6,200	31	900	1,400	<10***	a,l
	6/4/2008	20.32	--	14.31	7,500	1,600	4.6	25	91	<10***	a,j
	9/9/2008	20.75	--	13.88	54,000	8,900	76	1,300	1,700	<25***	a,l
	12/5/2008	21.08	--	13.55	33,000	9,200	43	1,500	1,800	<5.0***	a,l
	3/2/2009	20.74	--	13.89	34,000	9,700	41	1,100	1,300	<5.0***	a,l
	9/15/2009	21.02	--	13.61	40,000	10,000	280	1,400	2,600	<2.5***	a,l
	3/1/2010	20.55	--	14.08	57,000	16,000	240	1,800	5,000	<10***	a,l
	9/7/2010	**20.25**	--	**14.38**	--	--	--	--	--	--	--
MW-6	10/28/1996	20.02		15.87	<50	<0.50	<0.50	<0.50	<0.50	<2.0*	
35.89	12/12/1996	20.18	--	15.71	ND	ND	ND	ND	ND	ND*	n
	3/31/1997	19.81	--	16.08	--	--	--	--	--	--	--
	6/27/1997	19.76	--	16.13	--	--	--	--	--	--	--
	9/9/1997	20.06	--	15.83	ND	ND	ND	ND	ND	ND*	--
	12/18/1997	19.90	--	15.99	ND	ND	ND	ND	ND	--	--
	3/12/1998	18.00	--	17.89	ND	ND	ND	ND	ND	ND*	--
	6/22/1998	18.43	--	17.46	ND	ND	ND	ND	ND	--	--
	9/18/1998	19.10	--	16.79	ND	ND	ND	ND	ND	--	--
	12/23/1998	19.61	--	16.28	ND	ND	ND	ND	ND	--	--
	3/29/1999	18.92	--	16.97	ND	ND	ND	ND	ND	--	--
	6/23/1999	18.41	--	17.48	ND	ND	ND	ND	ND	--	--
	9/24/1999	19.61	--	16.28	ND	ND	ND	ND	ND	--	--
	12/23/1999	20.30	--	15.59	ND	ND	ND	ND	ND	--	--
	3/21/2000	18.97	--	16.92	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	7/3/2000	19.46	--	16.43	59	5.1	2.3	1.1	5.3	<5.0*	--
	9/7/2000	19.95	--	15.94	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	a
	12/5/2000	20.50	--	15.39	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	3/6/2001	19.54	--	16.35	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	6/8/2001	20.92	--	14.97	<50	<0.5	<0.5	<0.5	<0.5	<5.1	--
	8/27/2001	21.37	--	14.52	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	10/25/2001	21.59	--	14.30	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	3/1/2002	21.33	--	14.56	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	--
	6/10/2002	21.97	--	13.92	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	--
	9/3/2002	21.55	--	14.34	--	--	--	--	--	--	--
	12/22/2002	22.25	--	13.64	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	1/23/2003	20.47	--	15.42	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	6/12/2003	21.09	--	14.80	--	--	--	--	--	--	--
	7/23/2003	21.42	--	14.47	--	--	--	--	--	--	--
	12/22/2003	19.49	--	16.40	--	--	--	--	--	--	--
	3/10/2004	20.20	--	15.69	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	6/16/2004	20.73	--	15.16	--	--	--	--	--	--	--
	9/27/2004	22.88	--	13.01	--	--	--	--	--	--	--
	12/22/2004	22.53	--	13.36	--	--	--	--	--	--	--
	3/3/2005	19.87	--	16.02	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	6/9/2005	18.95	--	16.94	--	--	--	--	--	--	--
	9/9/2005	19.45	--	16.44	--	--	--	--	--	--	--

GROUNDWATER ELEVATION AND ANALYTICAL DATA
ALLRIGHT PARKING
1432 HARRISON STREET
OAKLAND, CALIFORNIA

Well ID Sample ID TOC (ft amsl)	Date	Depth to Groundwater (ft below TOC)	SPH Thickness (feet)	TOC Groundwater Elevation (ft amsl)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
					←			(µg/L)		→	
MW-6 cont.	12/20/2005	19.90	--	15.99	--	--	--	--	--	--	--
	3/26/2006	18.85	--	17.04	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	6/23/2006	18.57	--	17.32	--	--	--	--	--	--	--
	9/7/2006	19.13	--	16.76	--	--	--	--	--	--	--
	12/29/2006	19.96	--	15.93	--	--	--	--	--	--	--
	3/21/2007	19.87	--	16.02	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	m
	6/7/2007	20.05	--	15.84	--	--	--	--	--	--	--
	9/28/2007	20.51	--	15.38	--	--	--	--	--	--	--
	12/9/2007	20.90	--	14.99	--	--	--	--	--	--	--
	3/3/2008	20.47	--	15.42	<50	<0.5	<0.5	<0.5	<0.5	<0.5***	--
	6/4/2008	20.70	--	15.19	--	--	--	--	--	--	--
	9/9/2008	21.09	--	14.80	--	--	--	--	--	--	--
	12/5/2008	21.50	--	14.39	--	--	--	--	--	--	--
	3/2/2009	21.30	--	14.59	<50	<0.5	<0.5	<0.5	<0.5	<0.5***	--
	9/15/2009	21.55	--	14.34	--	--	--	--	--	--	--
	3/1/2010	21.20	--	14.69	<50	<0.5	<0.5	<0.5	<0.5	<0.5***	m
	9/7/2010	**20.78**	--	**15.11**	--	--	--	--	--	--	--
Trip Blank	3/21/2000	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	9/7/2000	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
Grab Groundwater Sample Results:											
SB-A	7/6/1995	~20	--	--	330	16	3.6	1.3	4.9	--	i,j
SB-B	7/7/1995	~20	--	--	450	55	3.1	5.1	5.0	--	a
SB-C	7/6/1995	~20	--	--	44,000	6,600	5,900	980	4,400	--	a
SB-D	7/6/1995	~20	--	--	70,000	7,400	10,000	1,600	7,200	--	a
SB-E	7/6/1995	~20	--	--	25,000	1,000	3,000	610	2,700	--	a
SB-G	7/7/1995	~20	--	--	84,000	9,400	16,000	2,200	9,900	--	a,b
SB-I	7/7/1995	~20	--	--	24,000	6,100	1,400	680	1,600	--	a
SB-J	7/7/1995	~20	--	--	960	110	66	8.7	71	--	a
SB-K	7/7/1995	~20	--	--	72,000	9,600	9,600	1,800	7,000	--	a
CB-1-W	7/22/1999	--	--	--	110,000	1,300	16,000	2,700	12,000	<3000*	a,b,c
CB-2-W	7/22/1999	--	--	--	4,700	21	13	170	76	<50*	a,c
GW-1	7/30/1994	--	--	--	<50	<0.5	<0.5	<0.5	<2.0	--	--
GW-2 ^	7/29/1994	--	--	--	<50	<0.5	<0.5	<0.5	<2.0	--	--
GW-3 ^	7/29/1994	--	--	--	<50	<0.5	<0.5	<0.5	<2.0	--	--

