ENVIRONMENTAL RISK SPECIALTIES CORPORATION

ers

November 2, 2009

Paresh C. Khatri
Hazardous Materials Specialist

Alameda County Health Agency
Department of Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

RE: 2009 Soil and Groundwater Investigation Report
Foothill Mini Mart
6600 Foothill Boulevard, Oakland, California
Fuel Leak Case No. RO0000175
GeoTracker Global ID: T0600102286

Dear Mr. Khatri:

On behalf of Mr. Ravi Sekhon and pursuant to Alameda County Environmental Health's February 6 and June 18, 2009 letters, Environmental Risk Specialties Corporation (ERS) has completed the 2009 data gap investigation for the subject site, and prepared the *2009 Soil and Groundwater Investigation Report*. Attached with this electronic file, please find this report for your review and comments.

If you have questions, please feel free to call the undersigned at (925) 938-1600 ext. 108. Your assistance on this site is very appreciated.

Sincerely,
ERS

Jim Ho, Ph.D., P.E.
Principal Engineer

Cc: Ravi Sekhon, 21696 Knuppe Place, Castro Valley, CA 94552

2009 Soil and Groundwater Investigation Report

Foothill Mini Mart
6600 Foothill Boulevard
Oakland, CA 94605

Fuel Leak Case No. RO0000175
GeoTracker Global ID: T0600102286

Submitted by:

Mr. Ravi Sekhon

Prepared for:

Mr. Ravi Sekhon

Prepared by:

Environmental Risk Specialties Corporation
1600 Riviera Avenue, Suite 310
Walnut Creek, CA 94596

November 2009

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EXECUTIVE SUMMARY

At the request of Mr. Ravi Sekhon and in response to the February 6 and June 18, 2009 letters issued by the Alameda County Environmental Health (ACEH), Environmental Risk Specialties Corporation (ERS) conducted a data gap investigation from September 21 through 25, 2009 for the subject site located at 6600 Foothill Boulevard, Oakland, CA, following the investigation work plan and the work plan addendum (ERS, 2008b; ERS, 2009a). The purposes of the 2009 soil and groundwater investigation (data gap investigation) were:

- Lithology delineation in the deep groundwater zone;
- Confirmation of the lateral and vertical range of the on-site source area;
- Confirmation of the presence of preferential migration pathway through the utility corridors;
- Confirmation of the lateral and vertical extent of soil/groundwater contamination; and
- Determination of the level of contamination in deep groundwater.

The 2009 investigation activities included: soil boring, soil and groundwater sampling, investigation of preferential pathway, well installation, well survey and development, and gauging of groundwater depth after well development. ERS has prepared a *2009 Soil and Groundwater Investigation Report* following the conclusion of these activities. This report presents the data gaps investigation results and satisfies the site/groundwater plume characterization requirements set forth for the site before the implementation of cleanup activities and site closure.

The major findings and conclusions resulting from the 2009 data gap investigation are summarized in Section 6. A number of findings are listed below:

- Both lithologic and groundwater data suggest that shallow and deep groundwater zones are not connected.
- The deep zone groundwater is not impacted by the contaminated soil/groundwater in the shallow zone.
- Contaminated soil exists on the site south of the UST pit. TPH-g is the major contaminant of concern within the source area in the vadose zone; MTBE impact under the source area primarily exists in the shallow groundwater zone. A higher TPH-g concentration exists near the south/southeast corner of the property. The highest TPH-g concentration appears at a depth interval of approximately 6 to 8 feet below ground surface. The range of the on-site source area delineated in the preliminary SCM remains unchanged.

- The EBMUD's 8-inch water pipe trench is a preferential migration pathway. Since the TPH-g concentration within the EBMUD trench appear to increase along the trench slope, and the highest TPH-g concentration within the trench was found in the farthest downstream borehole USB-11 approximately 120 feet east of the east property line, the extent of soil/groundwater contamination under Foothill Boulevard along the EBMUD trench in the east direction has not been completely determined.

- The lateral range of soil impact by TPH-g, MTBE, and benzene shown in the preliminary Site Conceptual Model has been updated. Since the vertical range of soil contamination remains unchanged, the vertical range of soil contamination included in the preliminary SCM does not need modification.

- The lateral range of the TPH-g and MTBE plumes determined during the 2Q09 monitoring has been reduced since 2Q09.

1. INTRODUCTION

At the request of Mr. Ravi Sekhon, the UST Cleanup Fund Claimant for the Sekhon Gas Station (Foothill Mini Mart site), and in response to the February 6 and June 18, 2009 letters issued by the Alameda County Environmental Health (ACEH), Environmental Risk Specialties Corporation (ERS) has prepared a *2009 Soil and Groundwater Investigation Report*. This report presents the data gap investigation results and satisfies the site/groundwater plume characterization requirements set forth for the site before the implementation of cleanup activities and site closure.

1.1 2009 Soil and Groundwater Investigation Purposes

Based on the developed preliminary Site Conceptual Model (SCM), data gaps for the site and the groundwater plume have been identified (ERS, 2008b). The purposes of the 2009 soil and groundwater investigation were:

- Lithology delineation in the deep groundwater zone;
- Confirmation of the lateral and vertical range of the on-site source area;
- Confirmation of the presence of preferential migration pathway through the utility corridors;
- Confirmation of the lateral and vertical extent of soil/groundwater contamination; and
- Determination of the level of contamination in deep groundwater.

Since the analytical data of the grab groundwater samples collected between September 21 and 25, 2009 and the groundwater depths measured on October 6, 2009 are both included/discussed in this investigation report, the semi-annual groundwater monitoring requested in ACEH's July 24, 2009 letter will commence in the First Quarter 2010 (1Q10). The assessment of the hydraulic connection between shallow and deep groundwater zones (Task 6) mentioned in the 2009 data gap work plan addendum (ERS, 2009a) has been discussed in this report; This will be further verified and confirmed in the 1Q10 semi-annual groundwater monitoring event when all the available on-site and off-site monitoring wells (shallow and deep wells) are monitored and sampled.

1.2 Investigation Report Structure

This *2009 Soil and Groundwater Investigation Report* contains the following sections:

- Section 1 – Introduction
- Section 2 – Site Description and History

- Section 3 – 2009 Site Investigation Activities
- Section 4 – Results of Soil and Groundwater Investigation
- Section 5 – Discussion and Findings
- Section 6 – Conclusions
- Section 7 – Recommendations

2. SITE DESCRIPTION AND HISTORY

2.1 Site Location and Description

The subject site is located at 6600 Foothill Boulevard, Oakland, California, on the northeastern corner of Havenscourt Boulevard and Foothill Boulevard (Figure 1). The ground surface elevation at the site is approximately 60 feet above mean sea level (msl). The regional topography of the site slopes gently toward the south-southwest. The site is located in an area with mixed commercial and residential uses. It is currently occupied by a retail gasoline station (Golden Gasoline) that includes a convenience store and two gasoline dispenser islands. Each dispenser island contains two dispensers.

The property is bounded by an empty commercial building to the east, Foothill Boulevard to the south, Havenscourt Boulevard to the west, and Evergreen Cemetery to the north. On the opposite side of Foothill Boulevard, south of the site, there is an empty lot formerly used as a gas station at the southeast corner of Havenscourt Boulevard and Foothill Boulevard. East of the empty lot is a two-story residential building with a store. The site plan is shown in Figure 2.

The site is located in the southern foothills of Oakland Hills. San Francisco Bay is located approximately two miles to the west of the property, and San Leandro Bay is approximately two miles southwest of the property. The Frick Jr. High School, Luther Burbank School, and Markham School are all located within 2,000 feet of the property.

2.2 Site and Underground Storage Tank History

The site has been a retail gas station since 1959 and was formerly operated as Shell, ARCO, and BEACON branches. The underground storage tank (UST) system of the gas station formerly consisted of one 8,000-gallon single-wall steel UST, two 10,000-gallon single-wall fiberglass USTs, and two dispenser islands with two gasoline dispensers on each island. Mr. Ravi Sekhon purchased the property from the BEACON gas station in 1998.

As part of the UST system upgrade, a suspected leakage of the 8,000-gallon steel UST was noticed in November 1998. Consequently, the steel UST and associated dispensers were removed on December 16, 1998, and the leakage was reported in January 1999. Mr. Steve Crawford of the City of Oakland Fire Department was on site during the tank removal to observe site conditions and to direct sample collections. At Mr. Crawford's direction, two soil samples were collected from the eastern and western sidewalls of the UST pit and three soil samples were collected from beneath the dispenser islands. Since the pipe trench between the dispensers and UST pit was less than 20 feet, Mr. Crawford did not require that pipe trench samples be collected. Copies of the sampling results for samples collected from beneath the dispenser islands and from the UST pit sidewall were forwarded to the ACEH on January 11, 1999. In addition, the staff of Edd Clark & Associates collected one grab groundwater sample on

December 31, 1998. A copy of these sample results was also forwarded to the ACEH (AARS, 2003b). Review of all laboratory reports shows that, with the exception of 25 ppb of toluene in the east dispenser island soil sample, the only detected compound in the soil has been methyl tertiary butyl ether (MTBE). The water sample from the pit shows that compounds of Total Petroleum Hydrocarbons as gasoline (TPH-g), benzene, toluene, ethylbenzene, and xylenes (BTEX), and MTBE were detected in the groundwater.

Following the removal of the 8,000-gallon steel UST on December 16, 1998, P&D Environmental (P&D) of Oakland, California, was retained by Mr. Sekhon to provide consulting services. During P&D's site visit on January 9, 1999, approximately 6 inches of groundwater was observed at the bottom of the UST pit, from which a steel UST had just been removed. The measured depth to groundwater was 8.0 feet below ground surface (bgs). Sheen was observed on the water in the UST pit. However, no petroleum hydrocarbon odors were detected in the soil at the site. Based on a January 11, 1999 telephone conversation between Mr. Crawford and the staff of P&D, Mr. Crawford indicated that there was nothing remarkable about the site, nor any evidence of contamination other than MTBE, which was reported in the laboratory reports.

Based on these observations and the sampling results, P&D recommended that the UST pit be backfilled, the upgrade of the remaining UST system be completed, and that a groundwater investigation be performed to determine the extent and origin of petroleum hydrocarbons in groundwater. Prior to backfilling, groundwater was pumped from the UST pit and stored in above-ground storage tanks pending carbon filtration and discharge to the storm drain with an approved San Francisco Bay Regional Water Quality Control Board temporary groundwater discharge permit. The stockpile soil generated during UST removal was also characterized, profiled, and removed from the site to the BFI Vasco Road Landfill in Livermore, California (P&D Environmental, 1999). In addition, two fiberglass USTs were kept at the site to complete the UST system upgrade. New dispensers with dispenser pans and sensors, double walled piping, overfill and overspill protection, a sump with a sensor for each UST, and an automatic tank gauging system were installed. The pit was backfilled in January and February 1999.

2.3 Site Investigation History

Mr. Sekhon retained Advanced Assessment And Remediation Services (AARS) of Concord, California, to conduct subsequent groundwater investigation. AARS conducted a preliminary site assessment in June 2001, supervised the installation of monitoring wells MW-1, MW-2, and MW-3 on June 4, 2001, and conducted quarterly sampling on June 13, 2001 (AARS, 2001) and March 21, 2002 (AARS, 2002a). The results of the preliminary site investigation, as well as the June 2001 and March 2002 quarterly monitoring and sampling, confirmed the presence of elevated petroleum hydrocarbons and MTBE in monitoring well MW-2 near the backfilled UST pit. AARS conducted an additional site investigation by installing three monitoring wells MW-4, MW-5, and MW-6 and two soil borings. These monitoring wells were installed on June 26, 2002, and an additional groundwater sampling was performed on July 9, 2002 (AARS, 2002b). After that, ARRS only conducted six quarterly monitoring and sampling events. The above

wells were not monitored regularly every quarter between 2001 and 2005. Wells MW-1 through MW-3 were gauged only twice each year between 2002 and 2005, and wells MW-4 through MW-6 were gauged and sampled twice each year between 2003 and 2005. AARS conducted a final monitoring event on November 30, 2005 (AARS, 2006). The analytical results (ARRS, 2006) indicated an elevated concentration of petroleum hydrocarbons in MW-4 and the farthest downgradient monitoring well MW-6, as well as elevated MTBE concentrations in monitoring wells MW-1, MW-2, and MW-6. The results of these monitoring events suggested that off-site migration of petroleum hydrocarbons and MTBE might have occurred. In response, ACEH requested additional site characterization to define the lateral and vertical extent of the groundwater impact in ACEH's March 28, 2008 letter.

Mr. Ravi Sekhon retained ERS on July 9, 2008, to manage this site cleanup and closure project. At the request of ACEH's July 24, 2008 letter, ERS conducted a preferential pathway study and submitted a study report (ERS, September 2008a). ERS also resumed quarterly groundwater monitoring for the subject site beginning with the third quarter 2008 (3Q08) on August 8, 2008.

2.4 Contaminants of Concern

Historical groundwater sampling conducted between June 2001 and August 2008 showed that elevated concentrations of dissolved hydrocarbons, including TPH-g and/or benzene, as well as fuel oxygenates such as MTBE and/or Tertiary Butyl Alcohol (TBA), were detected in on-site monitoring wells MW-1 and MW-2, and off-site monitoring wells MW-4, MW-5, and MW-6. Thus, TPH-g, benzene, MTBE, and TBA are the contaminants of concern for the subject site.

3. 2009 SITE INVESTIGATION ACTIVITIES

Following the data gap work plan and work plan addendum for the 2009 site investigation (ERS, 2008b; ERS, 2009a), the investigation activities included soil boring, soil and groundwater sampling, investigation of preferential pathways, well installation, well survey and development, and gauging of groundwater depth after well development. Most of the proposed soil sampling boreholes and monitoring wells were drilled, sampled, and installed from September 21 through 25, 2009, according to the investigation work plan and the work plan addendum (ERS, 2008b; ERS, 2009a). However, a few modifications were carried out based on the following reasons:

- Since the property owner of 6601 Foothill Boulevard could not be located, well pair MW-8A/8B was not installed.

- Although the property owner of 6619 Foothill Boulevard, Mr. William Jue, had signed the property access permit on February 17, 2009, he refused to allow ERS to install wells MW-9A/9B on his property during the 2009 investigation; he did not want excessive activity and equipment in his backyard. Thus, well pair MW-9A/9B was not installed.

- Since the property owner of 6615 Brann Street did not respond to the access request, well pair MW-11A/11B was moved approximately 20 feet to the southeast onto the subject site and was substituted by shallow well MW-11.

- Shallow well MW-7 was moved approximately 20 feet northeast of the proposed location from Havenscourt Boulevard to Foothill Boulevard to avoid complicated permitting and traffic issues.

- The 2Q09 (ERS, 2009b) sampling data indicated that shallow wells MW-5 and MW-6 had the highest TPH-g/benzene and MTBE concentrations. Based on the organic vapor reading of the Photo-Ionization Detector (PID) and the field observation for deep wells MW-5B and MW-6B, groundwater in deep zone was clearly not contaminated. Thus, deep well MW-13B was not installed.

- Since groundwater in shallow zone was most likely contaminated, an additional shallow soil boring SMW-13 (approximately 28 feet north of shallow well MW-13A) was drilled and sampled in order to assess the lateral range of soil and groundwater contamination.

- Since the preferential pathway identification boring USB-2 drilled into the trench material of East Bay Municipal Utility District's (EBMUD's) 8-inch water pile was clean, soil borings USB-1 and USB-3 outside the trench were not drilled to conserve resources.

- Since the preferential pathway identification boring USB-5 drilled into the trench material of the 8-inch water pipe and bore holes USB-7 and USB-8 within the

downstream transect were all contaminated, bore holes USB-4, USB-6, and USB-9 outside the trench were not drilled to conserve resources.

- Since USB-5 and USB-8 were highly contaminated, two additional borings USB-10 and USB-11 within the trench along the downstream direction were drilled and sampled.

All the available off-site access permits are included in Appendix A. Other applicable permits including the encroachment and excavation permits issued by the City of Oakland Community and Economic Development Agency and the well installation permit issued by the Alameda County Public Works Agency are included in Appendix B.

3.1 Soil Boring and Sampling in Shallow and Deep Groundwater Zones

In addition to the proposed on-site shallow soil borings SB-15, SB-16, and SB-17 used to determine the range of on-site source area, a pilot borehole was drilled to the specified depth (shallow or deep) for each proposed well to assist the selection of screen interval. All the above shallow soil borings and pilot boreholes were drilled using a direct push power rig and dual wall tooling described in the work plan (ERS, 2008b) to implement continuous soil coring and grab groundwater sampling. Continuous soil cores of 4 feet long each were withdrawn from the boreholes to log the lithology. Each soil core was scanned immediately with a PID to identify the level of soil contamination prior to soil sampling for laboratory analysis and soil logging. Soil in the capillary fringe above water table and/or with the highest PID reading was sampled using EPA Method 5035 (EPA, 2003) approved 5035SC ™ Sampler. The on-site shallow soil boring locations, pilot holes, and well locations are shown in Figure 3.

The soil stored in the 5035 samplers (three samples for each sampling depth) was placed in a chilled cooler and recorded in the chain-of-custody prior to delivery to a state-certified analytical laboratory, Kiff Analytical, located in Davis, California. The sampled soil was analyzed for BTEX, MTBE, and TBA using EPA Method 8260B, and analyzed for TPH-g using EPA Method 8015B.

It should be noted that soils in pilot boreholes MW-5B, MW-6B, MW-7, MW-11, and MW-12B, were not sampled because the PID did not detect any soil vapor in those soils (see PID readings shown on the boring logs included in Appendix C). Although soil vapor also was not detected in well MW-10, soil on top of the water table in borehole MW-10 was sampled to verify this judgment. Additionally, PID screening had been heavily applied during the 2009 data gap investigation to assist in the identification of contamination and the need of soil and/or groundwater sampling.

3.2 Investigation of Migration Preferential Pathway Along Utility Corridors

Soil borings USB-1 through USB-9 were proposed in three transects perpendicular to EBMUD's 8-inch water main under Foothill Boulevard (ERS, 2009a). The first borehole drilled was USB-2.

The drilling was accomplished by penetrating the asphalt-paved street surface using a hollow stem auger, followed by hand-augering. USB-2 was drilled approximately 4 inches from the wall of the water pipe and was certainly located within the filled material of the trench. Hand-augered fill material at USB-2 did not show any signs of petroleum hydrocarbon contamination, i.e., no petroleum hydrocarbon odors, a "zero" PID reading, and no dark-colored organic matter. Native soil was encountered at approximately 6 feet bgs. Since USB-2 was clearly clean, boreholes USB-1 and USB-3 were not drilled to conserve resources.

Following the same procedure described above, borehole USB-5 was drilled and found contaminated with strong odors. The highest PID reading was found in the gravelly bed 8 feet below ground surface. Grab groundwater was collected at 8 feet bgs. Since this location was clearly contaminated, boreholes USB-4 and USB-6 were not drilled to save the resources. The third transect containing boreholes USB-7 through USB-9 was marked approximately 27 feet downstream USB-5 along the water pipe. Boreholes USB-7 and USB-8 drilled to 7 and 7.5 feet bgs were found to be significantly contaminated according to the PID reading. Because of this, grab groundwater was collected from these two boreholes at 7.5 and 8 feet, respectively. Similarly, borehole USB-9 outside the trench was not drilled for sampling.