Abbreviations, Methods, & Notes

TOC = Top of casing elevation
ft amsl = feet above mean sea level
SPH = Separate-phase hydrocarbons
TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method SW8015C
Benzene, toluene, ethylbenzene, and xylenes by EPA Method SW8021B
MTBE = Methyl tert-butyl ether * = MTBE by EPA Method SW8021B
** = MTBE by EPA Method SW8240
*** = MTBE by EPA Method SW8260
1 = Not confirmed with EPA Method 8260B.
µg/L = micrograms per liter, equivalent to parts per billion
-- = Not sampled, not analyzed, not applicable, or no SPH was measured or observed
<n = Not detected in sample above n mg/L
ND = Not detected above laboratory detection limit
x = Groundwater elevation adjusted for SPH by the relation:
Groundwater Elevation = TOC Elevation - Depth to Groundwater + (0.7 x SPH thickness)
= The wellhead elevation was raised by 0.41 feet when well MW-1 was connected to the SVE system on October 31, 2003.
= The wellhead elevation was lowered by 0.41 feet when well MW-1 was disconnected from the SVE

GROUNDWATER ELEVATION AND ANALYTICAL DATA
ALLRIGHT PARKING
1432 HARRISON STREET
OAKLAND, CALIFORNIA

Well ID / Sample ID	Date	Depth to Groundwater	SPH Thickness	TOC Groundwater Elevation	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
TOC (ft amsl)		(ft below TOC)	(feet)	(ft amsl)	←			(µg/L)		→	

system on April 30. 2005.

+ = Well de-watered during purging, no measurable water to sample.

Sheen = A sheen was observed on the water's surface

Field = Observed in the field

Lab = Observed in analytical laboratory

^ = Samples associated with 1439 Alice St. Property

a = Unmodified or weakly modified gasoline is significant.

b = Lighter than water immiscible sheen is present.

c = Liquid sample that contains greater than ~2 vol. % sediment.

d = MTBE result confirmed by secondary column or GC/MS analysis.

e = Sample analyzed for purgeable hydrocarbons by EPA Method SW8010, no purgeable hydrocarbons were detected.

f = Sample analyzed for VOCs by EPA Method SW8240, no non-BTEX compounds were detected.

g = Sample analyzed for Total Petroleum Hydrocarbons as motor oil (TPHmo) by Modified EPA Method SW8015, no TPHmo was detected.

h = Analytic sampling discontinued. Approved by Alameda County Department of Environmental Health.

i = Lighter gasoline range compounds are significant.

j = Gasoline range compounds having broad chromatographic peaks are significant.

k = No recognizable pattern.

l = Sample diluted due to high organic content.

m = Liquid sample that contains greater than ~1 vol. % sediment.

n = TOC well elevation was increased by 3 ft based on a benchmark discrepancy discovered during a well survey performed on September 11, 2002.

TABLE 2

PETROLEUM HYDROCARBON SOIL ANALYTICAL DATA
ALLRIGHT PARKING
1432 HARRISON ST
OAKLAND, CALIFORNIA

Boring / Sample ID	*Sample Depth (ft)*	*Sample Date*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*Notes*
			←			(mg/kg)		→	
1 / 1@20.0'	20	07/25/90	6,300	99	490	110	610	--	
2 / 2@18.5'	18.5	07/25/90	9,300	98	900	190	1,100	--	
B5 / B5@22.5'	22.5	09/17/90	110	0.024	0.21	0.069	1.3	--	
B6 / B6@9'	9	09/17/90	--	<0.005	<0.005	<0.005	<0.005	--	
B6 / B6@9.5'	9.5	09/17/90	--	--	--	--	--	--	*
B7 / B7@13'	13	09/21/90	<1	<0.005	<0.005	<0.005	<0.005	--	*
B7 / B7@20'	20	09/21/90	2,500	3.5	34	33	130	--	
B8 / B8@22.5'	22.5	09/21/90	1,200	2.3	38	18	89	--	
B1 / B1-2'	2	01/16/92	27.3	<0.005	3.0	0.23	<0.005	--	*
B2 / B2-2'	2	01/16/92	<1	<0.005	0.10	<0.005	<0.005	--	*
B3 / B3-2'	2	01/16/92	1.6	<0.005	1.1	<0.005	<0.005	--	*
B4 / B4-2'	2	01/16/92	1.9	<0.005	0.8	<0.005	<0.005	--	*
B5 / B5-2'	2	01/16/92	<1	<0.005	0.4	<0.005	<0.005	--	*
B6 / B6-2'	2	01/16/92	<1	<0.005	0.4	<0.005	<0.005	--	*
B7 / B7-2'	2	01/16/92	2.6	<0.005	1.6	<0.005	<0.005	--	*

TABLE 2

PETROLEUM HYDROCARBON SOIL ANALYTICAL DATA
ALLRIGHT PARKING
1432 HARRISON ST
OAKLAND, CALIFORNIA

Boring / Sample ID	*Sample Depth (ft)*	*Sample Date*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*Notes*
			←			(mg/kg)		→	
B8 / B8-2'	2	01/16/92	<1	<0.005	0.04	<0.005	<0.005	--	*
B9 / B9-5'	2	01/22/92	2.44	<0.005	<0.005	--	--	--	*
B10 / B10-8'	2	01/22/92	<1	--	<0.005	--	--	--	*
B13 / B13-5'	5	01/21/92	83.2	<0.005	0.068	1.23	<0.005	--	
B13 / B13-15'	15	01/21/92	135	--	0.71	--	8.85	--	
B14 / B14-5'	5	01/21/92	<1	<0.005	--	--	--	--	
B14 / B14-15'	15	01/21/92	2.5	--	--	<0.005	--	--	
B17 / B17-5'	5	2/3/1992	--	--	--	--	--	--	
B19 / B19-5'	5	02/03/92	2.5	<0.005	<0.005	<0.005	0.01	--	
B20 / B20-5'	5	02/03/92	2.1	<0.005	0.03	<0.005	0.01	--	
B20 / B20-15'	15	02/03/92	2.5	<0.005	0.034	<0.005	<0.005	--	
B21 / B21-5'	5	02/05/92	2.1	<0.005	0.02	<0.005	0.01	--	
B21 / B21-10'	10	02/05/92	1.9	<0.005	0.021	<0.005	0.026	--	
B21 / B21-15'	15	02/05/92	2	<0.005	0.03	<0.005	<0.005	--	
B22 / B22-5'	5	02/05/92	42.3	<0.005	0.113	<0.005	2.13	--	
B22 / B22-10'	10	02/05/92	1,540	0.987	11.7	1.67	2.88	--	
B23 / B23-5'	5	02/05/92	2.5	<0.005	0.027	<0.005	<0.005	--	