Thus, contamination within the trench was confirmed based on the observations of the three transects. However, in order to determine the extent of the contaminants' downstream migration along the trench, two additional boreholes USB-10 and USB-11 were drilled along the wall of the water pipe within the trench. USB-10 was 30 feet downstream from USB-8 and USB-11 was 30 feet downstream from USB-10. All these boring locations are also shown in Figure 3.

3.3 Groundwater Sampling in Shallow and Deep Groundwater Zones

Since petroleum hydrocarbons were the contaminants of concern, PID screening was fully used to identify soil contamination and assist in the selection of soil samples for laboratory analysis. In order to determine the lateral and vertical extent of groundwater contamination, grab groundwater was collected from the following boreholes:

- MW-11 (northwest of well MW-1 where significant TPH-g and MTBE concentrations were detected in 2Q09)
- SMW-13 (southeast of the MW-6 where elevated level of TPH-g was detected in 2Q09 and elevated vapor concentration was detected in borehole MW-13A during 2009 investigation)
- SB-16 (southeast of well MW-2 where elevated concentrations of TPH-g and TBA were detected in 2Q09)
- MW- 5B (although elevated concentration of TPH-g was detected in wells MW-5 and MW-6 in 2Q09, contamination of deep zone groundwater was not identified)

In addition to the groundwater collected from soil boreholes USB-5, USB-7, USB-8, USB-10, and USB-11 discussed in Section 3.2, all the groundwater samples collected from the above boreholes were placed in a chilled cooler and recorded in the chain-of-custody prior to being delivered to a state-certified analytical laboratory, Kiff Analytical, located in Davis, California. The groundwater samples were analyzed for BTEX, MTBE, and TBA using EPA Method 8260B, and analyzed for TPH-g using EPA Method 8015B.

It should be noted that, since local soil was clayey, a sufficient volume of grab groundwater was not readily available from the boreholes. Grab groundwater samples could not be collected from MW-11, SB-16, and SMW-13 until 24 hours later after drilling. Conversely, groundwater was available from deep borehole MW-5B shortly after drilling. The top of the groundwater level was approximately 9 feet bgs in borehole MW-5B during grab groundwater sampling.

3.4 Installation of New Monitoring Wells

A total of 14 additional monitoring wells were proposed in the 2009 data gap investigation work plan addendum (ERS, 2009a). However, as mentioned previously, wells MW-8A/8B and MW-9A/9b were not installed because permission was not available from the property owners. Similarly, since a well permit was not available, well pair MW-11A/11B was moved to an on-site location approximately 24 feet northwest of well MW-1. Also, well pair was replaced by a shallow well MW-11, i.e., deep well MW-11B was not installed, because organic vapor was not detected in wells MW-10 and MW-11 (see Appendix C).

Only eight additional wells MW-5B, MW-6B, MW-7, MW-10, MW-11, MW-12A, MW-12B, and MW-13A were installed within their pilot test holes according to the work plan (ERS, 2008b). The locations of the above monitoring wells are shown in Figure 3. Well construction data for the above monitoring wells is included in Table 1.

3.5 Well Development and Survey

The development of monitoring wells MW-5B, MW-6B, MW-7, MW-10, MW-11, MW-12A, MW-12B, and MW-13A was conducted on October 1, 2009 following the procedure presented under Task 3 of the data gap investigation work plan (ERS, 2008b). Well development was conducted by surging with a surge block and removing groundwater from the well with a bailer until the well was dewatered or free of sediment. Since most wells, except for wells MW-12A and MW-13A, were dewatered during well development, the number of casing volumes extracted during well development was approximately 8.5, 7, 5.9 6.8, 11.8, 6.4, 3.4, and 10.2, respectively, for wells MW-5B, MW-6B, MW-7, MW-10, MW-11, MW-12A, MW-12B, and MW-13A. Groundwater in wells MW-12A and MW-13A was higher after well development. All data collected during development is recorded on the Well Development Data Sheet included in Appendix E.

These monitoring wells were surveyed by PLS Surveys, Inc. of Oakland, California, on October 6, 2009. All the top of casing elevations were surveyed and adjusted relative to the City of Oakland datum and converted to mean sea level. The surveyed casing elevations are included in Table 2. All the surveyed coordinates were entered into the GIS along with the coordinates of existing wells prior to the development of Figure 3.

3.6 Groundwater Depth Measurement

Since groundwater depth could not be reliably measured during soil boring/sampling and the groundwater elevation could not be determined without the top of casing elevation data, a complete gauging of groundwater depth was conducted on October 6, 2009, after well development and well survey described in Section 3.5. The measured well depth data is also included in Appendix E and Table 2.

4. RESULTS OF SOIL AND GROUNDWATER INVESTIGATION

The data obtained from soil boring, soil and groundwater sampling, and investigation of the preferential pathway was used:

- To delineate the lithology in deep groundwater zone;
- To confirm the lateral and vertical range of on-site source area;
- To confirm the presence of preferential migration pathway through the utility corridors;
- To identify the lateral and vertical extent of soil/groundwater contamination; and
- To determine the level of contamination in deep groundwater;

The data also have been used to update the existing Site Conceptual Model. The 2009 data gap investigation results are summarized in the following sub-sections:

4.1 Lithology of Deep Groundwater Zone

The predominant soil types at the site are clays and silty clays with a stringer of clayey gravels and gravelly sand. Inter-fingered lenses of clayey gravel, poorly- and well-graded sand/gravel, sandy and gravely clays, and sandy to silty clay exist to the depth of 30 feet bgs. The lithology included in the existing SCM shows that local subsurface is composed of fine-grained materials. Most of the clays and silty clays are very stiff with high plasticity. Clay, poorly sorted clay and silty clay dominate to a depth of 30 feet bgs. Subsurface cross-sections included in the SCM report (ERS, 2008b) show that only former soil boring SB-2, approximately 56 feet east of well MW-6; contain silty sand with significant thickness at 17 feet bgs. Also, a clayey gravel lens of 2 to 3 feet thick also exists near wells MW-5 and MW-6 at depth of 15 feet bgs. The lithology of shallow groundwater zone has been well characterized based on the results of 2001, 2002, and 2005 investigations (AARS, 2001; 2002b; 2005). Additional soil borings for the 2009 data gap investigation have been used to confirm the lithology included in the existing SCM. All the 2009 soil boring logs are included in Appendix C. The updated and additional cross-sections and cross-section locations are presented in Appendix D.

The 2009 data gap investigation attempts to delineate the lithology in deep groundwater zone. Soil borings generated from boreholes MW-5B, MW-6B, and MW-12B (include in Appendix C) indicate that clean sand and sandy clay exist below/near 25 feet and 35 feet bgs (top of the well screen) in borehole MW-5B. Relatively thick gravelly clay and silty sand also exists in boreholes MW-6B and MW-12B, respectively, at depths below 33 to 50 feet bgs. Soil boring/logging of the 2009 investigation shows that:

- Permeable sediment more than 10 feet in thickness exists in the deep groundwater zone below 25 feet bgs (see cross-section J-J' included in Appendix D).

- Clay of significant thickness exists below 18 feet bgs and above the permeable materials identified in the deep groundwater zone (see cross-sections, C-C', D-D', I-I' and J-J' included in Appendix D).

Most importantly, although predominant soil types at the site are clays and silty clays, permeable materials such as gravel/sandy gravel, gravelly sand/clean sand have been identified within the shallow groundwater zone between 4 and 18 feet bgs (see boring logs included in Appendix A and cross-sections A-A' through H-H' of the SCM Report). Thus, the clean sand identified within borehole MW-5B near 25 feet bgs may have a hydraulic connection with the shallow groundwater.

4.2 Groundwater Elevation and Direction

Since soil boring performed between September 21 and 25, 2009 could not generate reliable groundwater depth data prior to the installation of monitoring wells and groundwater elevation could not be determined without surveying the top of casing elevation, a complete groundwater depth measurement was conducted on October 6, 2009 after well development and well survey.

The measured groundwater depth of each shallow zone well was subtracted from the surveyed top of casing elevation to determine the groundwater elevation relative to mean sea level. The calculated groundwater elevation of shallow zone wells ranged between 53.72 ft above msl (well MW-13A) and 47.93 ft above msl (well MW-11) on October 6, 2009. The calculated groundwater depths listed in Table 2 were contoured and plotted. The plotted groundwater elevation contours in the shallow zone are shown in Figure 4. The plotted groundwater elevation contours show that groundwater in the shallow zone is primarily in the southwest west and northwest directions with hydraulic gradients between 0.017 and 0.028 feet per foot. A branch of groundwater flow with higher gradient of 0.042 feet per foot was identified in the vicinity of wells MW-1, MW-2 and MW-4. The delineated October 6, 2009 groundwater flow distribution in the shallow zone is consistent with the historical monitoring results obtained since 3Q08.

Based on the gauging data collected between June 2001 and August 2008, the average on-site groundwater depth (determined from wells MW-1 through MW-3) was consistently greater than the average off-site groundwater depth (determined from wells MW-4 through MW-6). The October 6, 2009 gauging data shows that the average on-site groundwater depth (determined from wells MW-1 through MW-3 and wells MW-10 and MW-11) and average off-site groundwater depth (determined from wells MW-4 through MW-6 and wells MW-7, MW-12A, and MW-13A) were 11.05 and 7.73 feet, respectively. The condition described above is consistent with historical data and is due to the southward and southeastward topography from

Brann Street to Foothill Boulevard and higher ground elevation of the subject site comparing with the road surface of Foothill Boulevard.

Initial groundwater depths measured on October 1, 2009, prior to well development for wells MW-5B, MW-6B, and MW-12B were 22.45, 38.35, and 39.09 feet, respectively, below the top of well casing. The groundwater depths measured on October 6, 2009 for the same wells were 13.16, 40.95, and 40.12 feet, respectively, below the top of well casing. Since the groundwater depths measured on October 6, 2009, five days after well development, were not influenced by well development, the gauging of groundwater depth on October 1 and October 6, 2009 appear consistent except for well MW-5B. Following the same method described above for determining the groundwater elevations in the shallow zone wells, the calculated groundwater elevations for wells MW-5B, MW-6B, and MW-12B were 44.53, 15.76, and 22.82 ft above msl, respectively, on October 6, 2009.

4.3 Range of On-Site Source Area

Release of gasoline from an 8,000-gallon steel UST removed in November 1999 is likely the only significant source of subsurface contamination for the subject site (ERS, 2008b). In order to confirm the area of the contaminant source, the vertical and lateral extent of the source area was assessed by three soil borings SB-15, SB-16, and SB-17 shown in Figure 3 following the work plan addendum (ERS, 2009a).

Both soil sampling and PID measurement indicates that soil near soil boring SB-15 north of the UST pit from ground surface to a maximum depth of 9.5 feet below ground is not contaminated. Soil sampled from borings SB-16 and SB-17 contains TPH-g concentrations of 410 and 73 mg/Kg, respectively, at a depth of 7.5 feet below ground surface. The PID reading of 124 ppm at SB-16 at 6.5 feet below grade was significant. The soil sampling and PID measurement data are included in Tables 3 and 6. Results of the 2009 investigation indicate that contaminated soil exists on site south of the UST pit. Higher contamination appears at the southeast corner of the property near 6620 Foothill Boulevard. The location of soil contamination is consistent with the location of the TPH-g plume reported in the 2Q09 monitoring report (ERS, 2009b).

It should be noted that the MTBE concentrations in SB-15, SB-16, and SB-17 soil samples are either less than the Method Detection Limits or less than the associated Environmental Screening Level (ESL) of 0.023 mg/Kg listed in the November 2007 Interim Final promulgated by California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) for soil above 10 feet bgs, if the groundwater is a potential drinking water resource. However, an elevated MTBE concentration (7,000 μg/L) was found from the grab groundwater sample collected from soil boring SB-16 at a depth of 15 feet below ground surface. The analyzed concentration is much higher than the MTBE concentration (9.7 μg/L) sampled in 2Q09 from well MW-2 (ERS, 2009b) (Note: Boring SB-16 is approximately 17 feet southeast of well MW-2, which is screened from 10 to 25 feet bgs). Based on the results of 2009 data gap investigation, the following conclusions were obtained:

- TPH-g is the contaminant of concern in the source area above the water table; MTBE impact within the source area primarily exists in groundwater.
- The range of the on-site source area delineated in the preliminary SCM (ERS, 2008b) remains unchanged.
- The highest TPH-g concentration near the southern/southeastern edge of the property appears at a depth interval of approximately 6 to 8 feet below ground surface.

4.4 Preferential Migration Pathway Along Utility Corridors

Although three transects or nine soil bore holes were proposed in the 2009 data gap work plan addendum (ERS, 2009a), only six boreholes were drilled and sampled following the field observation and strategy described in Section 3.2. The bottom of the trench for EBMUD's 8-inch water main under Foothill Boulevard is approximately 6 feet below road surface. Analysis of groundwater samples collected from soil borings USB-5, USB-7, USB-8, USB-10, and USB-11 drilled within the trench material clearly indicates that soil/groundwater within the trench is highly contaminated by TPH-g, instead of MTBE/TBA and benzene. The groundwater sampling data included in Table 4 coincides with the soil PID measurements (from 638 to 1,700 ppm) included in Table 6. All the PID readings are consistently higher than the maximum PID reading of 124 ppm obtained from on-site soil boring SB-16.

In addition, the highest TPH-g groundwater concentration of 81,000 µg/L was identified in borehole USB-11, approximately 120 feet east of the east property line. Since the slope of the water pipe/trench is eastward, the sampled TPH-g groundwater concentrations within the trench increase along the trench slope (see the sampling locations shown in Figure 3 and the TPH-g concentrations of USB-8, USB-10, and USB-11 listed in Table 4). Results of the 2009 investigation clearly indicate that:

- The trench of the 8-inch EBMUD water main gathers petroleum hydrocarbons.
- The permeable trench constitutes the preferential migration pathway and enhances the eastward migration of TPH-g, which is consistent with the position of the plume shown in Figure 4 of the 2Q09 monitoring report (ERS, 2009b).

4.5 Range of Soil and Groundwater Contamination

Lateral and vertical ranges of soil contamination are discussed and presented in Section 7.3.1.2 and Figures 4 through 14 of the SCM report (ERS, 2008b). One purpose of the 2009 data gap investigation was to confirm and update the range of soil and groundwater contamination included in the preliminary SCM.

4.5.1 Range of Soil Contamination

The preliminary SCM shows that higher TPH-g and benzene soil concentrations are near the UST pit. However, elevated TPH-g concentration (800 mg/Kg) was also found in the borehole for well MW-13A during the 2009 investigation. Thus, the range of TPH-g soil impacted shown in Figure 12 of the SCM Report (ERS, 2008b) has been updated based on the 2009 investigation results presented in Sections 4.3 and 4.4 of this report, as well as the soil sampling data included in Table 5 (Figure 5). The major changes are caused by:

(1) Soil contamination under Foothill Boulevard along the EBMUD water main

(2) Contamination east of the 6633 Foothill Boulevard property.

As mentioned previously, the range of on-site source area at the subject site remains unchanged. Since the MTBE and benzene concentrations of all the soil borings drilled for the 2009 data gap investigation were either less than the Method Detection Limits or insignificant, the lateral range of benzene and MTBE soil impact shown in the preliminary SCM also has been modified accordingly. The delineated TPH-g, benzene, and MTBE soil impact is shown in Figures 5, 6, and 7.

The PID vapor screening and field observation for the deep zone boreholes MW-5B, MW-6B, and MW-12B did not show any sign of soil contamination in the deep groundwater zone (see Table 6). Thus, the vertical range of soil contamination presented in the preliminary SCM does not need modification.

4.5.2 Range of Groundwater Contamination

The Ranges of TPH-g and MTBE plumes were delineated and presented in the 2Q09 groundwater monitoring report (ERS, 2009b). To confirm or modify the range of those plumes, only groundwater from MW-5B (west bound), MW-11 (north bound), and SMW-13 (southeast bound) was sampled. Data from the 2009 investigation included in Table 5 for boreholes MW-5B, MW-11, and SMW-13 indicates that the TPH-g concentration of MW-5B has declined from 1,900 μg/L (2Q09) to 1,000 μg/L. In addition, the groundwater TPH-g concentrations in boreholes MW-11 and SMW-13 were less than Method Detention Limit of 50 μg/L. This data demonstrates that the range of the TPH-g plume determined from the 2Q09 monitoring was reduced during the 2009 investigation. A comparison of the MTBE concentrations obtained from the 2009 investigation (Table 5) with 2Q09 data also suggests that the range of the MTBE plume was also reduced during the 2009 investigation.

4.6 Level of Groundwater Contamination in Deep Groundwater Zone

Figure 15 of the SCM Report (ERS, 2008b) and the 2Q09 groundwater monitoring (ERS, 2009b) consistently show that the shallow zone groundwater at or near the locations of wells MW-5

and MW-6 have elevated groundwater contamination comparing with other monitoring wells. Conversely, as mentioned previously in Section 4.5.1, the soil vapor measurements and field observation for the deep zone boreholes MW-5B, MW-6B, and MW-12B located within or near the range of TPH-g impacted soil delineated in Figure 5 do not show any sign of soil contamination in the deep groundwater zone (see Table 6).

In addition, groundwater elevation data included in Table 2 reveals a strong head difference between well pairs MW-5/MW-5B (50.39 vs 44.53 ft above msl), MW-6/MW-6B (51.05 vs 15.76 ft above msl), and MW-12A/MW-12B (52.33 vs 22.82 ft above msl). The above data suggests that no significant hydraulic connection exists between shallow and deep groundwater zone. The soil boring logs for the above boreholes included in Appendix C and the subsurface cross-section presented in the SCM Report (ERS, 2008b) also show that thick clayey soil exists between the shallow and deep groundwater zones.

Thus, the results of the 2009 data gap investigation indicate that the deep groundwater zone is not hydraulically connected with the contaminated shallow groundwater. The deep groundwater zone is not impacted by the shallow contaminated soil.

5. DISCUSSION AND FINDINGS

Lithology

Based on the preliminary SCM, discontinuous sand/gravel lenses with limited extent and variable thickness exist in the shallow groundwater zone above 25 feet bgs. Cross-sections A-A', E-E', and G-G' shown in Figures 4, 8, and 10 of the SCM Report (ERS, 2008b) and modified cross-sections C-C' and D-D' included in Appendix D clearly indicate that a layer of permeable sediment with variable thickness exists within a depth interval between ground surface and 15 feet bgs. This permeable layer may facilitate the migration of the contaminant plume. In addition to the permeable layer shown in cross-section G-G', off-site migration of the groundwater plume may take place through the inter-fingered or interconnected permeable materials above or below 15 ft bgs. The potential pathways for off-site migration have been identified in cross-sections C-C', D-D', F-F', and H-H' shown in Figures 6, 7, 9, and 11 of the SCM Report (ERS, 2008b). Thus, although the predominant soil types in the shallow zone at the subject site are clays and silty clays, the presence of inter-fingered or interconnected permeable materials, in addition to the 15-inch storm drain and/or the 8-inch drinking water pipe, may lead to the formation of a "conduit" of lesser hydraulic resistance for the migration of dissolved contaminants. Overall, although permeable layers or conduits of less hydraulic resistance exist, clays and silty clays are still dominant at depths between 15 and 30 feet bgs.

Results of the 2009 data gap investigation have been used to update the lithology included in the preliminary SCM, especially the deep groundwater zone. The updated SCM shows that:

- Permeable sediment more than 10 feet in thickness exists in the deep groundwater zone below 25 feet bgs.
- Clay of significant thickness prevails above the permeable layer exists in the deep groundwater zone.
- Permeable materials such as gravel/sandy gravel, gravelly sand/clean sand have been widely distributed within the shallow groundwater zone between 4 and 18 feet bgs. Thus, the clean sand within borehole MW-5 near 25 feet bgs may have hydraulic connection with the shallow groundwater.

Groundwater Flow

The calculated groundwater elevations on October 6, 2009 for shallow zone wells, ranged between 53.72 ft and 47.93 ft above msl. The contoured groundwater elevations show that:

- Groundwater in the shallow zone is primarily in the west and northwest directions with hydraulic gradients between 0.017 and 0.028 feet per foot. A branch of groundwater

flow with higher gradient of 0.042 feet per foot was identified in the vicinity of wells MW-1, MW-2 and MW-4.

- The October 6, 2009 delineated groundwater flow distribution in the shallow zone is consistent with the monitoring results obtained since 3Q08.

It is worth nothing that based on the survey data, the preferential pathway study results (ERS, 2008a), as well as all groundwater monitoring data, the shallow groundwater often flows toward the San Leandro Bay and/or San Francisco Bay, instead of following the slopes of ground surface topography and the trench of the underground pipes.

The groundwater depths gauged on October 1 and October 6, 2009 for deep zone wells MW-5B, MW-6B, and MW-12B appeared consistent, except for well MW-5B. The calculated groundwater elevations on October 6, 2009 for deep zone wells were 44.53, 15.76, and 22.82 ft above msl, respectively. The gauged data indicates that:

- Groundwater elevation (50.39 feet above msl) in the shallow zone well MW-5 was 5.86 feet higher than the deep zone groundwater head (44.53 feet above msl) measured in the deep zone well MW-5B.

- The average groundwater elevation (50.48 feet above msl) determined from 11 shallow zone wells was much higher than the average groundwater head (19.29 ft above msl) determined from the deep zone wells MW-6B and MW-12B.

The above data collectively suggests that groundwater in the shallow and deep groundwater zones is not well connected, although minor connection may exist near wells MW-5 and MW-5B through permeable lenses (see boring logs included in Appendix C of this report and the SCM Report). This finding is consistent with the groundwater response observed during well development (see Appendix E) and the general lithology shown in the SCM in the vicinity of the site.

Range of On-Site Source Area

Contaminants released from the removed 8,000-gal steel tank can dissolve into the groundwater if the groundwater elevation is higher than 8.5 feet bgs. According to the preliminary SCM (ERS, 2008b), it appears that the UST pit is the source of on-site and off-site soil contamination. Based on the plotted TPH-g and benzene footprints, the area of the impacted soil is approximately 70 feet by 50 feet located on the southeastern corner of the property near the UST pit. Results of the 2009 data gap investigation indicate that:

- Contaminated soil exists on site south of the UST pit. Higher contamination appears at the southeast corner of the property near 6620 Foothill Boulevard. The location of contamination is consistent with the TPH-g plume reported in the 2Q09 monitoring report (ERS, 2009b).

- TPH-g is the major contaminant of concern in the source area above the water table; and MTBE impact within the source area primarily exists in shallow groundwater.
- The range of on-site source area delineated in the preliminary SCM has been confirmed.
- The highest TPH-g concentration near the south/southeast corner of the property appears at a depth interval of approximately 6 to 8 feet below ground surface.

Preferential Migration Pathway

According to the preliminary SCM (ERS, 2008b), there are no apparent vertical conduits and pumping activities in the vicinity that may affect the vertical and/or lateral migration of the groundwater plume from the subject site. However, since the 15-inch storm drain under the Foothill Boulevard sidewalk and the EBMUD 8-inch water pipe installed under Foothill Boulevard south of the subject site slope toward the east, both conduits can become preferential pathways for lateral migration of contaminants when the groundwater elevation is higher than 5 feet bgs, especially in the area east of well MW-2.

Results of the 2009 data gap investigation show that elevated TPH-g concentration was found within the EBMUD 8-inch pipe trench. The highest TPH-g groundwater concentration of 81,000 µg/L was present in borehole USB-11, which is approximately 120 feet east of the property line. Since the slope of the water pipe/trench is eastward, the sampled TPH-g concentrations within the trench also increased along the trench. The 2009 investigation clearly indicate that:

- The trench of the 8-inch EBMUD water main gathers petroleum hydrocarbons.
- The permeable trench of the 8-inch EBMUD water main constitutes the preferential migration pathway and enhances the eastward migration of TPH-g.
- Since the TPH-g concentrations within the EBMUD trench appear to increase along the trench slope and the highest TPH-g concentration within the trench was found in the farthest borehole USB-11 approximately 120 feet east of the east property line, the extent of soil/groundwater contamination under Foothill Boulevard along the EBMUD trench in the east direction has not been completely determined.

Range of Soil Contamination

Since soil concentrations normally do not change rapidly over time, the maximum TPH-g, benzene and MTBE concentrations for samples collected within the depth intervals of 8 – 15 feet bgs and 6 – 29 feet bgs during the 2001, 2002, and 2005 investigations (AARS, 2001; 2002b; 2005) were used to develop the preliminary SCM. Based on cross-sections A-A', B-B', and C-C', shown in the SCM Report (ERS, 2008b), the approximate range of soil contamination within the impacted area both on and off site is within the depth interval of 7 to 25 feet bgs.

The lateral range of TPH-g contamination has been updated by including: (1) the soil contamination under Foothill Boulevard along the EBMUD water main and (2) the contamination east of the 6633 Foothill Boulevard property. Since the MTBE and benzene concentrations of all the soil borings drilled for the 2009 data gap investigation are either less than the Method Detection Limits or insignificant, the lateral range of benzene and MTBE soil impact included in the existing SCM has been slightly modified.

The PID screening and field observation for deep boreholes MW-5B, MW-6B, and MW-12B did not shown any sign of groundwater contamination in the deep groundwater zone (see Table 6). As a result, the vertical range of soil contamination remains unchanged; the vertical range of soil contamination included in the preliminary SCM is not modified.

Range of Groundwater Contamination

The preliminary SCM shows that the TPH-g and MTBE plumes have migrated off-site across Foothill Boulevard. The off-site migration of TPH-g, benzene, and MTBE are facilitated by the presence of permeable lenses existing in the shallow zone and the southeastern and/or southwestern groundwater flow under the subject site. In addition, results of the 2009 investigation suggest that off-site migration of these compounds may also be influenced by the EBMUD's 8-inch water pipe. As a result of the 2009 investigation, the following conditions have been identified:

- The range of the TPH-g plume determined from the 2Q09 monitoring has been reduced.
- Comparison of the MTBE concentrations obtained from the 2009 investigation with the 2Q09 data also suggests that the range of the MTBE plume also has been reduced.

Groundwater Impact in Deep Zone

Results of the 2009 data gap investigation indicate that the deep groundwater zone is not hydraulically connected with the contaminated shallow groundwater. Soil vapor measurements and field observation for the deep zone boreholes MW-5B, MW-6B, and MW-12B located within or near the range of TPH-g impacted soil does not show any sign of soil contamination in the deep groundwater zone. Thus, the deep groundwater zone is not impacted by the contaminated soil/groundwater in the shallow zone.

6. CONCLUSIONS

The major findings and conclusions resulting from the 2009 data gap investigation are summarized below:

(1) In addition to a layer of permeable sediment with variable thickness exists within a depth interval between ground surface and 15 feet bgs (shallow zone), permeable sediment thicker than 10 feet also exists in the deep groundwater zone below 25 feet bgs. However, clay of significant thickness exists below 18 feet bgs and above the permeable sediment identified in the deep groundwater zone. Furthermore, the average groundwater elevation determined from all shallow zone wells is much higher than the average groundwater head determined from the deep zone wells MW-5B, MW-6B and MW-12B. Thus, both lithologic and groundwater data suggests that shallow and deep groundwater zones are not well connected.

(2) No PID reading and signs of contamination were identified during the 2009 investigation. Thus, the deep zone groundwater is not impacted by the contaminated soil/groundwater in the shallow zone.

(3) Based on the survey data and the preferential pathway study results, as well as historical groundwater monitoring data, the shallow groundwater often flows toward the San Leandro Bay and/or San Francisco Bay instead of following the slopes of ground surface topography and the underground pipes trench.

(4) Contaminated soil exists on site south of the UST pit. Higher TPH-g concentration exists near the south/southeast corner of the property. The highest TPH-g concentration appears at a depth interval of approximately 6 to 8 feet below ground surface.

(5) TPH-g is the major contaminant of concern in the source area above the water table. MTBE impact within the source area primarily exists in shallow groundwater. The range of on-site source area delineated in the preliminary SCM remains unchanged.

(6) The soil and groundwater within the EBMUD 8-inch water main trench is highly contaminated by TPH-g, instead of MTBE/TBA and benzene. The 8-inch permeable trench appears to gather petroleum hydrocarbons and constitutes a preferential migration pathway that enhances the eastward migration of TPH-g.

(7) Since the TPH-g concentrations within the EBMUD trench appear to increase along the trench slope and the highest TPH-g concentration within the trench was found in the farthest downstream borehole USB-11 approximately 120 feet east of the east property line, the extent of soil/groundwater contamination under Foothill Boulevard along the EBMUD trench in the east direction has not been completely determined.

(8) Due to the existence of soil contamination under Foothill Boulevard along the EBMUD water main and soil contamination east of the property of 6633 Foothill Boulevard, the TPH-g soil impact area has been greatly expanded. Since the MTBE and benzene concentrations of all the soil borings drilled for the 2009 data gap investigation are either less than the Method Detection Limits or insignificant, the lateral range of benzene and MTBE soil impact included in the preliminary SCM has been slightly modified.

(9) The vertical range of soil contamination remains unchanged; the vertical range of soil contamination included in the preliminary SCM does not need modification.

(10) The lateral range of the TPH-g and MTBE plumes determined from the 2Q09 monitoring has been reduced since 2Q09.

7. RECOMMENDATIONS

(1) An initial assessment of hydraulic connection between shallow and deep groundwater zones has been performed in this report. It will be further verified and confirmed when all the available shallow and deep wells are sampled during the 1Q10 semi-annual groundwater monitoring event. ACEH's July 24, 2009 letter requested that new monitoring wells should be sampled quarterly for one year before a semi-annual monitoring schedule is implemented for new wells. Thus, beginning from 1Q10, monitoring wells MW-5B, MW-6B, MW-7, MW-10, MW-11, MW-12A, MW-12B, and MW-13A will be sampled quarterly in 2010. Monitoring wells MW-1 through MW-6 will only be sampled semi-annually in 1Q and 3Q beginning from 2010.

(2) Both the lithology and soil/groundwater impact under and near the subject site have been sufficiently characterized, except for the lateral extend of soil/trench contamination under Foothill Boulevard in the east direction. A Feasibility Study (FS)/Corrective Action Plan (CAP) should be conducted shortly after all the new wells are monitored/sampled in 1Q10 and the groundwater impact in deep groundwater zone is verified. This will evaluate the applicable and effective remedial technologies/alternatives and determine the most acceptable water quality criteria so that the goal of site closure can be accomplished in a timely manner.

(3) The 8-inch EBMUD water main under Foothill Boulevard appears to be a preferential pathway that may enhance the eastward migration of TPH-g. Remediation of on-site source and off-site contamination should be implemented as soon as possible.

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CERTIFICATION

This document was prepared under the supervision of a State of California Professional Engineer at Environmental Risk Specialties Corporation (ERS). All statements, conclusions, and recommendations are based solely upon published results from previous consultants, field observations by ERS, and laboratory analysis performed by a California DHS-certified laboratory related to the work performed by ERS.

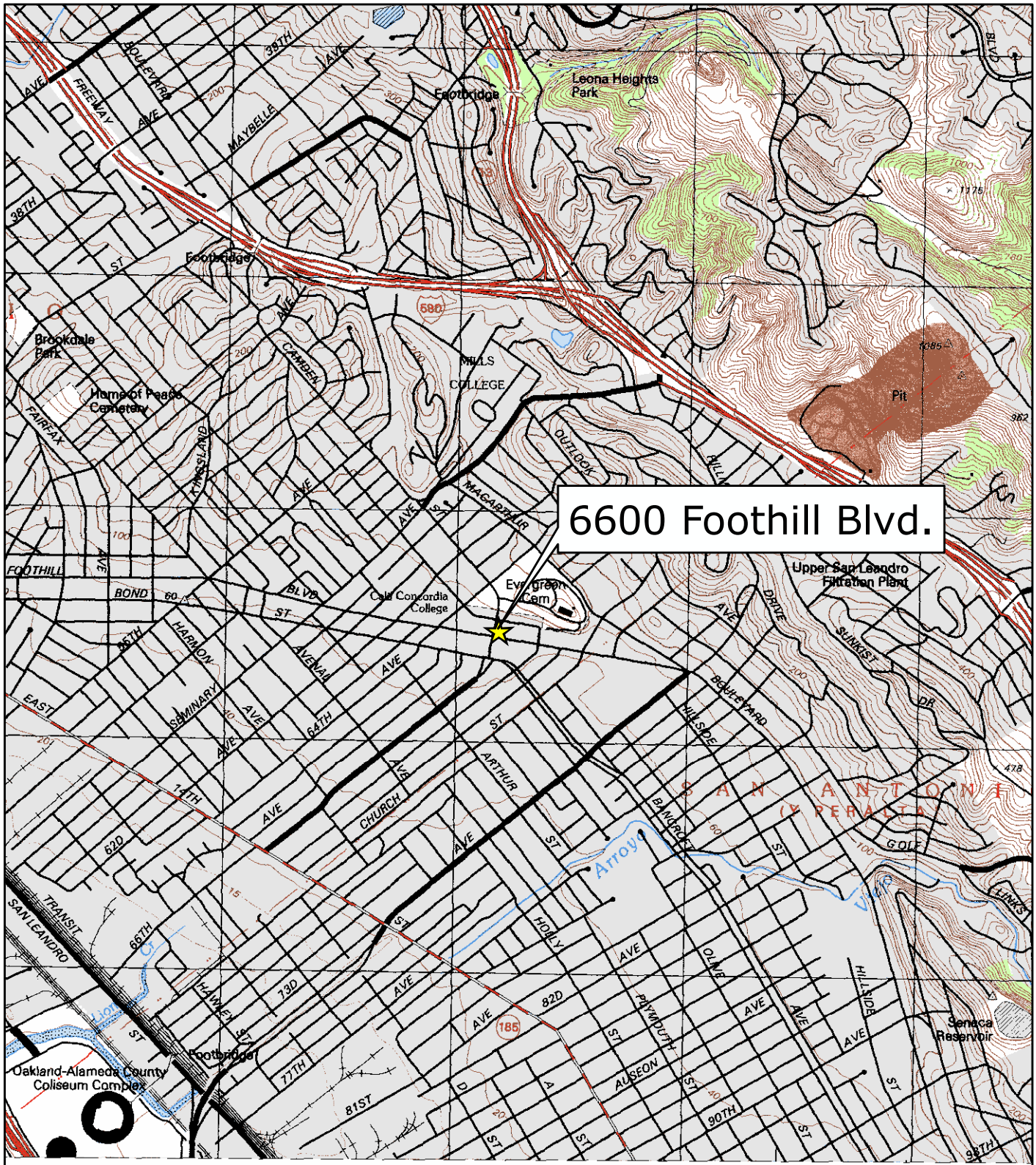
Information, interpretation, and methods presented herein are for the sole use of the client and regulating agency. The service performed by ERS has been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the area of the property. No other warranty, expressed or implied, is made.

Sincerely,

ENVIRONMENTAL RISK SPECIALTIES CORPORATION

Jim Ho, PE #C68639

FIGURES



0 1,000 2,000 Feet

1 inch = 2,000 feet

Vicinity Map

6600 Foothill Blvd, Oakland, CA

Figure 1

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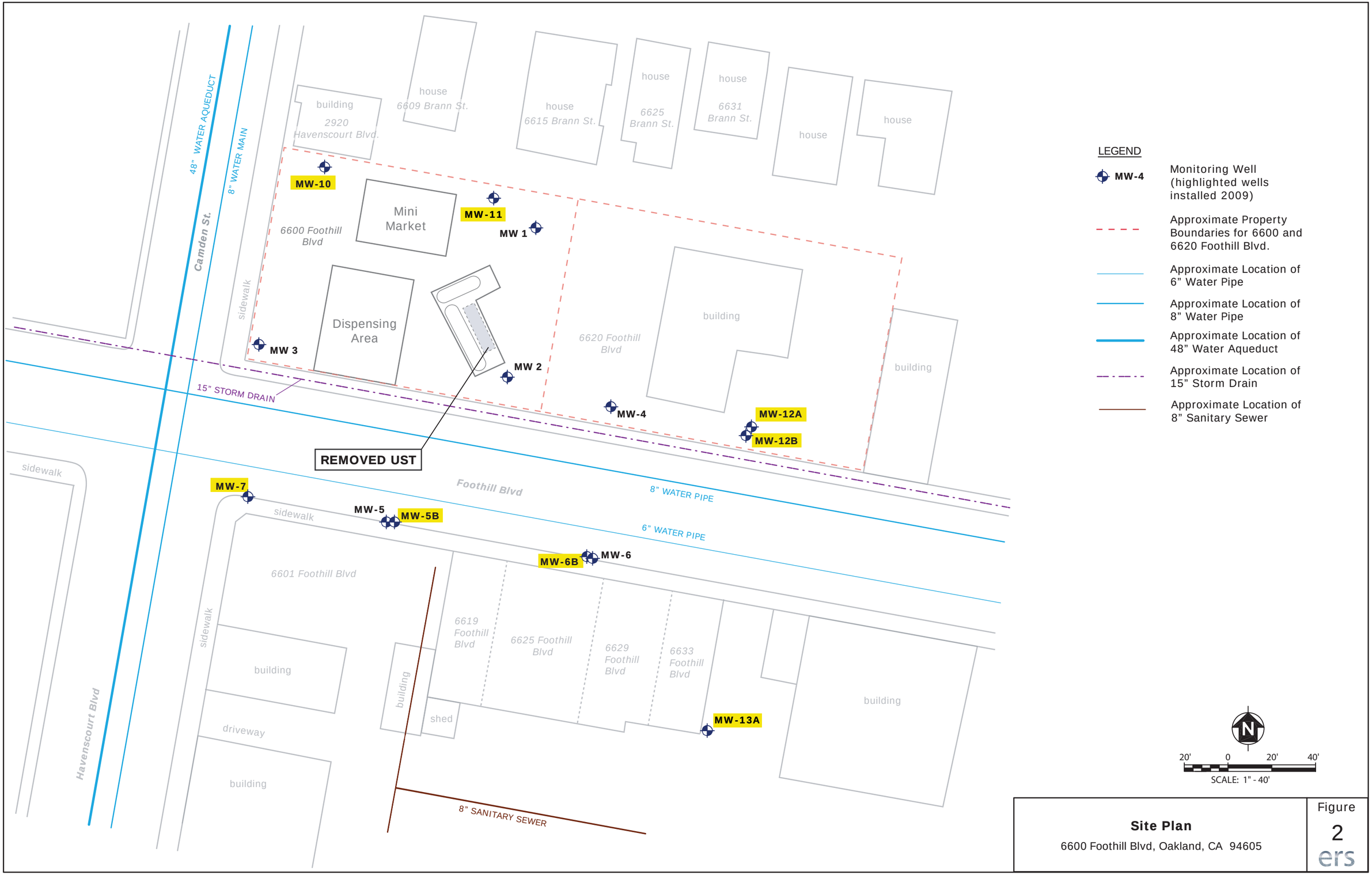