TABLE 2

PETROLEUM HYDROCARBON SOIL ANALYTICAL DATA
ALLRIGHT PARKING
1432 HARRISON ST
OAKLAND, CALIFORNIA

Boring / Sample ID	*Sample Depth (ft)*	*Sample Date*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*Notes*
			←			*(mg/kg)*		→	
B23 / B23-10'	10	02/05/92	3.3	<0.005	0.034	<0.005	<0.005	--	
LFSB1 / LFSB1-4.0	4	05/22/93	0.5	<0.005	0.01	<0.005	<0.005	--	
LFSB1 / LFSB1-14.0	14	05/22/93	<0.2	0.020	<0.005	<0.005	<0.005	--	
LFSB1 / LFSB1-24.5	24.5	05/22/93	8,800	210	980	160	750	--	
LFSB2 / LFSB2-9.5	9.5	05/22/93	<0.2	<0.005	<0.005	<0.005	<0.005	--	
LFSB2 / LFSB2-19.5	19.5	05/22/93	1,000	<0.2	9.4	16	68	--	
LFSB2 / LFSB2-24.5	24.5	05/22/93	6,100	91	320	120	410	--	
Sump 5.5H (3)	5.5	11/29/93	<0.2	<0.005	<0.005	<0.005	<0.005	--	
Hoist 1-8H	8	11/29/93	<0.2	<0.005	<0.005	<0.005	<0.005	--	
Hoist 2-9.5WH (2)	9.5	11/29/93	0.3	<0.005	<0.005	<0.005	<0.005	--	
Hoist 2-11.5H	11.5	11/29/93	970	2.9	14	4.2	24	--	
Hoist 2-9EH	9	11/29/93	<0.2	<0.005	<0.005	<0.005	<0.005	--	
E. Vault-6.5H	6.5	11/29/93	<0.2	<0.005	<0.005	<0.005	<0.005	--	
N. Vault-7H (4)	7	11/29/93	4.1	<0.005	<0.005	<0.005	23	--	
Vault-Base-9.5H (5)	9.5	11/29/93	380	0.05	0.69	0.22	2	--	
S. Tank-8FG	8	12/06/93	1,500	0.87	43	34	240	--	
S. Tank-8G	8	12/06/93	43	0.006	0.088	0.25	1.8	--	
N. Tank-7.5G	7.5	12/06/93	3,100	11	190	64	400	--	
N. Tank-8.5FG	8.5	12/06/93	<0.2	<0.005	<0.005	<0.005	<0.005	--	
PJ-2G	2	12/07/93	<0.2	<0.005	<0.005	<0.005	<0.005	--	

TABLE 2

PETROLEUM HYDROCARBON SOIL ANALYTICAL DATA
ALLRIGHT PARKING
1432 HARRISON ST
OAKLAND, CALIFORNIA

Boring / Sample ID	*Sample Depth (ft)*	*Sample Date*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*Notes*
			←			*(mg/kg)*		→	
DSP-2G	2	12/07/93	<0.2	<0.005	<0.005	<0.005	<0.005	--	
E. Wall-3G	3	12/15/93	<0.2	<0.005	<0.005	<0.005	<0.005	--	
S.Wall-3G	3	12/15/93	<0.2	<0.005	<0.005	<0.005	<0.005	--	
N.Wall-3G	3	12/16/93	<0.2	<0.005	<0.005	<0.005	<0.005	--	
W.Wall-3-N	3	12/29/93	<0.2	<0.005	<0.005	<0.005	<0.005	--	
W.Wall-3-S	3	12/29/93	0.5	<0.005	<0.005	<0.005	<0.005	--	
MW-2 / MW-2-5'	5	07/30/94	<0.2	<0.005	<0.005	<0.005	<0.005	--	
MW-2 / MW-2-9.5'	9.5	07/30/94	<0.2	<0.005	<0.005	<0.005	<0.005	--	
MW-2 / MW-2-15'	15	07/30/94	<0.2	0.024	0.007	<0.005	<0.005	--	
GW-1 / GW-1-10'	10	07/30/94	<0.2	<0.005	<0.005	<0.005	<0.005	--	
GW-1 / GW-1-15'	15	07/30/94	<0.2	<0.005	<0.005	<0.005	<0.005	--	
SB-F / SB-F 20'	20.0	07/07/95	160	1.9	10	2.5	11	--	a
SB-H / SB-H 20'	20.0	07/07/95	350	4.0	16	5.3	25	--	a
SB-L / SB-L 20'	20.0	07/07/95	220	1.6	4.1	4.8	24	--	b,d
(MW-4) / SB-M 20.0'	20.0	10/02/96	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	
(MW-5) / SB-N 20.0'	20.0	10/02/96	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	
(MW-6) / SB-O 20.5'	20.5	10/03/96	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	

TABLE 2

PETROLEUM HYDROCARBON SOIL ANALYTICAL DATA
ALLRIGHT PARKING
1432 HARRISON ST
OAKLAND, CALIFORNIA

Boring / Sample ID	*Sample Depth (ft)*	*Sample Date*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*Notes*
			←			*(mg/kg)*		→	
SB-P / SB-P 3.75'	3.75	10/03/96	3.8	<0.005	0.016	0.017	0.084	<0.05	
SB-P / SB-P 12.7'	12.7	10/03/96	1,500	0.55	14	25	100	2.0	b,d
SB-Q / SB-Q 3.75'	3.75	10/03/96	4.3	0.006	0.024	0.027	0.11	<0.02	g
SB-Q / SB-Q 9.6'	9.6	10/03/96	1,900	0.95	15	43	200	<1.4	b,d
VES-1 / VES-1-16.5'	16.5	07/22/99	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	
VES-1 / VES-1-21.5'	21.5	07/22/99	5,600	59	400	75	370	<10	a
VES-1 / VES-1-30.5'	30.5	07/22/99	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	
VES-2 / VES-2-16.5'	16.5	07/22/99	2.2	<0.005	0.018	<0.005	0.050	<0.05	g
VES-2 / VES-2-26.5'	26.5	07/22/99	4,300	35	260	74	310	<10	a
VES-2 / VES-2-30.0'	30.0	07/22/99	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	
VES-3 / VES-3-15.5'	15.5	07/23/99	1.3	0.011	<0.005	<0.005	0.010	<0.05	a
VES-3 / VES-3-20.5'	20.5	07/23/99	2,100	<0.50	66	56	280	<10	b,j
VES-3 / VES-3-30.5'	30.5	07/23/99	1.4	0.062	0.25	0.039	0.16	<0.05	a
VES-4 / VES-4-16.5'	16.5	07/23/99	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	
VES-4 / VES-4-25.0'	25.0	07/23/99	7,600	150	490	170	640	32*	a
VES-4 / VES-4-30.0'	30.0	07/23/99	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	
CB-1 / CB-1-10.0'	10.0	07/23/99	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	
CB-1 / CB-1-16.0'	16.0	07/23/99	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	
CB-1 / CB-1-20.0'	20.0	07/23/99	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	