Site Plan

6600 Foothill Blvd, Oakland, CA 94605

Figure 2

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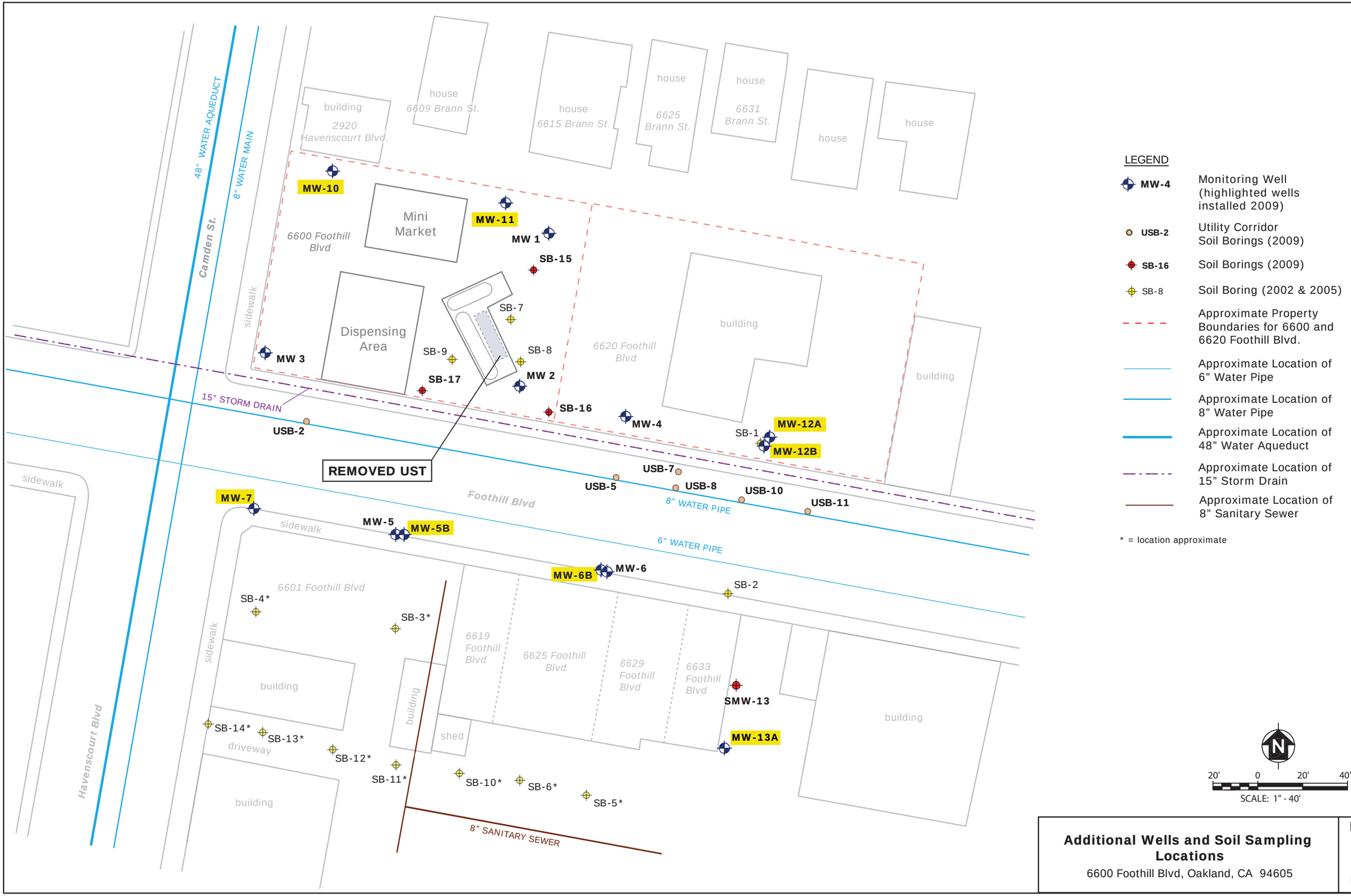

Additional Wells and Soil Sampling Locations

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Figure 3

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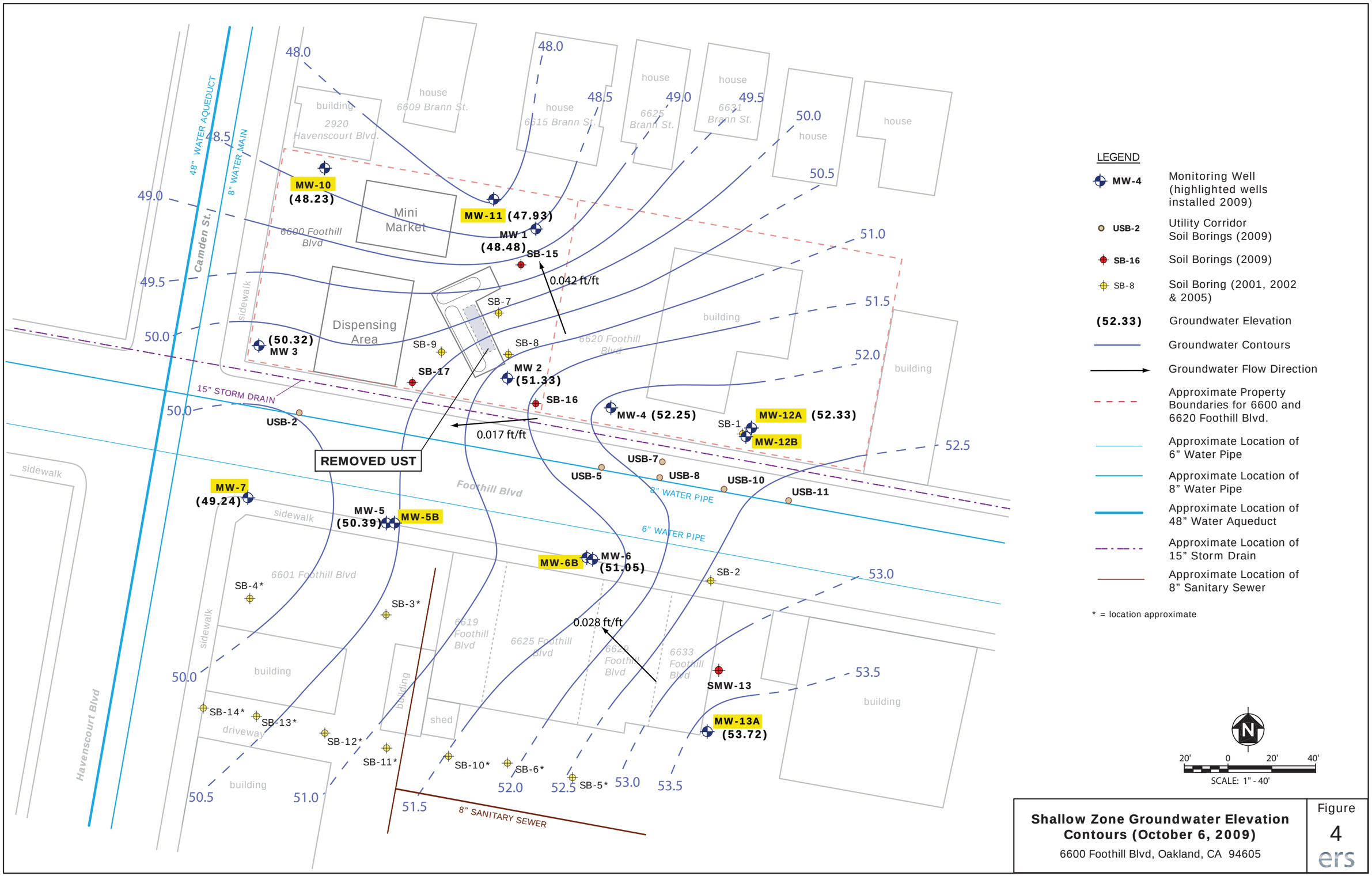

Shallow Zone Groundwater Elevation Contours (October 6, 2009)

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Figure 4

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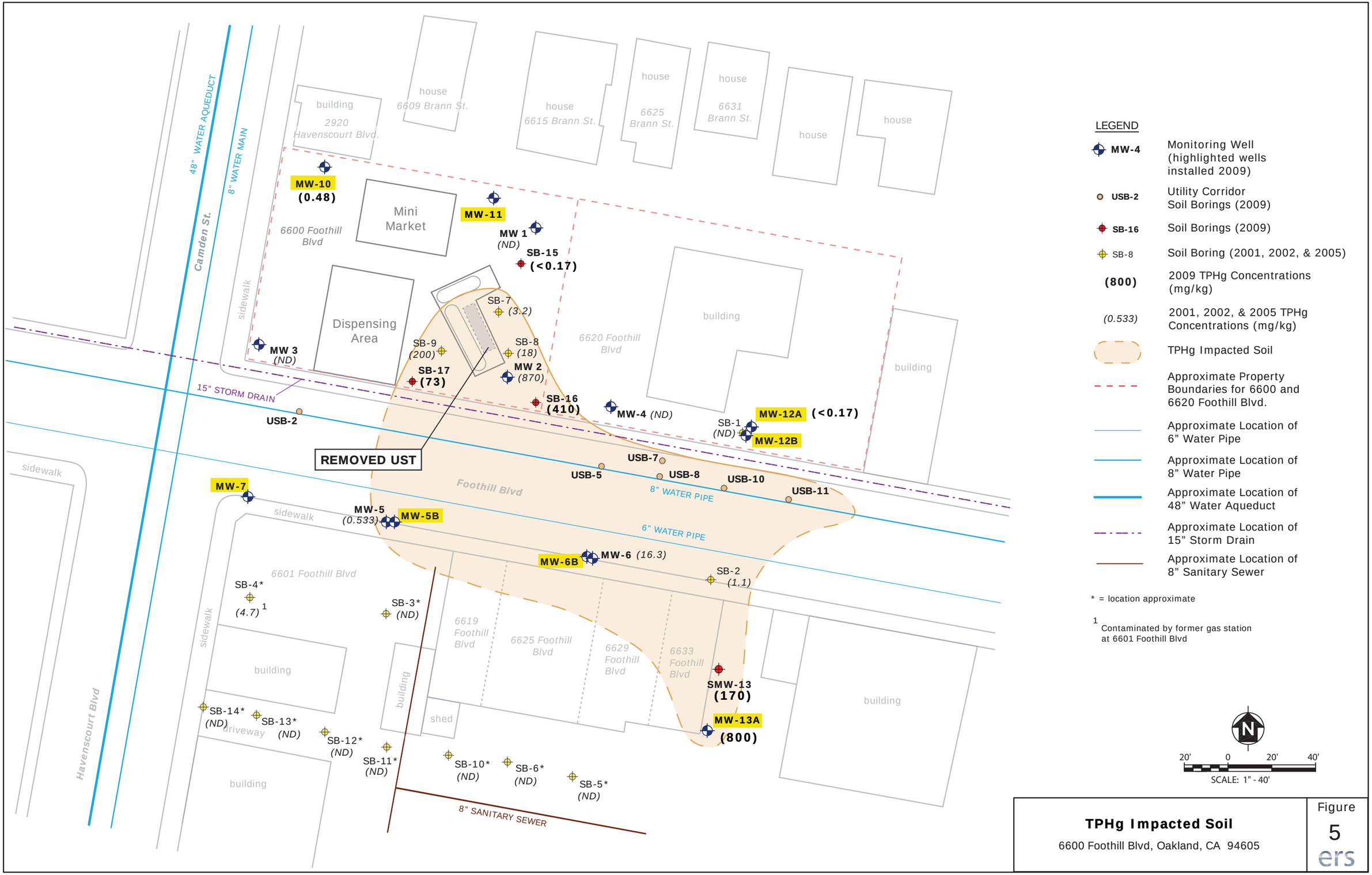

TPHg Impacted Soil

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Figure 5

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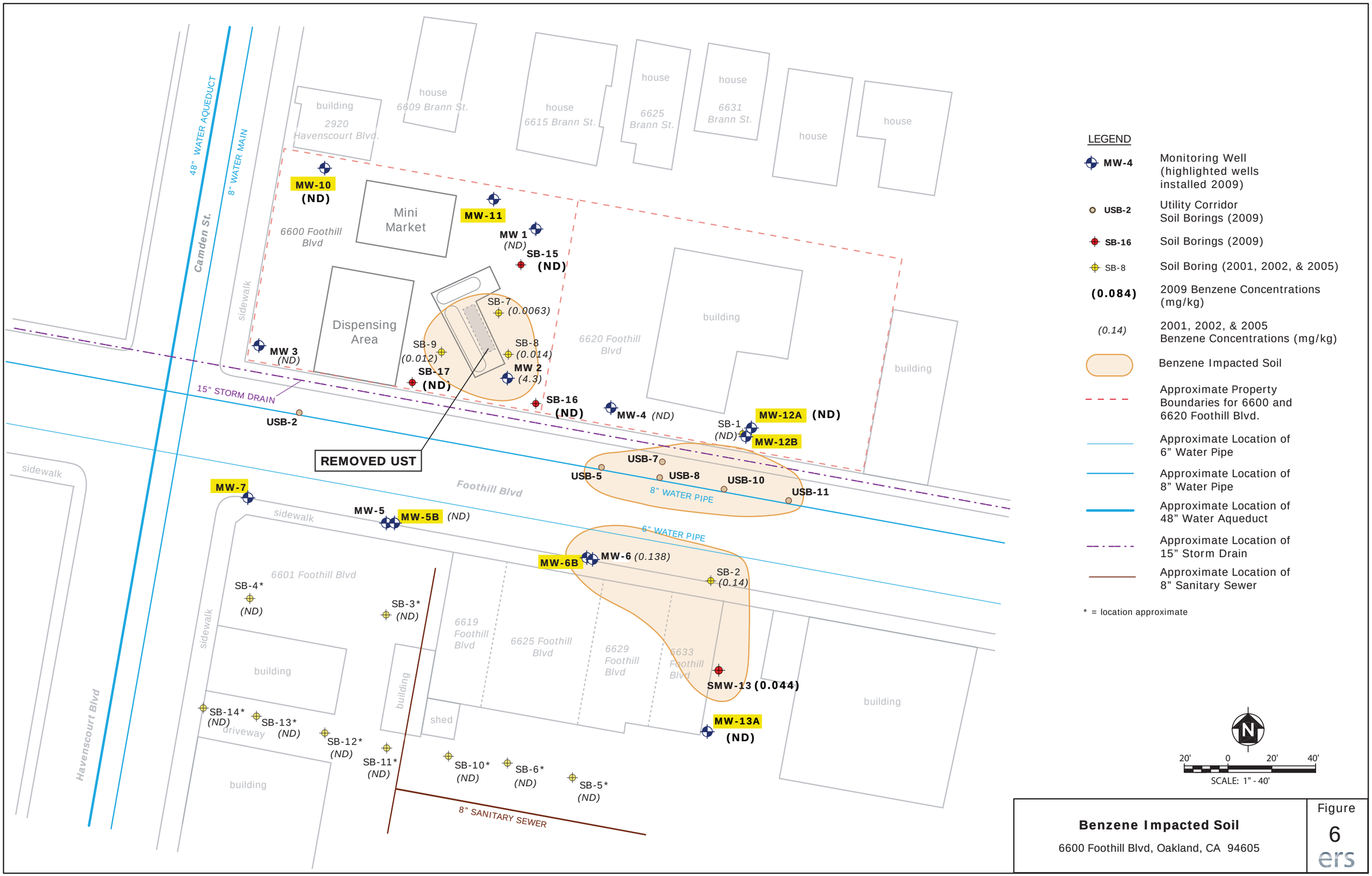

Benzene Impacted Soil

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Figure 6

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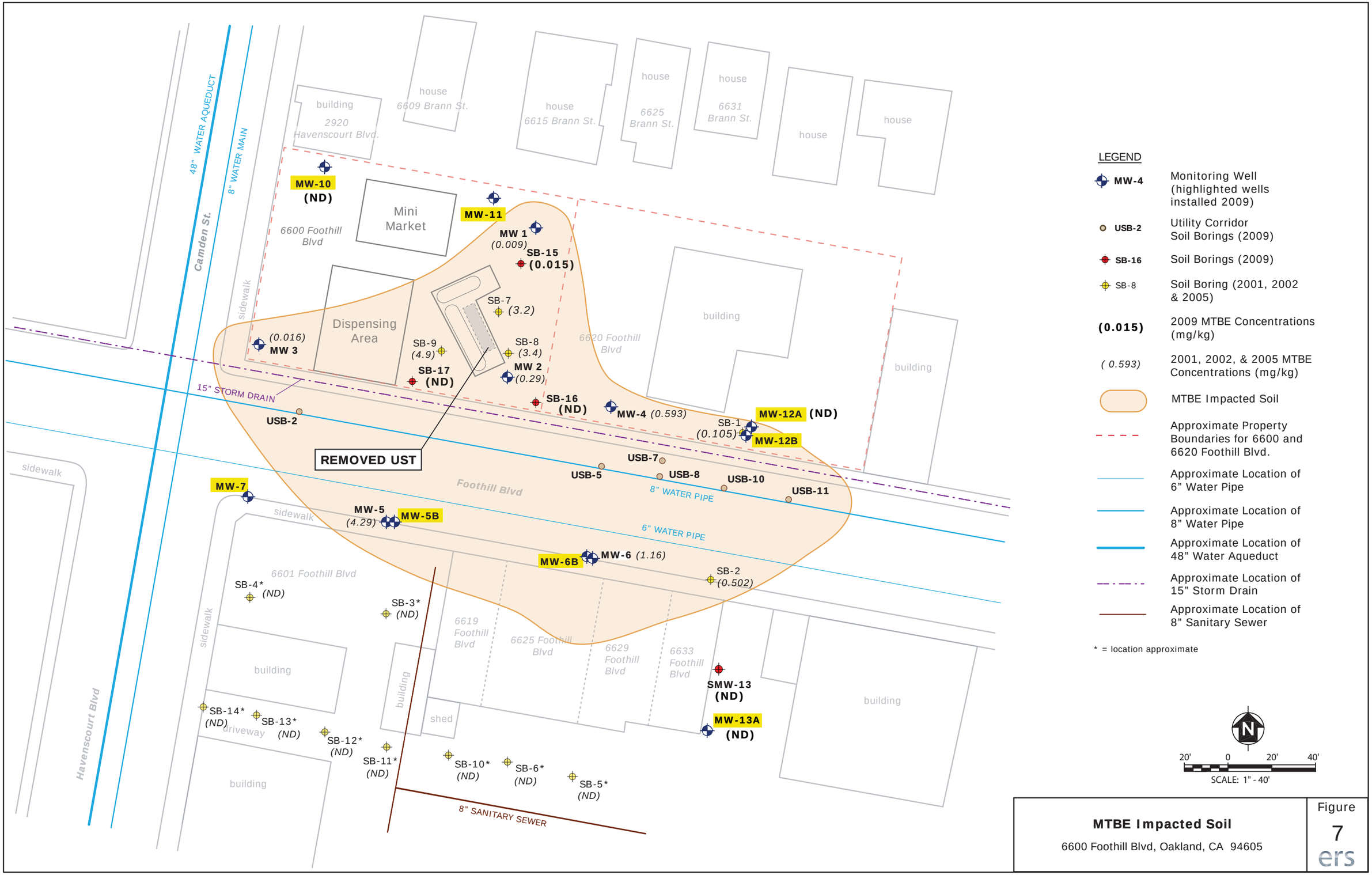