TABLE 2

PETROLEUM HYDROCARBON SOIL ANALYTICAL DATA
ALLRIGHT PARKING
1432 HARRISON ST
OAKLAND, CALIFORNIA

Boring / Sample ID	*Sample Depth (ft)*	*Sample Date*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*Notes*
			←			*(mg/kg)*		→	
CB-1 / CB-1-24.0'	24.0	07/23/99	1,500	2.3	6.8	12	58	<2	a
CB-2 / CB-2-12.0'	12.0	07/23/99	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	
CB-2 / CB-2-15.0'	15.0	07/23/99	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	
CB-2 / CB-2-20.5'	20.5	07/23/99	4.2	<0.005	0.010	0.007	0.025	<0.05	j
CB-2 / CB-2-24.0'	24.0	07/23/99	4.8	0.006	<0.005	0.026	0.030	<0.05	j
B-24-5	5	8/31/2009	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	
B-24-10	10	8/31/2009	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	
B-24-15	15	8/31/2009	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	
B-24-20	20	8/31/2009	1.5	<0.005	<0.005	<0.005	<0.005	<0.05	g
B-24-25	25	8/31/2009	4,300	<0.50	4.2	9.5	190	<5.0	g,j
B-24-29.5	29.5	8/31/2009	22	0.15	0.074	0.028	0.65	<0.25	g,j
B-24-35	35	8/31/2009	1,400	1.6	3.3	2.8	49	<5.0	g,j
B-24-49.5	49.5	8/31/2009	890	1.2	2.3	1.1	26	<10	g

Notes and Abbreviations:

TPHg = Total purgeable petroleum hydrocarbons as gasoline by EPA method Modified 8015.

Benzene, toluene, ethylbenzene, xylenes (BTEX) by EPA method 8020.

MTBE = Methyl tert-butyl ether by modified EPA method 8020.

<n = not detected above n parts per million

a = unmodified or weakly modified gasoline is significant

b = heavier gasoline range compounds significant

d = gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline

TABLE 2

PETROLEUM HYDROCARBON SOIL ANALYTICAL DATA
ALLRIGHT PARKING
1432 HARRISON ST
OAKLAND, CALIFORNIA

Boring / Sample ID	*Sample Depth (ft)*	*Sample Date*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*Notes*
			←			*(mg/kg)*		→	

g = strongly aged gasoline or diesel range compounds are significant

j = no recognizable pattern

* = MTBE result not confirmed by EPA Method 8260 analysis.

1990 through 1994 data tabulated from Table 1 in Levine Fricke's September 1, 1994, *Soil and Groundwater Investigation Report*, Harrison Street Garage,
1432-1434 Harrison Street, Oakland, California.

*= Samples taken from 1439 Alice St. Property

TABLE 3

ADDITIONAL SOIL ANALYTICAL DATA
ALLRIGHT PARKING
1432 HARRISON STREET
OAKLAND, CALIFORNIA

Boring / Sample ID	Sample Depth (ft)	Sample Date	TPHd	Kerosene	Oil & Grease	PCBs	CL-HCs (mg/kg)	VOCs	As	Pb	Hg	Ni	Se	PCB	Soluble Pb [1] (mg/L)	Notes
2 / 2@18.5'	18.5	7/25/1990	–	–	–	–	–	–	–	–	–	–	–	–	0.21	
B4 / B4@10'	10	9/17/1990	1,700	<100	6,300	–	–	–	–	–	–	–	–	–	–	
B6 / B6@9'	9	09/17/90	<10	98	ND	9	–	–	–	0.009	–	–	–	–	0.06	*
B6 / B6@9.5'	9.5	09/17/90	<10	140	ND	–	–	–	–	–	–	–	–	–	–	*
B7 / B7@20'	20	9/21/1990	–	–	–	–	–	–	–	–	–	–	–	–	0.07	
B1 / B1-2'	2	1/16/1992	55.7	–	54.2	ND	ND	ND	35.3	ND	50.7	21.9	15.3	ND	–	*
B2 / B2-2'	2	1/16/1992	1.5	–	ND	ND	ND	ND	39.5	ND	49.7	16.9	ND	ND	–	*
B3 / B3-2'	2	1/16/1992	1.6	–	ND	ND	ND	ND	40.2	ND	54.2	33.6	17.0	ND	–	*
B4 / B4-2'	2	1/16/1992	24.1	–	54.8	ND	ND	ND	42.9	ND	66.5	45.6	19.2	ND	–	*
B5 / B5-2'	2	1/16/1992	2.5	–	50.9	ND	ND	ND	47.3	ND	73.0	47.2	19.2	ND	–	*
B6 / B6-2'	2	1/16/1992	24.3	–	ND	ND	ND	ND	42.2	ND	66.7	41.4	16.9	ND	–	*
B7 / B7-2'	2	1/16/1992	6.3	–	221.0	ND	ND	ND	45.3	ND	74.2	36.3	18.9	ND	–	*
B8 / B8-2'	2	1/16/1992	2.9	–	55.1	ND	ND	ND	39.2	ND	52.9	30.8	15.3	ND	–	*
B9 / B9-5'	5	1/22/1992	11.10	–	ND	ND	ND	ND	–	7.53	21.5	59.8	11.6	ND	–	*
B10 / B10-8'	8	1/22/1992	109.0	–	ND	ND	ND	ND	–	5.63	15.5	34.9	ND	ND	–	*
B13 / B13-5'	5	1/21/1992	1.63	–	–	0.245	–	ND	47.3	17.4	45.4	46.1	21.9	245	–	
B13 / B13-15'	15	1/21/1992	<1	–	–	ND	–	ND	27.4	13.8	35.5	128.4	15.5	ND	–	
B14 / B14-5'	5	1/21/1992	<1	–	–	ND	–	ND	27.5	11.2	28.1	39.4	12.3	ND	–	
B14 / B14-15'	15	1/21/1992	17.3	–	–	ND	–	ND	32.7	13.2	32.8	376.2	15.3	ND	–	

TABLE 3

ADDITIONAL SOIL ANALYTICAL DATA
ALLRIGHT PARKING
1432 HARRISON STREET
OAKLAND, CALIFORNIA

Boring/ Sample ID	Sample Depth (ft)	Sample Date	TPHd	Kerosene	Oil & Grease	PCBs	CL-HCs (mg/kg)	VOCs	As	Pb	Hg	Ni	Se	PCB	Soluble Pb [1] (mg/L)	Notes
B15 / B15-5'	5	1/30/1992	--	--	--	--	--	ND	25.4	26.6	29.4	56.6	9.02	ND	--	
B15 / B15-15'	15	1/30/1992	--	--	--	--	--	ND	36.0	16.7	33.2	72.3	15.5	ND	--	
B16 / B16-5'	5	1/30/1992	--	--	--	--	--	ND	41.8	14.3	44.9	60.3	15.2	ND	--	
B16 / B16-15'	15	1/30/1992	--	--	--	--	--	ND	26.0	10.2	34.7	48.4	8.81	ND	--	
B17 / B17-5'	5	2/3/1992	--	--	39.1	ND	--	ND		10.4	3.56	329.2	6.24[a]	ND	--	
B19 / B19-5'	5	2/3/1992	28	--	--	--	--	--	--	--	--	--	--	--	--	
B20 / B20-5'	5	2/3/1992	24	--	--	--	--	--	--	--	--	--	--	--	--	
B20 / B20-15'	15	2/3/1992	<1	--	35.2	ND	--	--		10.4	2.48	224.8	<7.5	ND	--	
B21 / B21-5'	5	2/5/1992	16.7	--	--	--	--	--	--	--	--	--	--	--	--	
B21 / B21-10'	10	2/5/1992	15.7	--	--	--	--	--	--	--	--	--	--	--	--	
B21 / B21-15'	15	2/5/1992	22.7	--	--	--	--	--	--	--	--	--	--	--	--	
B22 / B22-5'	5	2/5/1992	670	--	--	--	--	--	--	--	--	--	--	--	--	
B22 / B22-10'	10	2/5/1992	175	--	--	--	--	--	--	--	--	--	--	--	--	
B23 / B23-5'	5	2/5/1992	26	--	--	--	--	--	--	--	--	--	--	--	--	
B23 / B23-10'	10	2/5/1992	<1	--	--	--	--	--	--	--	--	--	--	--	--	
Sump 5.5H (3)	5.5	11/29/1993	--	--	<10	ND	--	--	--	2	<0.06	50	<2	--	--	
Hoist 1-8H	8	11/29/1993	--	--	<10	--	--	--	--	--	--	--	--	--	--	
Hoist 2-9.5WH (	9.5	11/29/1993	--	--	17,000	--	--	--	--	--	--	--	--	--	--	
Hoist 2-11.5H	11.5	11/29/1993	--	--	5,100	--	--	--	--	--	--	--	--	--	--	
Hoist 2-9EH	9	11/29/1993	--	--	<10	--	--	--	--	--	--	--	--	--	--	
E. Vault-6.5H	6.5	11/29/1993	--	--	<10	--	--	--	--	--	--	--	--	--	--	
N. Vault-7H (4)	7	11/29/1993	--	--	1,700	--	--	--	--	--	--	--	--	--	--	
Vault-Base-9.5H	9.5	11/29/1993	--	--	14,000	--	--	--	--	--	--	--	--	--	--	

TABLE 3

ADDITIONAL SOIL ANALYTICAL DATA
ALLRIGHT PARKING
1432 HARRISON STREET
OAKLAND, CALIFORNIA

Boring/ Sample ID	Sample Depth (ft)	Sample Date	TPHd	Kerosene	Oil & Grease	PCBs	CL-HCs (mg/kg)	VOCs	As	Pb	Hg	Ni	Se	PCB	Soluble Pb [1] (mg/L)	Notes
S. Tank-8FG	8	12/6/1993	--	--	--	--	--	--	--	<0.5	--	--	--	--	<0.5[b]	
S. Tank-8G	8	12/6/1993	--	--	--	--	--	--	--	<0.5	--	--	--	--	<0.5[b]	
N. Tank-7.5G	7.5	12/6/1993	--	--	--	--	--	--	--	1.9	--	--	--	--	1.9[b]	
N. Tank-8.5FG	8.5	12/6/1993	--	--	--	--	--	--	--	<0.5	--	--	--	--	<0.5[b]	

Notes and Abbreviations:

1 = Unknown extraction method

a = Report concentration is lower than the detection limit

b = Concentrations reported are Organic Lead by DHS Method

ND - Not detected above laboratory reporting limits

-- = Not analyzed

PCB's - Polychlorinated biphenyls

VOCs = Volatile organic carbons

CL-HCs = Chlorinated hydrocarbons

Pb - Lead

Hg = Mercury

Ni = Nickel

Se = Selenium

All Data tabulated from Table 1 in Levine Fricke's September 1, 1994, *Soil and Groundwater Investigation Report* , Harrison Street Garage, 1432-1434 Harrison Street, Oakland, C

*= Samples associated with 1439 Alice St. Property

APPENDIX A

AGENCY CORRESPONDENCE

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Agency Director

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

July 19, 2010

Sydney & Barbara Borsuk Trust, Shiela Siegel Trust
C/o Mr. Mark Borsuk
1626 Vallejo Street
San Francisco, CA 94123-5116

Mr. Leland Douglas
Douglas Parking Company
1721 Webster Street
Oakland, CA 94612

Subject: Review of Sensitive Receptor Survey for Fuel Leak Case No. RO0000266 and Geotracker Global ID T0600100682, A Bacharach Trust & B Borsuk, 1432 Harrison Street, Oakland, CA 94612

Dear Mr. Borsuk and Mr. Douglas:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the subject site including the recently submitted documents entitled, "*Sensitive Receptor Survey, Allright Parking, 1432 Harrison Street, Oakland, California*," dated May 6, 2010 (Sensitive Receptor Survey) and "*First 2010 Semi-annual Groundwater Monitoring Report, Allright Parking, 1432 Harrison Street, Oakland, California*," dated April 16, 2010 (Groundwater Monitoring Report). Both reports were prepared on your behalf by Conestoga-Rovers & Associates. The Sensitive Receptor Survey was prepared in response to our request in previous correspondence dated January 19, 2010. We thank you for completing this scope of work.

We request that you address the technical comments below, perform the proposed work, and submit the documents requested below.

TECHNICAL COMMENTS

1. **Results of Receptor Survey and Potential for Vapor Intrusion.** The petroleum hydrocarbon plume originating from the former USTs extends north and continues beneath the building at 1445 Harrison Street. Groundwater from well MW-5, which is located north of 1445 Harrison Street, contained 16,000 micrograms per liter of benzene during the most recent sampling event, which significantly exceeds screening levels for potential vapor intrusion concerns due to volatilization from groundwater. The building at 1445 Harrison has a basement and a sump, which brings the subfloor of the building into closer proximity to the petroleum hydrocarbon plume. The use of the basement is not described but it does not appear to be a parking structure. During the most recent groundwater sampling event, free product was observed in well MW-2, which is located on the east side of Harrison Street immediately downgradient from the former USTs. The extent of free product and whether it extends north potentially below the building at 1445 Harrison Street, is not known. We request that you prepare a Work Plan to define the extent of free product downgradient in the area of well MW-2 and evaluate the potential for vapor intrusion to the basement at 1445 Harrison Street. We anticipate this scope of work will include installation of a monitoring well on the west side of Harrison Street and soil vapor sampling or subslab sampling within the basement at 1445 Harrison Street.

2. **Downgradient Plume Extent.** The downgradient extent of the plume remains undefined at this time. A proposed downgradient well, which was proposed in a July 1, 2009 Work Plan, was not installed because an access agreement could not be completed with a downgradient property owner. The need for downgradient assessment will be re-evaluated pending the completion of the delineation of free product and potential for vapor intrusion requested in technical comment 1.