MTBE Impacted Soil

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Figure 7

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TABLES

Table 1
Well Construction Data
6600 Foothill Boulevard, Oakland, California

Well ID	Date Installed	Casing Diameter	Borehole Diameter	Total Depth	Screened Interval	Sand Interval	Bentonite Seal	Cement	Slot Size	Sand Size
		(inches)	(inches)	(feet)	(feet bgs)	(feet bgs)	(feet bgs)	(feet bgs)	(inches)	
MW-1	6/4/2001	2	8	25	10 - 25	8 - 25	6 - 8	0 - 6	0.01	Lonestar #2
MW-2	6/4/2001	2	8	25	10 - 25	8 - 25	6 - 8	0 - 6	0.01	Lonestar #2
MW-3	6/4/2001	2	8	25	10 - 25	8 - 25	6 - 8	0 - 6	0.01	Lonestar #2
MW-4	6/26/2002	2	8	20	7.5 - 20	6 - 20	5 - 6	0 - 5	0.01	Lonestar #2
MW-5	6/26/2002	2	8	20	7.5 - 20	6 - 20	5 - 6	0 - 5	0.01	Lonestar #2
MW-5B	9/23/2009	2	8	45	35-45	33-45	45-50, 31-33	0-31	0.01	Monterey #2/12
MW-6	6/26/2002	2	8	20	7.5 - 20	6 - 20	5 - 6	0 - 5	0.01	Lonestar #2
MW-6B	9/24/2009	2	8	50	35 - 50	33-50	32-33	0-32	0.01	Monterey #2/12
MW-7	9/23/2009	2	8	25	10 - 25	9-25	7-9	0-7	0.01	Monterey #2/12
MW-10	9/22/2009	2	8	25	15 - 25	14-25	12-14	0-12	0.01	Monterey #2/12
MW-11	9/23/2009	2	8	25	10 - 25	9-25	7-9	0-7	0.01	Monterey #2/12
MW-12A	9/22/2009	2	8	25	10 - 25	9-25	7-9	0-7	0.01	Monterey #2/12
MW-12B	9/22/2009	2	8	43	33 - 43	32-43	30-32	0-30	0.01	Monterey #2/12
MW-13A	9/24/2009	2	8	25	5 - 25	4-25	2-4	0-2	0.01	Monterey #2/12

Table 2. Groundwater Elevation Data

Monitoring Wells	Date Measured	Total Depth Drilled (ft bgs)	Groundwater Zones	Top of Casing Elevation (ft, above msl)	Depth to Water (ft, below TOC)	Water Elevation (ft, above msl)	Groundwater Flow Direction	Groundwater Gradient (ft/ft)
MW-1	5/7/2009	25	Shallow	60.02	6.76	53.26	SWW	0.015
	10/6/2009			**60.02**	**11.54**	**48.48**	**SWW/NW**	**0.017 - 0.042**
MW-2	5/7/2009	25	Shallow	58.74	6.53	52.21	SWW	0.015
	10/6/2009			**58.74**	**7.41**	**51.33**	**SWW/NW**	**0.017 - 0.042**
MW-3	5/7/2009	25	Shallow	59.94	8.98	50.96	SWW	0.015
	10/6/2009			**59.94**	**9.62**	**50.32**	**SWW/NW**	**0.017 - 0.042**
MW-4	5/7/2009	20	Shallow	58.19	4.86	53.33	SWW	0.015
	10/6/2009			**58.19**	**5.94**	**52.25**	**SWW/NW**	**0.017 - 0.042**
MW-5	5/7/2009	20	Shallow	57.80	6.43	51.37	SWW	0.015
	10/6/2009			**57.80**	**7.41**	**50.39**	**SWW/NW**	**0.017 - 0.042**
MW-6	5/7/2009	20	Shallow	57.01	4.91	52.10	SWW	0.015
	10/6/2009*			**56.83**	**5.78**	**51.05**	**SWW/NW**	**0.017 - 0.042**
MW-7	**10/6/2009**	25	Shallow	**58.66**	**9.42**	**49.24**	**SWW/NW**	**0.017 - 0.042**
MW-10	**10/6/2009**	25	Shallow	**61.89**	**13.66**	**48.23**	**SWW/NW**	**0.017 - 0.042**
MW-11	**10/6/2009**	25	Shallow	**60.97**	**13.04**	**47.93**	**SWW/NW**	**0.017 - 0.042**
MW-12A	**10/6/2009**	25	Shallow	**62.98**	**10.65**	**52.33**	**SWW/NW**	**0.017 - 0.042**
MW-13A	**10/6/2009**	25	Shallow	**60.90**	**7.18**	**53.72**	**SWW/NW**	**0.017 - 0.042**
MW-5B	**10/6/2009**	45	Deep	**57.69**	**13.16**	**44.53**	**SWW/NW**	**0.017 - 0.042**
MW-6B	**10/6/2009**	50	Deep	**56.71**	**40.95**	**15.76**	**SWW/NW**	**0.017 - 0.042**
MW-12B	**10/6/2009**	43	Deep	**62.94**	**40.12**	**22.82**	**SWW/NW**	**0.017 - 0.042**

Notes:

TOC Top Of Casing

* Well casing repaired during 2009 investigation. Top of casing elevation re-surveyed on October 6, 2009

Table 3. Confirmation of Range of Source Area

Soil Sample Location	Sample Depth (feet below grade)	TPH-g	BTEX	MTBE	TBA
		Concentration (mg/Kg)			
SB-15	9.5	<0.17	<0.0050	0.015	<0.0050
SB-16	7.5	410	<0.0050	<0.0050	0.015
SB-17	7.5	73	<0.025	<0.025	<0.15

Grab Groundwater Location	Sample Depth (feet below grade)	TPH-g	BTEX	MTBE	TBA
		Concentration (µg/L)			
SB-16	15	<500	<20	7,000	36,000

Table 4. Confirmation of Preferential Pathway Through Utility Corridors

Grab Groundwater Location	Sample Depth (feet below grade)	TPH-g	Benzene	MTBE	TBA
		Concentration (µg/L)			
USB-5	8	14,000	<1.0	8.6	54
USB-7	7	3,700	<0.70	<0.70	16
USB-8	7	8,900	<0.90	1.7	24
USB-10	7.5	22,000	4.6	5.6	51
USB-11	8	81,000	<4.0	8.3	95

Table 5. Confirmation of Lateral and Vertical Range of Contamination

Soil Sample Location	Sample Depth (feet below grade)	TPH-g	BTEX	MTBE	TBA
		Concentration (mg/Kg)			
MW-10	10	0.48	<0.0050	<0.0050	<0.0050
MW-12A	5.5	<0.17	<0.0050	<0.0050	<0.0050
MW-13A	8	800	<0.025	<0.025	<0.15
SMW-13	7.5	170	0.044[(1)]	<0.025	<0.15

[(1)] Benzene: 0.044, Toluene: <0.025, Ethylbenzene: 1.6, Total xylenes: 3.9 mg/Kg

Grab Groundwater Location	Sample Depth (feet below grade)	TPH-g	BETX	MTBE	TBA
		Concentration (µg/L)			
MW-5B	9	1,000	<0.50[(2)]	5.1	58
MW-11	10	<50	<0.50	140	<5.0
SMW-13	8	<50	0.72[(3)]	2.0	<5.0

[(2)] Total xylenes: 1.6 µg/L

[(3)] Benzene: 0.72, Toluene: <0.50, Ethylbenzene: 0.52, Total xylenes: 0.76 µg/L

Table 6. Confirmation of Soil Contamination Using Photo-ionization Detector

Boring Location	Measurement Interval (feet below grade)	Depth with Maximum Vapor Concentration (feet below grade)	Maximum Vapor Concentration (ppm)*
MW-7	0 - 25	**	0
MW-10	0 - 25	**	0
MW-11	0 - 30	**	0
SB-15	0 - 15	**	0
SB-16	0 - 16	6.5	124
SB-17	9 - 15	6	80
USB-2	0 - 7	**	0
USB-5	0 – 8.5	8	1,386
USB-7	0 – 7.5	7	666
USB-8	0 - 8	7.5	638
USB-10	0 – 7.5	7.5	1,700
USB-11	0 - 8	7.5	1,313
MW-5B	0 - 50	10/**	50/0
MW-6B	25- 50	**	0
MW-12A	0 - 25	7	123
MW-12B	25 - 43	**	0
MW-13A	0 - 25	8.5	710
SMW-13	0 - 25	7.5	500

* Photo-ionization detector measurement

** Organic vapor non-detected within the measurement interval

APPENDIX A

ENVIRONMENTAL RISK SPECIALTIES CORPORATION

ers

February 17, 2009

Joseph C Leblanc/Maude E Leblanc
Property Owners
P.O. Box 5130
Oakland, CA 94605

RE: Authorization for Access and Installation of Subsurface Monitoring Wells
Property Address: 6620 Foothill Blvd, Oakland, CA 94605
APN: 039-3279-013-02

Dear Mrs. And Mr. Le Blanc:

In connection with ongoing remediation activities at 6600 Foothill Boulevard, Oakland, California, under the direction of the Alameda County Environmental Health Department (ACEH) (letter attached), Environmental Risk Specialties Corporation (ERS) requests your authorization to enter your property for the purpose of installing and sampling two monitor wells (MW-12A and MW-12B) (location map attached). These locations are proposed and can be changed to better suit your needs.

The purpose of these wells is to delineate the extent of subsurface contamination associated with a former underground storage tank at the 6600 Foothill Boulevard address. The well installation will be completed in approximately one day and will be scheduled in March or April 2009. The wellheads will be flush-mounted and approximately leveled with the ground. The wellheads will be covered with a traffic-rated steel well cap.

Subsequent to well installation, access to the wells will be necessary approximately every three months for quarterly sampling. When quarterly sampling is no longer necessary, the wells will be properly abandoned in accordance with all federal, state, and local laws, regulations, and ordinances, and the surface of the subject property will be restored as nearly as possible to its original condition.

Please indicate your authorization by signing and returning this letter in the enclosed SASE. If you have any questions or concerns, please feel free to contact Dr. Jim Ho at (925) 938-1600 x 108.

ERS

Steve Michelson – CFO

Authorized By:

Recd on 3-17-09

Maude E. LeBlanc 3-19-09
Date

Print Name Maude E. LeBlanc

ENVIRONMENTAL RISK SPECIALTIES
CORPORATION

ers

February 17, 2009

MacArthur Lane/Edna Lane
Property Owners
3238 Knowland Avenue
Oakland CA 94619

RE: Authorization for Access and Installation of Subsurface Monitoring Wells
Property Address: 6633 Foothill Blvd, Oakland, CA 94605
APN: 039-3275-021-04

Dear Property Owners:

In connection with ongoing remediation activities at 6600 Foothill Boulevard, Oakland, California, under the direction of the Alameda County Environmental Health Department (ACEH) (letter attached), Environmental Risk Specialties Corporation (ERS) requests your authorization to enter your property for the purpose of installing and sampling two monitor wells (MW-13A and MW-13B) (location map attached). These locations are proposed and can be changed to better suit your needs.

The purpose of these wells is to delineate the extent of subsurface contamination associated with a former underground storage tank at the 6600 Foothill Boulevard address. The well installation will be completed in approximately one day and will be scheduled in March or April 2009. The wellheads will be flush-mounted and approximately leveled with the ground. The wellheads will be covered with a traffic-rated steel well cap.

Subsequent to well installation, access to the wells will be necessary approximately every three months for quarterly sampling. When quarterly sampling is no longer necessary, the wells will be properly abandoned in accordance with all federal, state, and local laws, regulations, and ordinances, and the surface of the subject property will be restored as nearly as possible to its original condition.

Please indicate your authorization by signing and returning this letter in the enclosed SASE. If you have any questions or concerns, please feel free to contact Dr. Jim Ho at (925) 938-1600 x 108.

ERS

Steve Michelson – CFO

Authorized By:

3/9/09
Date

Print Name MACARTHUR/LANE

ENVIRONMENTAL RISK SPECIALTIES
CORPORATION

ers

February 17, 2009

Katherine C Jue/William H Jue
Property Owners
6625 Foothill Blvd
Oakland CA 94605

RE: Authorization for Access and Installation of Subsurface Monitoring Wells
Property Address: 6619 Foothill Blvd, Oakland, CA 94605
APN: 039-3275-019-06

Dear Property Owners:

In connection with ongoing remediation activities at 6600 Foothill Boulevard, Oakland, California, under the direction of the Alameda County Environmental Health Department (ACEH) (letter attached), Environmental Risk Specialties Corporation (ERS) requests your authorization to enter your property for the purpose of installing and sampling two monitor wells (MW-9A and MW-9B) (location map attached). These locations are proposed and can be changed to better suit your needs.

The purpose of these wells is to delineate the extent of subsurface contamination associated with a former underground storage tank at the 6600 Foothill Boulevard address. The well installation will be completed in approximately one day and will be scheduled in March or April 2009. The wellheads will be flush-mounted and approximately leveled with the ground. The wellheads will be covered with a traffic-rated steel well cap.

Subsequent to well installation, access to the wells will be necessary approximately every three months for quarterly sampling. When quarterly sampling is no longer necessary, the wells will be properly abandoned in accordance with all federal, state, and local laws, regulations, and ordinances, and the surface of the subject property will be restored as nearly as possible to its original condition.

Please indicate your authorization by signing and returning this letter in the enclosed SASE. If you have any questions or concerns, please feel free to contact Dr. Jim Ho at (925) 938-1600 x 108.

ERS

Steve Michelson – CFO

Authorized By:

William H. Jue 2/20/09
Date

Print Name WILLIAM H. JUE

February 17, 2009

Ms. Rebecca Taber
Property Owner
6609 Brann St
Oakland, CA 94605

RE: Authorization for Access and Installation of Subsurface Monitoring Wells
Property Address: 6609 Brann St, Oakland, CA 94605
APN: 039-3279-020

Dear Ms. Taber:

In connection with ongoing remediation activities at 6600 Foothill Boulevard, Oakland, California, under the direction of the Alameda County Environmental Health Department (ACEH) (letter attached), Environmental Risk Specialties Corporation (ERS) requests your authorization to enter your property for the purpose of installing and sampling two monitor wells (MW-11A and MW-11B) (location map attached). These locations are proposed and can be changed to better suit your needs.

The purpose of these wells is to delineate the extent of subsurface contamination associated with a former underground storage tank at the 6600 Foothill Boulevard address. The well installation will be completed in approximately one day and will be scheduled in March or April 2009. The wellheads will be flush-mounted and approximately leveled with the ground. The wellheads will be covered with a traffic-rated steel well cap.

Subsequent to well installation, access to the wells will be necessary approximately every three months for quarterly sampling. When quarterly sampling is no longer necessary, the wells will be properly abandoned in accordance with all federal, state, and local laws, regulations, and ordinances, and the surface of the subject property will be restored as nearly as possible to its original condition.

Please indicate your authorization by signing and returning this letter in the enclosed SASE. If you have any questions or concerns, please feel free to contact Dr. Jim Ho at (925) 938-1600 x 108.

ERS

Steve Michelson – CFO

Authorized By:

Print Name Rebecca L. Taber **Date**

APPENDIX B

CITY OF OAKLAND

Community & Economic Development Agency Building Services
250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, California 94612

From: Patrick Taylor
510-238-4781
Fax: 510-238-2263

Memo

To:

Re: 6600 Foothill Blvd **encroachment agreement** ENMI 09190

Enclosed is the encroachment permit requiring signature.

If all is found to be in good order, please have the owner sign and notarize and return the package to me for recordation.

Patrick Taylor
Engineering Technician II
City of Oakland
Community and Economic Development Agency
250 Frank H. Ogawa Plaza, Second Floor
Oakland, California 94612
510-238-4781 Fax: 510-238-2263

Recording requested by:

CITY OF OAKLAND

When recorded mail to:

City of Oakland
CEDA - Building Services
Dalziel Administration Building
250 Ogawa Plaza - 2nd Floor
Oakland, CA 94612
Attn: City Engineer

---------- *space above for Recorder's use only* ----------

INDENTURE AGREEMENT

Address 6600 Foothill Blvd.. **Permit no.** ENMI 09190 **Resolution No.** ___N.A.__ **C.M.S.**

Parcel no. 039 -3279-015-03 **Authorities** Municipal Code Section 12.08.080

Description Encroach into the Public Right-of-Way with three monitoring wells.

RECITAL

The owner subscribed below of fee simple interest in the property referenced above and described in Exhibit B attached hereto, is hereby granted, for an indeterminate period of time, the revocable permit referenced above allowing the temporary encroachment described above and delineated in Exhibit C, attached hereto, and limiting the use, exercise, and operation of the encroachment with the requirements and restrictions set forth in Exhibit A, attached hereto, and the associated permit. The owner agrees by and between themselves to be bound by the general and special conditions in Exhibit A and to comply with these conditions faithfully and fully at all times. The conditions of this agreement and associated permit shall equally bind all agents, heirs, successors, and assigns of the owner.

ACKNOWLEDGEMENT OF PROPERTY OWNER

(Notarization of signature required)

Signature _____ **Date** 9.9.2009

ZAROON, INC.
(ABDUL GHAFFAR)

Please See Attached Acknowledgement From Notary Public

ATTACHMENTS

Exhibit **A** - Conditions of encroachment
Exhibit **B** - Description of privately owned parcel
Exhibit **C** - Limits of encroachment

CITY OF OAKLAND a municipal corporation	by _____	date _____
DAN LINDHEIM City Administrator	**RAYMOND M. DERANIA** City Engineer Community and Economic Development Agency	

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California
County of Alameda

On SEPTEMBER 9, 2009 (Date) before me, GLORIA ORTEGA NOTARY PUBLIC (Here Insert Name and Title of the Officer),

personally appeared ABDUL GHAFFAR (Name(s) of Signer(s)),

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(~~ies~~), and that by his/~~her/their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Gloria Ortega (Signature of Notary Public)

OFFICIAL SEAL
GLORIA ORTEGA
NOTARY PUBLIC - CALIFORNIA
Commission #1798542
County of Alameda
My Commission expires May 19, 2012

JPG-01 JPG-01

Place Notary Seal Above

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: INDENTURE AGREEMENT

Document Date: SEPTEMBER 9, 2009 Number of Pages: 1 PLUS ATTACHMENTS

Signer(s) Other Than Named Above: NONE

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____
☐ Individual
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Attorney in Fact
☐ Trustee
☐ Guardian or Conservator
☐ Other: _____
Signer Is Representing: _____

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

Signer's Name: _____
☐ Individual
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Attorney in Fact
☐ Trustee
☐ Guardian or Conservator
☐ Other: _____
Signer Is Representing: _____

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

EXHIBIT A

Conditions for an Encroachment in the Public Right-Of-Way

address 6600 Foothill Blvd **parcel no.** 039 -3279-015-03

permittee ZAROON, INC. (ABDUL GHAFFAR) **permit no.** ENMI 09178

- **General conditions of the encroachment**

1. This agreement may be voided and the associated permit for an encroachment may be revoked at any time and for any reason, at the sole discretion of the City Council, or the associated permit may be suspended at any time, at the sole discretion of the City Engineer, upon failure of the permittee to comply fully and continuously with each and all of the general and special conditions set forth herein and in the associated permit.