3. **Site Development and Recommendations.** The Recommendations section in the Site Characterization Report indicates that site development will require excavation to a depth of 25 feet bgs. The Recommendation section also indicates that residual hydrocarbons appear to the outside the proposed excavation. A limited investigation of the former UST area is recommended prior to excavation with limited excavation of impacted soils occurring concurrent with the development excavation. This proposal may be acceptable to move forward with site development contingent upon a review of approved building plans. Please describe the expected schedule for site development in the Work Plan requested below.

4. **Redevelopment of Monitoring Well MW-1.** The April 16, 2010 Groundwater Monitoring Report recommends redevelopment of well MW-1 to remove sediment in the bottom of the well. We have no objection to this proposal provided that the well is structurally intact.

5. **Groundwater Monitoring.** Please continue groundwater monitoring on the established semi-annual sampling schedule.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **September 29, 2010** – Work Plan

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org.

Sincerely,

Jerry Wickham

Digitally signed by Jerry Wickham
DN: cn=Jerry Wickham, o, ou, email=jerry.wickham@acgov.org, c=US
Date: 2010.07.20 15:29:27 -07'00'

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: Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032 (*Sent via E-mail to:* lgriffin@oaklandnet.com)

Robert Foss, Conestoga-Rovers & Associates, 5900 Hollis Street, Suite A, Emeryville, CA 94608 2032 (*Sent via E-mail to:* bfoss@craworld.com)

Donna Drogos, ACEH (*Sent via E-mail to: donna.drogos@acgov.org*)
Jerry Wickham, ACEH

Geotracker, File

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.swrcb.ca.gov/ust/electronic_submittal/report_rqmts.shtml.

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)	**ISSUE DATE:** July 5, 2005
	REVISION DATE: July 8, 2010
	PREVIOUS REVISIONS: December 16, 2005, October 31, 2005
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

- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection**. (Please do not submit reports as attachments to electronic mail.)
- 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)

Additional Recommendations

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in **Excel** format. These are for use by assigned Caseworker only.

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 dehloptoxic@acgov.org
         Or
      ii) Send a fax on company letterhead to (510) 337-9335, to the attention of Teena Le Khan.
   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 and Firefox browsers will not open the FTP site.
   b) Click on Page on upper right side of browser, 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 dehloptoxic@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.

APPENDIX B

STANDARD FIELD PROCEDURES

STANDARD FIELD PROCEDURES FOR HAND-AUGER SOIL BORINGS

This document describes Conestoga-Rovers & Associates' standard field methods for drilling and sampling soil borings using a hand-auger. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

Objectives

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor odor or staining, estimate ground water depth and quality and to submit samples for chemical analysis.

Soil Classification/Logging

All soil samples are classified according to the Unified Soil Classification System by a trained geologist or engineer working under the supervision of a California Registered Geologist (RG) or a Certified Engineering Geologist (CEG). The following soil properties are noted for each soil sample:

- Principal and secondary grain size category (i.e. sand, silt, clay or gravel)
- Approximate percentage of each grain size category,
- Color,
- Approximate water or product saturation percentage,
- Observed odor and/or discoloration,
- Other significant observations (i.e. cementation, presence of marker horizons, mineralogy), and
- Estimated permeability.

Soil Boring and Sampling

Hand-auger borings are typically drilled using a hand-held bucket auger to remove soil to the desired sampling depth. Samples are collected using lined split-barrel or equivalent samplers driven into undisturbed sediments beyond the bottom of the augered hole. The vertical location of each soil sample is determined using a tape measure. All sample depths use the ground surface immediately adjacent to the boring as a datum. The horizontal location of each boring is measured in the field from an onsite permanent reference using a measuring wheel or tape measure.

Augering and sampling equipment is steam-cleaned prior to drilling and between borings to prevent cross-contamination. Sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent.

Sample Storage, Handling and Transport

Sampling tubes chosen for analysis are trimmed of excess soil and capped with Teflon tape and plastic end caps. Soil samples are labeled and stored at or below 4°C on either crushed or dry ice, depending upon local regulations. Samples are transported under chain-of-custody to a State-certified analytic laboratory.

Field Screening

One of the remaining tubes is partially emptied leaving about one-third of the soil in the tube. The tube is capped with plastic end caps and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable photoionization detector (PID) measures volatile hydrocarbon vapor concentrations in the tube headspace, extracting the vapor through a slit in the cap. PID measurements are used along with the field observations, odors, stratigraphy and ground water depth to select soil samples for analysis.

Water Sampling

Water samples, if they are collected from the boring, are collected from the open borehole or through temporary PVC casing using bailers. The ground water samples are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory.

Duplicates and Blanks

Blind duplicate water samples are collected usually collected only for monitoring well sampling programs, at a rate of one blind sample for every 10 wells sampled. Laboratory-supplied trip blanks accompany samples collected for all sampling programs to check for cross-contamination caused by sample handling and transport. These trip blanks are analyzed if the internal laboratory QA/QC blanks contain the suspected field contaminants. An equipment blank may also be analyzed if non-dedicated sampling equipment is used.

Grouting

The borings are filled to the ground surface with cement grout poured or pumped through a tremie pipe.

Waste Handling and Disposal

Soil cuttings from drilling activities are usually stockpiled onsite on top of and covered by plastic sheeting. At least four individual soil samples are collected from the stockpiles for later compositing at the analytic laboratory. The composite sample is analyzed for the same constituents analyzed in the borehole samples. Soil cuttings are transported by licensed waste haulers and disposed in secure, licensed facilities based on the composite analytic results.

Ground water removed during sampling and/or rinsate generated during decontamination procedures are stored onsite in sealed 55-gallon drums. Each drum is labeled with the drum number, date of generation, suspected contents, generator identification and consultant contact. Disposal of the water is based on the analytic results for the well samples. The water is either pumped out using a vacuum truck for transport to a licensed waste treatment/disposal facility or the individual drums are picked up and transported to the waste facility where the drum contents are removed and appropriately disposed.

Conestoga-Rovers & Associates

STANDARD FIELD PROCEDURES FOR MONITORING WELL INSTALLATION

This document presents standard field methods for drilling and sampling soil borings and installing, developing and sampling groundwater monitoring wells. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

SOIL BORINGS

Objectives

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor or staining, and to collect samples for analysis at a State-certified laboratory. All borings are logged using the Unified Soil Classification System by a trained geologist working under the supervision of a California Registered Geologist (RG).

Soil Boring and Sampling

Soil borings are typically drilled using hollow-stem augers or direct-push technologies such as the Geoprobe®. Soil samples are collected at least every five ft to characterize the subsurface sediments and for possible chemical analysis. Additional soil samples are collected near the water table and at lithologic changes. Samples are collected using lined split-barrel or equivalent samplers driven into undisturbed sediments at the bottom of the borehole.

Drilling and sampling equipment is steam-cleaned prior to drilling and between borings to prevent cross-contamination. Sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent.

Sample Analysis

Sampling tubes chosen for analysis are trimmed of excess soil and capped with Teflon tape and plastic end caps. Soil samples are labeled and stored at or below 4^{o} C on either crushed or dry ice, depending upon local regulations. Samples are transported under chain-of-custody to a State-certified analytic laboratory.