2. The property owner and permittee hereby disclaim any right, title, or interest in or to any portion of the public right-of-way, including the sidewalk and street, and agree that the encroachment is granted for indeterminate period of time and that the use and occupancy by the permittee of the public right-of-way is temporary and does not constitute an abandonment, whether expressed or implied, by the City of Oakland of any of its rights associated with the statutory and customary purpose and use of and operations in the public right-of-way.

3. The permittee agrees to indemnify and save harmless the City of Oakland, its officers, agents, employees, and volunteers, and each of them, from any suits, claims, or actions brought by any person or persons, corporations, or other entities for on account of any bodily injury, disease, or illness, including death, damage to property, real or personal, or damages of any nature, however caused, and regardless of responsibility for negligence, arising in any manner out of the construction of or installation of a private improvement itself or sustained as result of its construction or installation or resulting from the permittees' failure to maintain, repair, remove and/or reconstruct the private improvement.

4. The permittee shall maintain fully in force and effect at all times that the encroachment occupies the public right-of-way good and sufficient public liability insurance in a face amount not less than $300,000.00 for each occurrence, and property damage insurance in a face amount not less than $50,000.00 for each occurrence, both including contractual liability, insuring the City of Oakland, its officers, agents, employees, and volunteers against any and all claims arising out of the existence of the encroachment in the public right-of-way, as respects liabilities assume under this permit, and that a certificate of such insurance and subsequent notices of the renewal thereof, shall be filed with the City Engineer of the City of Oakland, and that such certificate shall state that the insurance coverage shall not be canceled or be permitted to lapse without thirty calendar (30) days written notice to the City Engineer. The permittee also agree that the City of Oakland may review the type and amount of insurance required of the permittee annually and may require the permittee to increase the amount of and/or change the type of insurance overage required.

5. The permittee shall be solely and fully liable and responsible for the repair, replacement, removal, reconstruction, and maintenance of any portion or all of the private improvements constructed or installed in the public right-of-way, whether by the cause, neglect, or negligence of the permittee or others and for the associated costs and expenses necessary to restore or remove the encroachment to the satisfaction of the City Engineer and shall not allow the encroachment to become a blight or a menace or a hazard to the health and safety of the general public.

6. The permittee acknowledge and agree that the encroachment is out of the ordinary and does not comply with City of Oakland standard installations. The permittee further acknowledge and agree that the City of Oakland and public utility agencies will periodically conduct work in the public right-of-way, including excavation, trenching, and relocation of its facilities, all of which may damage the encroachment. Permittee further acknowledge and agree that the City and public utility agencies take no responsibility for repair or replacement of the encroachment which may be damaged by the City or its contractors or public utility agencies or their contractors. Permittee further acknowledge and agree that upon notification by and to the satisfaction of the City Engineer, permittee shall immediately repair, replace, or remove, at the sole expense of the permittee, all damages to the encroachment that are directly or indirectly attributable to work by the City or its contractors or public utility agencies or their contractors.

7. Permittee shall remain liable for and shall immediately reimburse the City of Oakland for all costs, fee assessments, penalties, and accruing interest associated with the City's notification and subsequent abatement action for required maintenance, repairs, or removal, whether in whole or in part, of the encroachment or of damaged City infrastructure made necessary by the failure, whether direct or indirect, of the permittees to monitor the encroachment effectively and accomplish preventative, remedial, or restorative work expeditiously. The City reserves the unqualified right to collect all monies unpaid through any combination of available statutory remedies, including recordation of Prospective Liens and Priority Liens/ Special Assessments with the Alameda County Recorder, inclusion of non-reimbursed amounts by the Alameda County Assessor with the annual assessment of the general levy, and awards of judgments by a court of competent jurisdiction.

8. Upon revocation of the encroachment permit, permittee shall immediately, completely, and permanently remove the encroachment from the public right-of-way and restore the public right-of-way to its original conditions existing before the construction or installation of the encroachment, to the satisfaction of the City Engineer and all at the sole expense of the permittee.

9. This agreement and the associated permit for an encroachment shall become effective upon filing of this agreement with the Alameda County Clerk Recorder for recordation as an encumbrance of the property and its title.

- **Special conditions of the encroachment**

10. That said permittee acknowledges that the City makes no representations or warranties as to the conditions beneath said encroachment. By accepting this revocable permit, permittee agrees that it will use the encroachment area at its own risk, is responsible for the proper coordination of its activities with all other permittee, underground utilities, contractors, or workmen operating, within the encroachment area and for the safety of itself and any of its personnel in connection with its entry under this revocable permit.

11. That said permittee acknowledges that the City is unaware of the existence of any hazardous substances beneath the encroachment area, and permittee hereby waives and fully releases and forever discharges the City and its officers, directors, employees, agents, servants, representatives, assigns and successors from any and all claims, demands, liabilities, damages, actions, causes of action, penalties, fines, liens, judgments, costs, or expenses whatsoever (including, without limitation, attorneys' fees and costs), whether direct or indirect, known or unknown, foreseen or unforeseen, that may arise out of or in any way connected with the physical condition or required remediation of the excavation area of any law or regulation applicable thereto, including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (42 U.S.C. Sections 9601 et seq.), the Resource Conservation and Recovery Act of 1976 (42 U.S.C. Section 466 et seq.), the Safe Drinking Water Act (14 U.S.C. Sections 1401, 1450), the Hazardous Waste Control Law (California Health and Safety Code Sections 25100 et seq.), the Porter-Cologne Water Quality Control Act (California Health

and Safety Code Section 13000 et seq.), the Hazardous Substance Account Act (California Health and Safety Code Sections 253000 et seq.), and the Safe Drinking Water and Toxic Enforcement Act (California Health and Safety Code Section 25249.5 et seq.).

12. That said permittee further acknowledges that it understands and agrees that it hereby expressly waives all rights and benefits which it now has or in the future may have, under and by virtue of the terms of California Civil Code Section 1542, which reads as follows: "A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM MUST HAVE MATERIALLY AFFECTED HIS SETTLEMENT WITH THE DEBTOR."

13. That said permittee recognizes that by waiving the provisions of this section, permittee will not be able to make any claims for damages that may exist, and to which, if known, would materially affect its decision to agree to these encroachment terms and conditions, regardless of whether permittee's lack of knowledge is the result of ignorance, oversight, error, negligence, or any other cause.

14. (a) That said permittee, by the acceptance of this revocable permit, agrees and promises to indemnify, defend, and hold harmless the City of Oakland, its officers, agents, and employees, to the maximum extent permitted by law, from any and all claims, demands, liabilities damages, actions, causes of action, penalties, fines, liens, judgments, costs, or expenses whatsoever (including, without limitation, attorneys' fees and costs; collectively referred to as "claims", whether direct or indirect, known or unknown, foreseen or unforeseen, to the extent that such claims were either (1) caused by the permittee, its agents, employees, contractors or representatives, or, (2) in the case of environmental contamination, the claim is a result of environmental contamination that emanates or emanated from 6600 Foothill Blvd, Oakland, California site, or was otherwise caused by the permittee, its agents, employees, contractors or representatives.

(b) That, if any contamination is discovered below or in the immediate vicinity of the encroachment, and the contaminants found are of the type used, housed, stored, processed or sold on or from 6600 Foothill Blvd, Oakland, California site, such shall amount to a rebuttable presumption that the contamination below, or in the immediate vicinity of, the encroachment was caused by the permittee, its agents, employees, contractors or representatives.

(c) That said permittee shall comply with all applicable federal, state, county and local laws, rules, and regulations governing the installation, maintenance, operation and abatement of the encroachment.

15. That said Encroachment Permit and Agreement shall take effect when all the conditions hereinabove set forth shall have been complied with to the satisfaction of the City Engineer, and shall become null and void upon the failure of the permittee to comply with all conditions.

16. The Council of the City of Oakland, at its sole discretion and at future date not yet determined, may impose additional and continuing fees as prescribed in the Master Fee Schedule, for use and occupation of the public right of way

EXHIBIT B

Description of the Private Property Abutting the Encroachment

address 6600 Foothill Blvd parcel no. 039 -3279-015-03

Recorders Series No. 2005068137 Recorded 01/20/2005

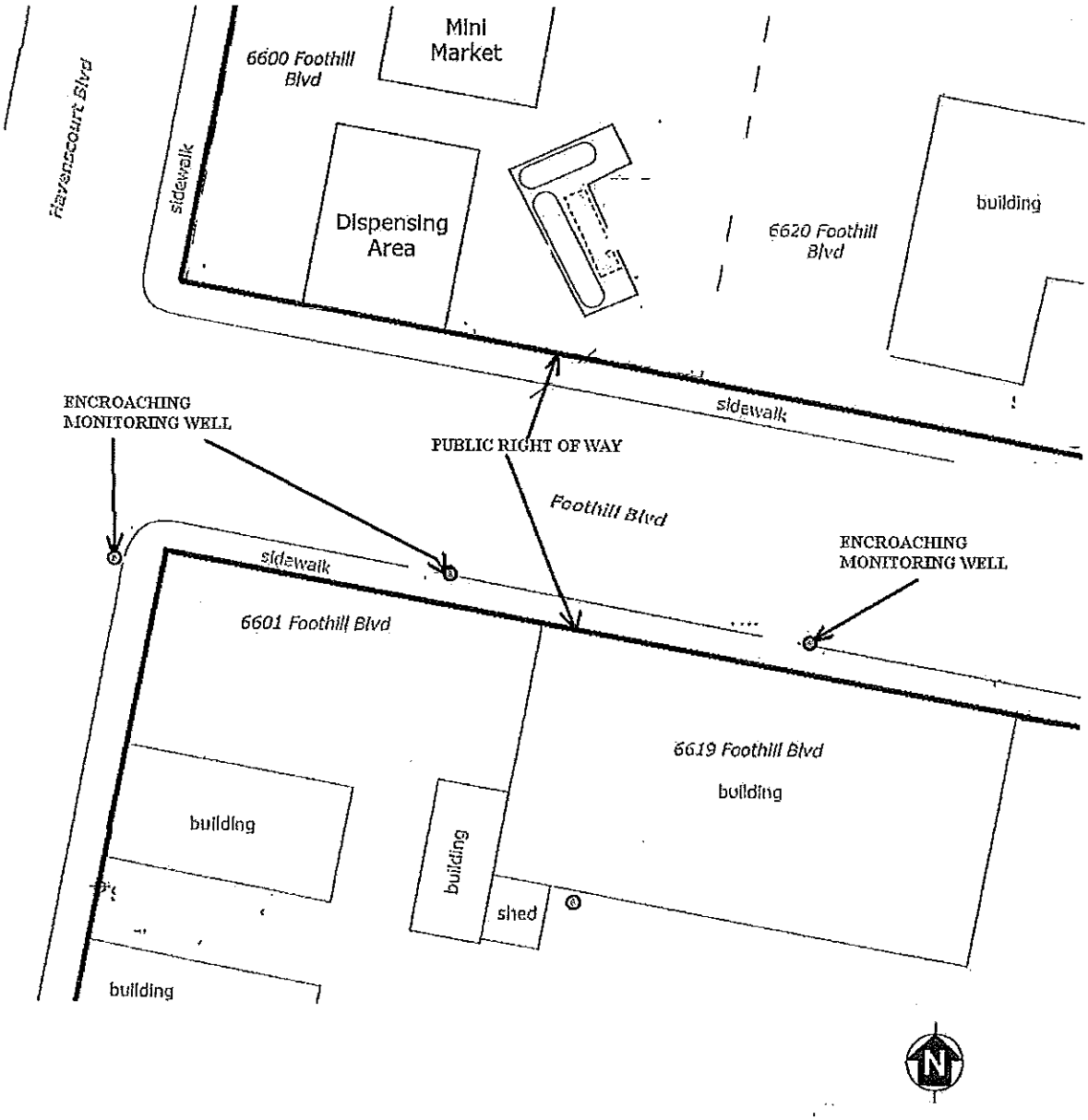
LOTS ONE HUNDRED EIGHT (108) TO ONE HUNDRED TWELVE (112) INCLUSIVE, AND THE WESTERN TWELVE AND FIFTY HUNDREDTHS (12.50) FEET FRONT AND REAL MEASUREMENTS OF LOT ONE HUNDRED THIRTEEN (113) OF HAVENSCOURT ADDITION ACCORDING TO THE MAP THEREOF FILED OCTOBER 21, 1913, IN BOOK 28 OF MAPS, PAGE 44, ALAMEDA COUNTY RECORDS.

A more legible copy is available for reviewing at the Office of the City Engineer, City of Oakland 250 Frank H. Ogawa Plaza 2nd Floor.

EXHIBIT C

Limits of the Encroachment in the Public Right-Of-Way

address 6600 Foothill Blvd. **parcel no.** 039 -3279-015-03



A more legible copy is available for reviewing at the Office of the City Engineer, City of Oakland 250 Frank H. Ogawa Plaza 2nd Floor.

CITY OF OAKLAND • Community and Economic Development Agency

250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • Fax (510) 238-2263

Applications for which no permit is issued within 180 days shall expire by limitation. No refund after 180 days when expired.

Appl# X0901965 Job Site 6600 FOOTHILL BL Parcel# 039 -3279-015-03

Descr permit to excavate to place monitoring wells in public right of way Permit Issued 09/15/09

Work Type EXCAVATION-PRIVATE P

USA # Util Co. Job # Acctg#:
Util Fund #:

		Applcnt	Phone#	Lic#	--License Classes--
Owner	ZAROON INC				
Contractor	CLEAR HEART DRILLING INC	X		780357 A	B C57
Arch/Engr					
Agent					

Applic Addr 483 WEST COLLEGE AVE, SANTA ROSA CA, 95401

$433.18	TOTAL FEES PAID AT ISSUANCE		
$68.50	Applic	$309.00	Permit
$.00	Process	$35.86	Rec Mgmt
$.00	Gen Plan	$.00	Invstg
$.00	Other	$19.82	Tech Enh

Permit Issued By _____ Date: 9.15.09

Finaled By _____ Date: _____

ADDRESS:

DIST:

CITY OF OAKLAND

PAID
9/15/09

CITY OF OAKLAND • Community and Economic Development Agency
250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • Fax (510) 238-2263

Applications for which no permit is issued within 180 days shall expire by limitation. No refund after 180 days when expired.

Permit No. X0901965 Parcel #: 039 -3279-015-03
Project Address: 6600 FOOTHILL BL

Licensed Contractors' Declaration
I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

Construction Lending Agency Declaration
I hereby affirm under penalty of perjury that there is a construction-lending agency for the performance of the work for which this permit is issued, as provided by Section 3097 of the Business and Professions Code. N/A under Lender implies No Lending Agency.

Lender_____ Address_____

Workers' Compensation Declaration

I hereby affirm under penalty of perjury one of the following declarations:

[ ] I have and will maintain a certificate of consent to self-insure for workers' compensation, as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

[ ] I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

CARRIER:_____POLICY NO. _____

[ ] I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

WARNING: FAILURE TO SECURE WORKERS' COMPENSATION COVERAGE IS UNLAWFUL, AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS, IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3707 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.

Hazardous Materials Declaration

I hereby affirm that the intended occupancy [ ] WILL [ ] WILL NOT use, handle or store any hazardous, or acutely hazardous, materials. (Checking "WILL" acknowledges that Sections 25505, 25533, & 25534 of the Health & Safety Code, as well as filing instructions, were made available to you.)

I HEREBY CERTIFY THE FOLLOWING: That I have read this document; that the above information is correct; and that I have truthfully affirmed all applicable declarations contained in this document. I agree to comply with all city and county ordinances and state laws relating to building construction, and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection. I am fully authorized by the owner and to perform the work authorized by this permit.

ADDRESS:

DIST:

PRINT NAME _____ Signature [ ] Contractor, or [ ] Agent _____ Date _____

CITY OF OAKLAND
Office of Planning and Building

EXCAVATION PERMIT

TO EXCAVATE IN STREETS OR OTHER SPECIFIED WORK

CIVIL ENGINEERING

Permit valid for 90 days from date of issuance.

PERMIT NUMBER	SITE ADDRESS/LOCATION
X 0 9 0 1 9 6 5	6600 Foothill Blvd
APPROX. START DATE: 9/15/09 — APPROX. END DATE: 11/15/09	24-HOUR EMERGENCY PHONE NUMBER (Permit not valid without 24-Hour number): (925) 786-5230
CONTRACTOR'S LICENSE # AND CLASS: A,B+C57 780357	CITY BUSINESS TAX #: 66141

ATTENTION:

1- State law requires that the contractor/owner call Underground Service Alert (USA) two working days before excavating. This permit is not valid unless applicant has secured an inquiry identification number issued by USA. The USA telephone number is 1-800-642-2444. Underground Service Alert (USA) # We have not put this job on the schedule yet. Waiting for permit. NV

2- 48 hours prior to starting work, you MUST CALL (510) 238-3651 to schedule an inspection.

3- 48 hours prior to re-paving, a compaction certificate is required (waived for approved slurry backfill).

OWNER/BUILDER

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5 Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License law Chapter 9 (commencing with Sec. 7000) of Division 3 of the Business and Professions Code, or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than $500):

☐ I, as an owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale).

☐ I, as owner of the property, am exempt from the sale requirements of the above due to: (1) I am improving my principal place of residence or appurtenances thereto, (2) the work will be performed prior to sale, (3) I have resided in the residence for the 12 months prior to completion of the work, and (4) I have not claimed exemption on this subdivision on more than two structures more than once during any three-year period. (Sec. 7044 Business and Professions Code).

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project, (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License law).

☐ I am exempt under Sec. _____, B&PC for this reason _____

WORKER'S COMPENSATION

☐ I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Worker's Compensation Insurance, or a certified copy thereof (Sec. 3700, Labor Code).

Policy # 713-86-77-01 Company Name Clear Heart Drilling, INC.

☒ I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of California (not required for work valued at one hundred dollars ($100) or less).

NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Worker's Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked. This permit is issued pursuant to all provisions of Title 12 Chapter 12.12 of the Oakland Municipal Code. It is granted upon the express condition that the permittee shall be responsible for all claims and liabilities arising out of work performed under the permit or arising out of permittee's failure to perform the obligations with respect to street maintenance. The permittee shall, and by acceptance of the permit agrees to defend, indemnify, save and hold harmless the City, its officers and employees, from and against any and all suits, claims, or actions brought by any person for or on account of any bodily injuries, disease or illness or damage to persons and/or property sustained or arising in the construction of the work performed under the permit or in consequence of permittee's failure to perform the obligations with respect to street maintenance. This permit is void 90 days from the date of issuance unless an extension is granted by the Director of the Office of Planning and Building.