Field Screening

One of the remaining tubes is partially emptied leaving about one-third of the soil in the tube. The tube is capped with plastic end caps and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable volatile vapor analyzer measures volatile hydrocarbon vapor concentrations in the tube headspace, extracting the vapor through a slit in the cap. Volatile vapor analyzer measurements are used along with the field observations, odors, stratigraphy and groundwater depth to select soil samples for analysis.

Water Sampling

Water samples, if they are collected from the boring, are either collected using a driven Hydropunch® type sampler or are collected from the open borehole using bailers. The groundwater samples are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

Grouting

If the borings are not completed as wells, the borings are filled to the ground surface with cement grout poured or pumped through a tremie pipe.

MONITORING WELL INSTALLATION, DEVELOPMENT AND SAMPLING

Well Construction and Surveying

Groundwater monitoring wells are installed to monitor groundwater quality and determine the groundwater elevation, flow direction and gradient. Well depths and screen lengths are based on groundwater depth, occurrence of hydrocarbons or other compounds in the borehole, stratigraphy and State and local regulatory guidelines. Well screens typically extend 10 to 15 fee below and 5 feet above the static water level at the time of drilling. However, the well screen will generally not extend into or through a clay layer that is at least three feet thick.

Well casing and screen are flush-threaded, Schedule 40 PVC. Screen slot size varies according to the sediments screened, but slots are generally 0.010 or 0.020 inches wide. A rinsed and graded sand occupies the annular space between the boring and the well screen to about one to two feet above the well screen. A two feet thick hydrated bentonite seal separates the sand from the overlying sanitary surface seal composed of Portland type I,II cement.

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security.

The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

Well Development

Wells are generally developed using a combination of groundwater surging and extraction. Surging agitates the groundwater and dislodges fine sediments from the sand pack. After about ten minutes of surging, groundwater is extracted from the well using bailing, pumping and/or reverse air-lifting through an eductor pipe to remove the sediments from the well. Surging and extraction continue until at least ten well-casing volumes of groundwater are extracted and the sediment volume in the groundwater is negligible. This process usually occurs prior to installing the sanitary surface seal to ensure sand pack stabilization. If development occurs after surface seal installation, then development occurs 24 to 72 hours after seal installation to ensure that the Portland cement has set up correctly.

All equipment is steam-cleaned prior to use and air used for air-lifting is filtered to prevent oil entrained in the compressed air from entering the well. Wells that are developed using air-lift evacuation are not sampled until at least 24 hours after they are developed.

Groundwater Sampling

Depending on local regulatory guidelines, three to four well-casing volumes of groundwater are purged prior to sampling. Purging continues until groundwater pH, conductivity, and temperature have stabilized. Groundwater samples are collected using bailers or pumps and are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

Waste Handling and Disposal

Soil cuttings from drilling activities are usually stockpiled onsite and covered by plastic sheeting. At least three individual soil samples are collected from the stockpiles and composited at the analytic laboratory. The composite sample is analyzed for the same constituents analyzed in the borehole samples in addition to any analytes required by the receiving disposal facility. Soil cuttings are transported by licensed waste haulers and disposed in secure, licensed facilities based on the composite analytic results.

Groundwater removed during development and sampling is typically stored onsite in sealed 55-gallon drums. Each drum is labeled with the drum number, date of generation, suspected contents, generator identification and consultant contact. Upon receipt of analytic results, the water is either pumped out using a vacuum truck for transport to a licensed waste treatment/disposal facility or the individual drums are picked up and transported to the waste facility where the drum contents are removed and appropriately disposed.

STANDARD FIELD PROCEDURES
VAPOR POINT INSTALLATION AND SAMPLING

This document describes Conestoga-Rovers & Associates' standard field methods for soil vapor sampling. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

Objectives

Soil vapor samples are collected and analyzed to assess whether vapor-phase subsurface contaminants pose a threat to human health or the environment.

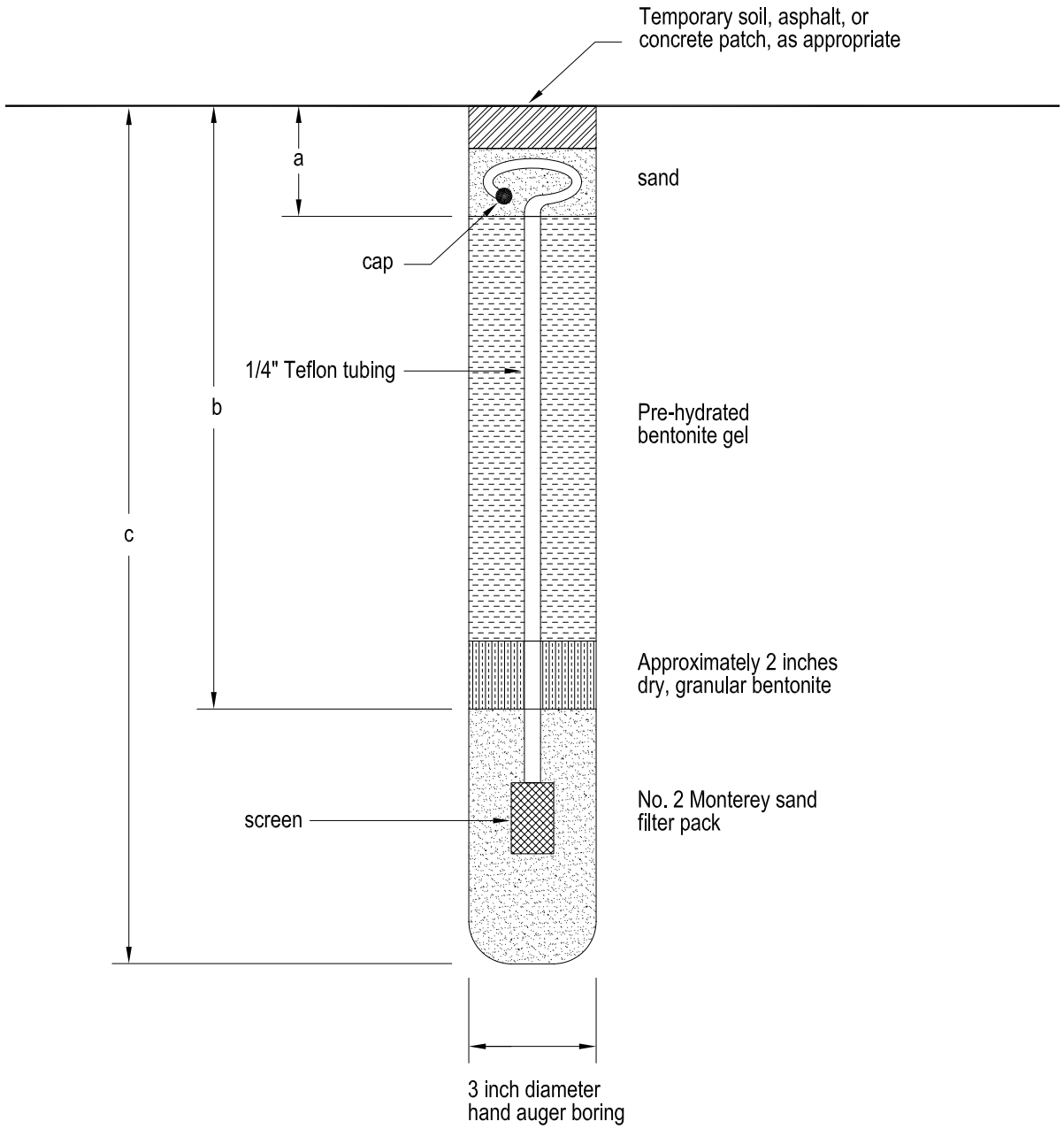
Shallow Soil Vapor Point Method for Soil Vapor Sampling