I hereby affirm that I am licensed under provisions of Chapter 9 of Division 3 of the Business and Professions Code and my license is in full force and effect (if contractor), that I have read this permit and agree to its requirements, and that the above information is true and correct under penalty of law.

X Jeri White — 8/5/09

Signature of Permittee ☒ Agent for ☐ Contractor ☐ Owner — Date

DATE STREET LAST RESURFACED	SPECIAL PAVING DETAIL REQUIRED? ☐ YES ☐ NO	HOLIDAY RESTRICTION? (NOV 1 - JAN 1) ☐ YES ☐ NO	LIMITED OPERATION AREA? (7AM-9AM & 4PM-6PM) ☐ YES ☐ NO

ISSUED BY — DATE ISSUED: 8.9.10.09

Alameda County Public Works Agency - Water Resources Well Permit

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 09/22/2009 By jamesy

Permit Numbers: W2009-0861
Permits Valid from 09/15/2009 to 09/24/2009

Application Id: 1252961612155
City of Project Site: Oakland
Site Location: 6600 FOOTHILL BLVD.
OAKLAND
CROSS STREET = HAVENS CT.
Project Start Date: 09/25/2009
Completion Date: 10/08/2009
Extension Start Date: 09/15/2009
Extension End Date: 09/24/2009
Extension Count: 1
Extended By: vickyh1

Assigned Inspector: Contact Vicky Hamlin at (510) 670-5443 or vickyh@acpwa.org

Applicant: CLEAR HEART DRILLING, INC. - TERRI WHITE
555 WEST COLLEGE AVE., SUITE B, SANTA ROSA, CA 95401
Phone: 707-568-6095

Property Owner: ABDUL GHAFFER
40092 DAVIS ST., FREMONT, CA 94538
Phone: --

Client: ** same as Property Owner **

Contact: TERRI WHITE
Phone: 707-568-6095
Cell: 707-478-7363

Total Due: $397.00
Receipt Number: WR2009-0342 **Total Amount Paid:** $397.00
Payer Name : Terri White Paid By: VISA **PAID IN FULL**

Works Requesting Permits:

Well Construction-Monitoring-Monitoring - 1 Wells
Driller: CLEAR HEART DRILLING, INC. - Lic #: 780357 - Method: auger **Work Total: $397.00**

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2009-0861	09/22/2009	12/24/2009	MW9-B cancelled	8.00 in.	2.00 in.	5.00 ft	25.00 ft

Specific Work Permit Conditions

1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

2. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit

number and site map.

4. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

5. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.

6. Minimum surface seal thickness is two inches of cement grout placed by tremie

7. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.

8. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

Alameda County Public Works Agency - Water Resources Well Permit

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 08/11/2009 By jamesy

Permit Numbers: W2009-0735 to W2009-0744
Permits Valid from 09/15/2009 to 11/15/2009

Application Id: 1249685235946
City of Project Site: Oakland
Site Location: 6600 Foothill Bl, Oakland, CA
Project Start Date: 09/15/2009
Completion Date: 11/15/2009

Assigned Inspector: Contact Vicky Hamlin at (510) 670-5443 or vickyh@acpwa.org

Applicant: Clear Heart Drilling - Terri White
555 W College Avenue, Santa Rosa, CA 95401
Phone: 707-568-6095

Property Owner: Abdul Ghaffer
40092 Davis St., Fremont, CA 94538
Phone: --

Client: ** same as Property Owner **

	Total Due:	$3838.00
Receipt Number: WR2009-0302	**Total Amount Paid:**	$3838.00
Payer Name : Clear Heart Drilling	Paid By: CHECK	**PAID IN FULL**

Works Requesting Permits:

Well Construction-Monitoring-Monitoring - 9 Wells
Driller: Clear Heart Drilling, Inc - Lic #: 780357 - Method: auger
Work Total: $3573.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2009-0743	08/11/2009	12/14/2009	MW-10	8.00 in.	2.00 in.	5.00 ft	25.00 ft
W2009-0735	08/11/2009	12/14/2009	MW-11	8.00 in.	2.00 in.	5.00 ft	50.00 ft
W2009-0739	08/11/2009	12/14/2009	MW-12A	8.00 in.	2.00 in.	5.00 ft	25.00 ft
W2009-0742	08/11/2009	12/14/2009	MW-12B	8.00 in.	2.00 in.	5.00 ft	50.00 ft
W2009-0741	08/11/2009	12/14/2009	MW-13A	8.00 in.	2.00 in.	5.00 ft	25.00 ft
W2009-0736	08/11/2009	12/14/2009	MW-5B	8.00 in.	2.00 in.	5.00 ft	50.00 ft
W2009-0737	08/11/2009	12/14/2009	MW-6B	8.00 in.	2.00 in.	5.00 ft	50.00 ft
W2009-0738	08/11/2009	12/14/2009	MW-7	8.00 in.	2.00 in.	5.00 ft	25.00 ft
W2009-0740	08/11/2009	12/14/2009	MW-9A cancelled	8.00 in.	2.00 in.	5.00 ft	25.00 ft

Specific Work Permit Conditions

1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

2. Permitte, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no

case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

3. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

4. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.

5. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.

6. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

7. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.

8. Minimum surface seal thickness is two inches of cement grout placed by tremie

9. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.

10. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

Borehole(s) for Investigation-Geotechnical Study/CPT's - 21 Boreholes
Driller: Clear Heart Drilling, Inc ECA (c57# 695970) - Lic #: 780357 - Method: auger **Work Total: $265.00**

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2009-0744	08/11/2009	12/14/2009	21	2.50 in.	25.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled

according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

4. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

5. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

6. Permitte, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

7. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

8. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

APPENDIX C

Environmental Risk Services, Corporation
1600 Riviera Avenue, Suite 310
Walnut Creek, CA 94596
925 938.1600

Date: 09/22/2009	Logged By: Tyson Fulmer	Well Specifications
Location: 6600 Foothill Blvd. Oakland, CA		Elevation
Client: Ravi Sekhon		**GSE:** **TOC:**
Drilling Co.: Clear Heart/ECA		Depth to Water
Drilling Method: 8" Hollow Stem Auger/Direct Push	**Driller:** Pablo/Jeff	**Initial:** 7.5 ft. **Static:** ft.
Well Sand Filter: #2/12	**Well Seal:** Bentonite	**Total Well Depth:** 50 ft.
Grout Materials and Method: Neat cement/Tremie		**Lat.:** **Long:**
Completion:		**PVC Diameter:** 2"
Groundwater Sampling Method: Peristaltic pump		**Screen Interval:** 35-45 ft.
Soil Sampling Method: Continuous core		**Screen Slot Size:** 0.01"

Depth, bgs (ft)	Recovery	OVM (ppm)	Water Sample	Saturated Zone	USCS	Graphic Log	Material Description	Well Diagram
		0					Asphalt cap underlain by fill material gravels in a silt matrix as described	
		0						
		0						
		0						
5		0						
		0					Clayey gravel (GC) as described. Dark gray similar to USB	Very slight odor at 5-7' bgs
		1						
		2		▼	GC			Strong odor at 7-9' bgs
		10						
		25	■					Water encountered in hand augered hole at ~9' bgs, odor present at 9' bgs. Collected water sample from open hole at 9' bgs
10		50					Push tip to 25', no sample	
15								
20								
25		0					Silty clay (CL) yellowish-brown, 20% silt increases with depth, 30% silt at 27' with some gravel and coarse-grained sand, 30-40% gravel/sand from 27-29' in clay	2' runs filling 4' liners
		0						
		0			CL			
		0			SP		Lens of clean sand (SP), poorly sorted very fine-grained to medium-grained, subrounded 28 to 28.5'	
		0			SP		*(Continued Next Page)*	

Environmental Risk Services, Corporation
1600 Riviera Avenue, Suite 310
Walnut Creek, CA 94596
925 938.1600

Date: 09/22/2009 Logged By: Tyson Fulmer

Depth, bgs (ft)	Recovery	OVM (ppm)	Water Sample	Saturated Zone	USCS	Graphic Log	Material Description	Well Diagram
35		0			CL		Lens of poorly sorted sand and fine-grained gravel 29.5-30.5' Silty clay (CL) yellowish-brown, 20% silt increases with depth, 30% silt at 27' with some gravel and coarse-grained sand, 30-40% gravel/sand from 27-29' in clay	No odor
		0			CL		Silty clay (CL) very stiff, 10-20% silt, low plasticity	
		0			SC		Sandy clay (SC) light yellow brown, stiff, 30-40% sand fine-grained to coarse-grained, trace gravels	Very expansive
40		0			CL		Silty clay (CL) as described, 15% very fine-grained to fine-grained sand, 20% silt, 80% fines	No odor
45		0			CL		Silty clay (CL) dark yellowish brown, 25% silt, 15% very fine-grained to fine-grained sand, very stiff	
50		0					Slight increase in sand at 49', 20% sand very fine-grained to fine-grained Total Depth: 50 ft.	Waited 15 minutes for water from 35-50', no water, shallow 9' producing water.
55								
60								
65								

Environmental Risk Services, Corporation
1600 Riviera Avenue, Suite 310
Walnut Creek, CA 94596
925 938.1600

Boring Log: MW-6B

Date: 09/23/09	Logged By: Logan Linderman	Well Specifications
Location: 6600 Foothill Blvd. Oakland, CA		Elevation
Client: Ravi Sekhon		**GSE:** **TOC:**
Drilling Co.: ECA/Clearheart Drilling		Depth to Water
Drilling Method: 8" Hollow Stem Auger/Direct Push	**Driller:** Jeff/Pablo	**Initial:** ft. **Static:** ft.
Well Sand Filter: #2/12	**Well Seal:** Bentonite	**Total Well Depth:** 50 ft.
Grout Materials and Method: Neat cement/Tremie		**Lat.:** **Long:**
Completion:		**PVC Diameter:** 2"
Groundwater Sampling Method: N/A		**Screen Interval:** 35-50 ft.
Soil Sampling Method: N/A		**Screen Slot Size:** 0.01"

Depth, bgs (ft)	Recovery	OVM (ppm)	Soil Sample	Saturated Zone	USCS	Graphic Log	Material Description	Well Diagram
5							See borelog for MW-6 for lithology from 0-25'	No odor in hand auger from 0-5', fill material as described in MW-5B
10								
15								
20								
25		0						
		0					Silty clay (CL) 10yr 4/4 dark yellowish-brown, some gravels, 20% silt, 10% sand poorly sorted fine-grained to coarse-grained, stiff sand content increases from 26'-27'	No odor
		0			CL		95% fines 27-28.5' with high plasticity	
		0						
		0					Trace gravels 29-34'	

(Continued Next Page)

Environmental Risk Services, Corporation
1600 Riviera Avenue, Suite 310
Walnut Creek, CA 94596
925 938.1600

Boring Log: MW-6B

Date: 09/23/09 Logged By: Logan Linderman

Depth, bgs (ft)	Recovery	OVM (ppm)	Soil Sample	Saturated Zone	USCS	Graphic Log	Material Description	Well Diagram
		0			CL		Silty clay (CL) 10yr 4/4 dark yellowish-brown, some gravels, 20% silt, 10% sand poorly sorted fine-grained to coarse-grained, stiff sand content increases from 26'-27'	Expansive clays 2' runs filling 4' liners
		0						
		0						
		0					Very stiff at 35', 10% fine-grained sand 33-35', mottled, high plasticity, 10-15% gravels and coarse-grained 35-36.5'	
35		0						No odor
		0						
		0			GC		Gravelly clay (GC) dark yellowish brown, poorly sorted fine-grained gravels, 30% sand/gravel in silt/clay matrix, grain size increases with depth, some gravels ~1"	
		0						
40		0						
		0						
							No recovery	No recovery 41-43', rock plugged samples push 41-45', no recovery
45		0					Gravelly clay (GC) as described	Advance 45' w/ tip to break up rock No odor
		0			GC			
		0						
		0					Clayey gravel (GC) dark yellowish-brown, ~50% sand/gravel, poorly sorted, sub-rounded, increase in clay at 49.5'	
		0			GC			
		0						Cut old PVC 1.9" at MW-6A lower Refusal for DPT at 50'. Wait for 20 minutes for water sample. Hole is dry
50		0					Total Depth: 50 ft.	
55								
60								
65								

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Boring Log: MW-7

Date: 9/23/2009 Logged By: Tyson Fulmer

Location: 6600 Foothill Blvd. Oakland, CA
Client: Ravi Sekhon
Drilling Co.: ECA/Clearheart Drilling
Drilling Method: 8" Hollow Stem Auger/Direct Push **Driller:** Jeff/Pablo
Well Sand Filter: #2/12 **Well Seal:** Bentonite
Grout Materials and Method: Neat cement/Tremie
Completion:
Groundwater Sampling Method: N/A
Soil Sampling Method: Continous Core

Well Specifications

Elevation
GSE: **TOC:**
Depth to Water
Initial: 8 ft. **Static:** ft.
Total Well Depth: 25 ft.
Lat.: **Long:**
PVC Diameter: 2"
Screen Interval: 10-25 ft.
Screen Slot Size: 0.01"

Depth, bgs (ft)	Recovery	OVM (ppm)	Soil Sample	Saturated Zone	USCS	Graphic Log	Material Description	Well Diagram
0		0					Asphalt cap underlain by 8" of concrete aggregate sub-base mixed with silty sand, gravelly clay (GC) at 5'-6', grades to sandy silt at 6' with gravels (40%) poorly sorted	No odor from 0-6' bgs
5		0						No odor
10		0		▼	ML		Clayey silt (ML) reddish brown, trace gravels, 20% clay, 10% very fine-grained to fine-grained sand, gravelly lenses in a clay matrix at 16.5'	
15		0						No odor
20		0			SC		Sandy clay (SC) dark reddish brown, soft, poorly sorted, 30% fine-grained to coarse-grained sand	
					CL		Silty clay (CL) reddish brown, 20-30% silt, soft, low plasticity	No odor
					ML		Sandy silt (ML) yellowish-brown , 25% very fine-grained to fine-grained sand, 10% clay, soft	
					CL		Silty clay (CL) as described, stiff, low plasticity	
25		0					Total Depth: 25 ft.	No odor Expansive open hole is dry after 30 minutes

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Boring Log: MW-10

Date: 09/21/09 Logged By: Tyson Fulmer

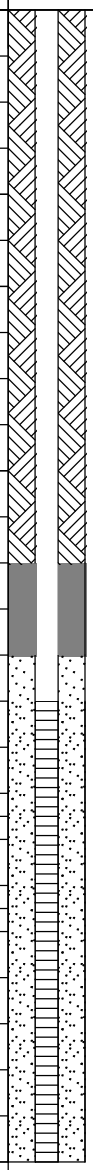
Location: 6600 Foothill Blvd. Oakland, CA
Client: Ravi Sekhon
Drilling Co.: ECA/Clearheart Drilling
Drilling Method: 8" Hollow Stem Auger/Direct Push **Driller:** Jeff/Pablo
Well Sand Filter: #2/12 **Well Seal:** Bentonite
Grout Materials and Method: Neat cement/Tremie
Completion:
Groundwater Sampling Method: N/A
Soil Sampling Method: Continous core/5035

Well Specifications

Elevation
GSE: **TOC:**
Depth to Water
Initial: 10 ft. **Static:** ft.
Total Well Depth: 25 ft.
Lat.: **Long:**
PVC Diameter: 2"
Screen Interval: 15-25 ft.
Screen Slot Size: 0.01"

Depth, bgs (ft)	Recovery	OVM (ppm)	Soil Sample	Saturated Zone	USCS	Graphic Log	Material Description
0		0			ML		Sandy silt (ML) dark brown, loose, dry with organics, mottled with some clay 3' bgs
5		0			SC		Sandy clay (SC) dark reddish brown, 20% sand fine-grained to coarse-grained, angular
		0			ML		Sandy silt (ML) 10yr 4/6 dark yellowish brown, soft, low plasticity, damp
10		0			CL		Silty clay (CL) dark reddish brown, 20% silt, stiff, expansive trace gravels 13.5-17', moist-wet
15		0			ML		Sandy silt (ML) yellowish-brown, soft, 40% fine-grained to medium-grained sand, wet, poorly sorted, sub-angular
20		0			CL		Silty clay (CL) yellowish-brown with dark brown trace coarse-grained sand, some fine-grained to coarse-grained sand at 10-15% in clay matrix
25		0					Total Depth: 25 ft.

Well Diagram



No odor

2.5' push fills a 4' liner at 11 to 13.5' and 15.5' to 18'

2' push fills 4' liner at 18-20'
No odor

Screen grab water sample from 17.5 to 25', no water after 3 hours. 9/22/2009-8:00am water 24.81' ~4" of water overnight. No grab sample

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Boring Log: MW-11

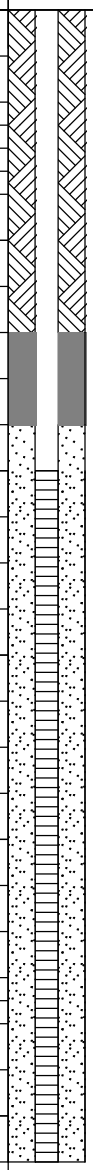
Date: 09/22/09 | Logged By: Logan Linderman

Location: 6600 Foothill Blvd. Oakland, CA
Client: Ravi Sekhon
Drilling Co.: Clear Heart/ECA
Drilling Method: 8" Hollow Stem Auger/Direct Push | **Driller:** Pablo/Jeff
Well Sand Filter: #2/12 | **Well Seal:** Bentonite
Grout Materials and Method: Neat cement/Tremie
Completion:
Groundwater Sampling Method: Peristaltic in open hole
Soil Sampling Method: Continous core

Well Specifications

Elevation
GSE: **TOC:**
Depth to Water
Initial: 10 ft. **Static:** 15 ft.
Total Well Depth: 30 ft.
Lat.: **Long:**
PVC Diameter: 2"
Screen Interval: 10-25 ft.
Screen Slot Size: 0.01"

Depth, bgs (ft)	Recovery	OVM (ppm)	Soil Sample	Saturated Zone	USCS	Graphic Log	Material Description
0		0					Fill material under asphalt as described
		0			ML		Clayey silt (ML), brown, damp, mottled with oxidation
		0			GC		Clayey gravel (GC), angular cobbles, lots of oxidation
5		0					Sandy clay (CL), brown, moist, stiff, ~10% coarse sand, 10% silt, trace gravel
		0			CL		
		0					
		0					
10		0		▼			Gravelly clay (GC), brown with gray, white, pink gravel. ~25% gravel
		0			GC		
		0					
		0					Clayey gravel (GC) brown with pink, white, gray angular gravel, >50% gravel and coarse sand
15		0		▽			
		0			GC		
		0					
		0					Clayey silt (ML), brown, soft, some gravel
20		0			ML		
		0					
		0					Gravelly clay (GC), brown, very stiff, some coarse sand. Gravel/sand increases with depth
		0			GC		
		0					Clayey sand (SC), brown, potentially water-bearing, looser than overlying units
25		0			SC		
		0					Sandy clay (CL), brown, very stiff, expansive. Trace gravel, increases in gravel to gravelly clay (GC) at 29'.
		0			CL		
		0					



No Odor
No Odor
No grab soil sample
Grab ground water from screened casing in open hole to 25' on 9/23/09 at 8am

Total Depth: 30 ft.