The shallow soil vapor point method for soil vapor sampling utilizes a hand auger or drill rig to advance a boring for the installation of a soil vapor sampling point. Once the boring is hand augered to the final depth, a 6-inch slotted probe, capped on either end with brass or Swagelok fittings, is placed within 12-inches of number 2/16 filter sand (Figure A). Nylon tubing of ¼-inch outer-diameter of known length is attached to the probe. A 2-inch to 12-inch layer of unhydrated bentonite chips is placed on top of the filter pack. Next pre-hydrated granular bentonite is then poured into the hole to approximately and topped with another 2-inch layer of unhydrated bentonite chips or concrete, depending if the boring will hold one probe or multiple probes. The tube is coiled and placed within a wellbox finished flush to the surface. Soil vapor samples will be collected no sooner than one week after installation of the soil vapor points to allow adequate time for representative soil vapors to accumulate. Soil vapor sample collection will not be scheduled until after a minimum of three consecutive precipitation-free days and irrigation onsite has ceased. Figure B shows the soil vapor sampling apparatus. A measured volume of air will be purged from the tubing using a different Summa purge canister. Immediately after purging, soil vapor samples will be collected using the appropriate size Summa canister with attached flow regulator and sediment filter. The soil vapor points will be preserved until they are no longer needed for risk evaluation purposes. At that time, they will be destroyed by extracting the tubing, hand augering to remove the sand and bentonite, and backfilling the boring with neat cement. The boring will be patched with asphalt or concrete, as appropriate.

Vapor Sample Storage, Handling, and Transport

Samples are stored and transported under chain-of-custody to a state-certified analytic laboratory. Samples should never be cooled due to the possibility of condensation within the canister.

Attachments: Figure A: Soil Vapor Point
Figure B: Soil Vapor Sampling Apparatus Diagram



Schematic Not to Scale

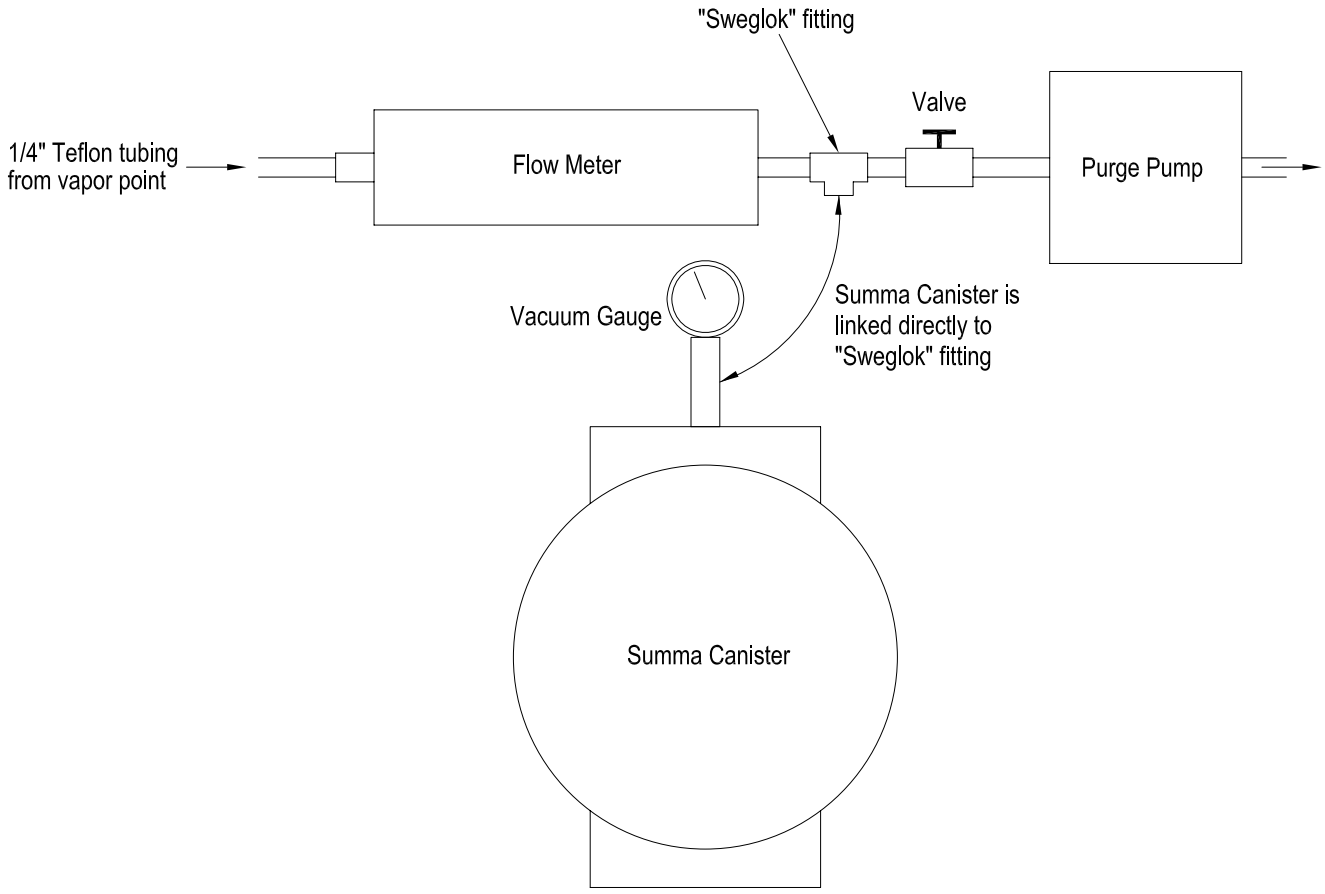
FIGURE

A

Soil Vapor Point

CONESTOGA-ROVERS & ASSOCIATES

S:\0-TEXACO\TEX-SITES\211273\FIGURES\VAPOR-POINT.DWG



Schematic Not to Scale

FIGURE

B

CONESTOGA-ROVERS & ASSOCIATES

Soil Vapor Sampling Apparatus Diagram

S:\0-TEXACO\TEX-SITES\211273\FIGURES\VAPOR-DIAG.DWG