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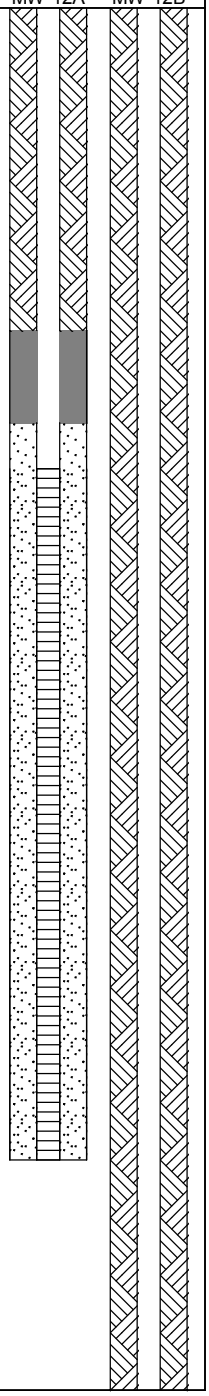
Boring Log: MW12A/MW12B

Date: 09/22/09	Logged By: Logan Linderman	Well Specifications
Location: 6600 Foothill Blvd. Oakland, CA		Elevation
Client: Ravi Sekhon		**GSE:** **TOC:**
Drilling Co.: Clear Heart/ECA		Depth to Water
Drilling Method: 8" Hollow Stem Auger/Direct Push	**Driller:** Jeff/Pablo	**Initial:** 6 ft. **Static:** ft.
Well Sand Filter: #2/12	**Well Seal:** Bentonite	**Total Well Depth:** 43 ft.
Grout Materials and Method: Neat cement/Tremie		**Lat.:** **Long:**
Completion:		**PVC Diameter:** 2"
Groundwater Sampling Method: N/A		**Screen Interval:** MW12A: 10-25 MW12B: 33-43 ft.
Soil Sampling Method: Continous core/5035		**Screen Slot Size:** 0.01"

Depth, bgs (ft)	Recovery	OVM (ppm)	Soil Sample	Saturated Zone	USCS	Graphic Log	Material Description
		0					Fill material under asphalt, as described. Grayish brown, 2.5y 5/2; damp, loose
		0					
		0					Sandy silt (ML), dark grayish brown, damp to moist, mottled with oxidation, dary gray clay and coarse sand
		0			ML		
5		0					
		0.2		▼			
		25					Silty clay (CL), brown 7.5yr 4/3, wet, mottled with sand and oxidation
		123			CL		
		16					
		2.5					Silty clay (CL), brown, trace coarse-grained sand and gravel, ~15% silt and 10% sand/gravel, increasing silt with depth
		0.2					
10		0					
		0			CL		
		0.3					
		0					
		0					
15		.8					Silty sand (SM), brown, with ~30% angular gravel (white, gray, dark gray; mostly quartz and feldspar), percent of fine-grained material varies with depth
		.5			SM		
		0					
		0					
		0					Silty clay (CL), brown, soft
20		0					
		0			CL		
		0					
		0					
		0					
25		0			SC		Sandy clay (SC), brown, ~30% coarse sand and angular gravel
		0					
		0			ML		Clayey silt (ML), brown, very well graded (~30% very fine-grained sand, 40% silt, 30% clay), medium stiff.
		0					
		0					Silty clay (CL), brown, expansice and very stiff, some trace sands.
		0			CL		

Remarks/Well Diagram

DTW in nearby MW-4 measured at 5.83' bgs



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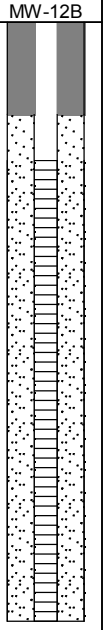
Date: 09/22/09 Logged By: Logan Linderman

Depth, bgs (ft)	Recovery	OVM (ppm)	Soil Sample	Saturated Zone	USCS	Graphic Log	Material Description
35		0			ML		Clayey silt (ML), brown, ~30% clay, ~10% sand, expansive and very stiff
		0					
		0					
		0					
		0			SM		Silty sand (SM), brown, vary trace clay, sand content increases and coarsens with depth, trace gravel at 37' bgs.
		0					
		0					
		0					
40		0					
		0			GC		Gravelly clay (GC), brown with angular gravel (green, red/brown, white).
		0					
		0					Total Depth: 43 ft.
45							
50							
55							
60							
65							

Remarks/Well Diagram

MW-12A MW-12B



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Boring Log: MW-13A

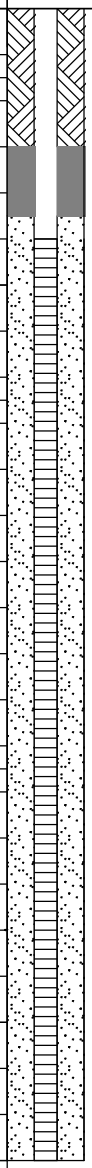
Date: 09/24/09 **Logged By:** Logan Linderman

Location: 6600 Foothill Blvd. Oakland, CA
Client: Ravi Sekhon
Drilling Co.: Clear Heart
Drilling Method: 8" Hollow Stem Auger **Driller:** Pablo
Well Sand Filter: #2/12 **Well Seal:** Bentonite
Grout Materials and Method: Neat cement/Tremie
Completion:
Groundwater Sampling Method: N/A
Soil Sampling Method: SPT 1.5'

Well Specifications

Elevation
GSE: **TOC:**
Depth to Water
Initial: 8 ft. **Static:** 15 ft.
Total Well Depth: 25 ft.
Lat.: **Long:**
PVC Diameter: 2"
Screen Interval: 5-25 ft.
Screen Slot Size: 0.01"

Depth, bgs (ft)	Recovery	OVM (ppm)	Water Sample	Saturated Zone	USCS	Graphic Log	Material Description
0		0			GW		Gravelly sand (GW) fill material on top, gravels poorly sorted
		0					
		0			CL		Silty clay (CL) very dark brown, soft, low plasticity, 1" rock at 3', 1.5" rock, 10% sand, 25% silt, mottled reddish brown
		0					
5		0					
		3					
		2			SM		Silty sand (SM) yellowish-brown, 30% silt, loose, wet at 8'
		16					
		80					
		710					
		11					Sandy silt (ML) yellowish-brown, 20% very fine-grained to fine-grained sand, mottled
10		2					
		59					
		3					
		1					
		23			ML		
		54					
		2.5					
		4					
15		3					
		0					
		0					Clayey silt (ML) yellowish-brown, soft, 20% clay, 5-10% fine-grained to coarse-grained sand with trace gravels and gravelly clay lenses
		0			ML		
		0					
20		0					Grades to silty sand (SM) from 20-22' with 50% sand and 50% fines
		0			SM		
		0					Silty clay (CL) dark yellowish-brown, 20% silt, trace fine-grained sand, stiff medium plasticity, trace gravels in clay matrix
		0					
		0			CL		
25		0					Total Depth: 25 ft.



Advanced well appx. 25' south of SB-MW13

No odor

Strong odor from 8-15' bgs

No odor

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Boring Log: SB15

Date: 9/21/09	**Logged By:** Tyson Fulmer
Location: 6600 Foothill Blvd. Oakland, CA	
Client: Ravi Sekhon	
Drilling Co.: ECA/CHD	**Driller:** Jeff/Pablo
Drilling Method: Direct Push/8" Hollow Stem Auger	**Grout Materials and Method:** Neat cement/Tremie
Groundwater Sampling Method: N/A	
Soil Sampling Method: Continous Core/5035	

Specifications

Elevation
GSE:

Depth to Water
Initial: **Static:** 9.5 ft.

Total Boring Depth: 15 ft.

Lat.: **Long:**

Depth, bgs (ft)	Recovery	OVM	Soil Sample	Water Sample	Saturated Zone	USCS	Graphic Log	Material Description	Remarks
0		0						Fill material under asphalt, sandy silt w/ angular gravels and cobbles, damp, loose	
5		0				ML		Sandy Silt (ML), dark greyish brown, 10% very fine-grained to fine-grained sand, angular, damp	Native material at 30" (2.5')
10		0				SC		Sandy Clay (SC) 7.5yr 4/3 brown, fine-grained to coarse-grained sand, well-rounded poorly sorted 20% sand, some gravels, damp-moist, wet at 9.5'	No odor Collect soil sample at 9-9.5'. Water in MW-1 at 11.5' bgs
15		0				CL		Silty Clay (CL) 10yr 5/6, yellowish-brown, ~20% silt, 10% fine-grained sand, stiff, low-plasticity, moist-wet at 12', gravel mixed in clay matrix, gravely clay 13' to 14' bgs	Screen well 10-15' in open hole, wait for water. No water after overnight wait
								Total Depth: 15 ft.	
20									
25									

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Boring Log: SB16

Date: 9/21/09	**Logged By:** Tyson Fulmer
Location: 6600 Foothill Blvd. Oakland, CA	
Client: Ravi Sekhon	
Drilling Co.: ECA	**Driller:** Jeff
Drilling Method: Direct Push	**Grout Materials and Method:** Neat cement/Tremie
Groundwater Sampling Method: Bailer	
Soil Sampling Method: Encore 5035	

Specifications

Elevation
GSE:

Depth to Water
Initial: 8 **Static:** ft.

Total Boring Depth: 16 ft.

Lat.: **Long:**

Depth, bgs (ft)	Recovery	OVM	Soil Sample	Water Sample	Saturated Zone	USCS	Graphic Log	Material Description	Remarks
0		0						Loose silty sand fill material w/ organics	Hand auger 0-5' bgs
		0						Silty clay (CL) 2.5y 3/2, very dark greyish brown, 20% silt, damp to moist	
		0				CL			Water Measurements: MW-3: 9.60' MW-2: 7.35' MW-1: 11.5'
		0.4							
5		0						Sandy clay (SC) as described, color change to light gray at 6.5'	
		6				SC			
		124							
		80						Sandy silt (ML) 2.5y 4/4, olive, 15% very fine-grained to fine-grained sand, mottled, oxidized, damp at 8', medium stiff	Soil sample: 6 encores and 1 jar at 7.5' bgs
		15				ML			
		5							
10		0						Silty clay (CL) 10yr 5/6, yellowish-brown, 20% silt, 10% sand, stiff trace coarse-grained sand and gravels	Screen for water w/ 3/4" pvc, 11-16' bgs in open hole, no water after 1/2 hour
		0							9/22/09-8:00am 14.2-DTW
		0							Collected grab ground water sample
		0							
		0				CL			
15		0							
		0							
		0						Total Depth: 16 ft.	
20									
25									

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Boring Log: SB17

Date: 09/21/09	**Logged By:** Tyson Fulmer
Location: 6600 Foothill Blvd. Oakland, CA	
Client: Ravi Sekhon	
Drilling Co.: ECA	**Driller:** Jeff
Drilling Method: Direct Push	**Grout Materials and Method:** Neat cement/Tremie
Groundwater Sampling Method: N/A	
Soil Sampling Method: Continous Core/5035	

Specifications

Elevation
GSE:

Depth to Water
Initial: 10 **Static:** ft.

Total Boring Depth: 15 ft.

Lat.: **Long:**

Depth, bgs (ft)	Recovery	OVM	Soil Sample	Water Sample	Saturated Zone	USCS	Graphic Log	Material Description	Remarks
		1.5						1-2" of asphalt cap underlain by sub-base fill material, sandy silt w/ angular gravels and cobbles, damp, loose	Hand auger 0-5' bgs
		0							
		0							Native at 2.5'
		0							
		1				ML		Clayey silt (ML) 10yr 3/3, dark brown, soft, damp-moist	
5		2							
		30						Sandy clay (SC) dark gray, 30% sand, fine-grained gravel, angular poorly sorted, damp-moist, wet at 10'	
		80							Odor strong from 6-8'
		75				SC			Soil sample at 7-7.5' bgs
		30							
		5						Silty clay (CL) Reddish brown, low plasticity, 10% silt, stiff, moist, trace sands and gravels at 12'	
		2							
10		1							Screen from 10-15'. Open hole, no water, covered and waited. No water after 5 hours, grouted hole without collecting water sample
		0				CL			
		0.5							
		0.2							
		3						Sandy clay (SC) Reddish brown, 30-40% sand, poorly sorted, angular fine-grained gravel	
		5				SC			
15		12						Total Depth: 15 ft.	
20									
25									

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Date: 9/23/09	Logged By: Tyson Fulmer	Specifications
Location: 6600 Foothill Blvd. Oakland, CA		Elevation
Client: Ravi Sekhon		**GSE:**
Drilling Co.: ECA	**Driller:** Jeff	Depth to Water
Drilling Method: Direct Push	**Grout Materials and Method:** Neat cement/Tremie	**Initial:** 8 ft. **Static:** 15 ft.
Groundwater Sampling Method: Peristaltic pump		**Total Boring Depth:** 25 ft.
Soil Sampling Method: Dual tube, acetate liners/encores		**Lat.:** **Long:**

Depth, bgs (ft)	Recovery	OVM	Soil Sample	Water Sample	Saturated Zone	USCS	Graphic Log	Material Description	Remarks
0		0				GM		Silty gravel (GM) poorly sorted, loose, dry	
		0							
		0						Sandy silt (ML), dark brown, soft, 40% very fine-grained to fine-grained sand, gravels increases with depth, wet at 7'	No odor
		0				ML			
5		20							No well construction due to property owner absence Strong odor from 6-12' bgs
		40							
		500						Clayey silt (ML) dark yellowish-brown, 20% clay, some fine-grained to coarse-grained sand, low plasticity, damp, soft. Gravelly clay lenses interlayed 1-3" thick, trace gravels throughout, 10-15% fine-grained gravels in silt/clay matrix	
		65							Collect encore sample from 8 to 8.5'
		10							
10		5							
		20							
		130							
		10				ML			Very slight odor 12-14', no odor after 14' bgs
		5							
		5							
		2							
		0							
15		0							
		0							
		0							No odor
		0							
		0						Clayey silt (ML) yellowish-brown, soft, 20% clay, 5-10% fine-grained to coarse-grained sand with trace gravels and gravelly clay lenses	
		0				ML			
20		0							
		0						Grades to silty sand (SM) from 20-22' with 50% sand and 50% fines	
		0				SM			
		0						Silty clay (CL) dark yellowish-brown, 20% silt, trace fine-grained sand, stiff medium plasticity, trace gravels in clay matrix	
		0				CL			
25		0							No water in hole after 3 hours. Left overnight and DTW-15.51 at 8:30am 9/24/09 Collect water sample from open hole at 25' bgs
								Total Depth: 25 ft.	

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Boring Log: USB-2

Date: 09/22/2009	Logged By: Tyson Fulmer	Specifications
Location: 6600 Foothill Blvd. Oakland, CA		Elevation
Client: Ravi Sekhon		**GSE:**
Drilling Co.: Clear Heart	**Driller:** Casey	Depth to Water
Drilling Method: Hand Auger	**Grout Materials and Method:** Neat cement/Tremie	**Initial:** 6.5 **Static:** ft.
Groundwater Sampling Method: NA		**Total Boring Depth:** 6.5 ft.
Soil Sampling Method: NA		**Lat.:** **Long:**

Depth, bgs (ft)	Recovery	OVM	Soil Sample	Water Sample	Saturated Zone	USCS	Graphic Log	Material Description	Remarks
0		0						Asphalt cap, 8" of concrete sub-base	Water levels: MW-4: 5.83' MW-6: 5.82' MW-5: 7.27'
		0						gravels, 1/4" -1" Silty sand with gravels, soft, loose, low plasticity, some large cobbles 2-3", coarse-grained gravel, moist around 4.5'	
		0							
		0				SM			
		0							
5		0							No odor, No PID readings
		0			▼				Native material at 6' bgs
		0				CL		Silty clay (CL) reddish brown, 20% silt, soft, low plasticity	
								Total Depth: 6.5 ft.	
10									
15									
20									
25									

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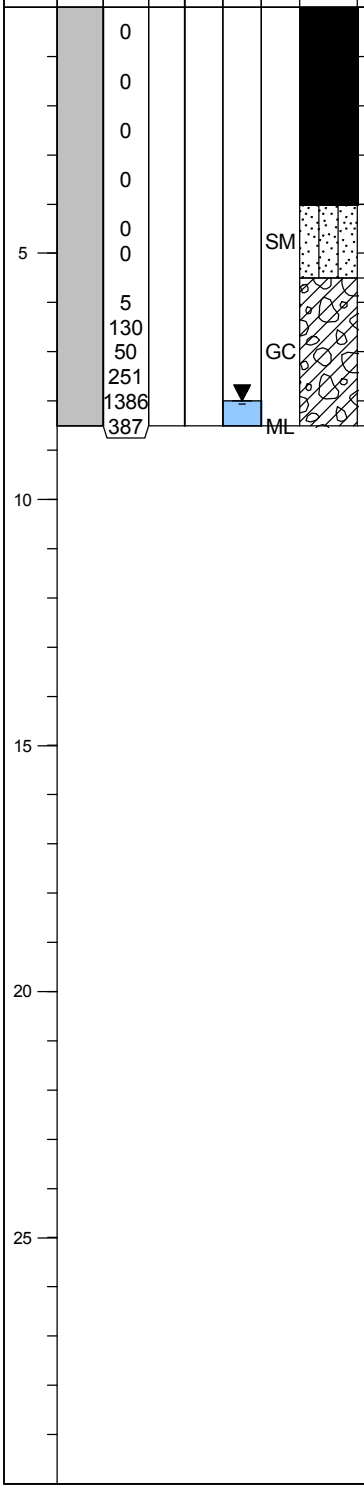
Date: 09/22/2009	Logged By: Tyson Fulmer	Specifications
Location: 6600 Foothill Blvd. Oakland, CA		Elevation
Client: Ravi Sekhon		**GSE:**
Drilling Co.: Clear Heart	**Driller:** Casey	Depth to Water
Drilling Method: Hand Auger	**Grout Materials and Method:** Neat cement/Tremie	**Initial:** 8 ft. **Static:** ft.
Groundwater Sampling Method: Peristaltic pump with dedicated tubing		**Total Boring Depth:** 8.5 ft.
Soil Sampling Method: N/A		**Lat.:** **Long:**



Material Description	Remarks
Asphalt cap with 8" of sub-base, gravels in a sandy silt matrix, very dark brown, 10% sand	No Odor
Sand incease, silty sand (SM) yellowish-brown, soft, low plasticity, very fine-grained to fine-grained gravels at 4.5', poorly sorted	Native appears to be 4' bgs. No odor
Gravel (GC) dark gray, 10% fines, wet	Very slight odor at 5.5' bgs Strong odor
Silt (ML) Reddish brown Total Depth: 8.5 ft.	Hand auger all to 8.5' bgs. Collect GW sample at 8.5' bgs

Environmental Risk Services, Corporation
1600 Riviera Avenue, Suite 310
Walnut Creek, CA 94596
925 938.1600

Boring Log: USB-7

Date: 09/22/09 Logged By: Tyson Fulmer	Specifications
Location: 6600 Foothill Blvd. Oakland, CA	Elevation
Client: Ravi Sekhon	**GSE:**
Drilling Co.: Clear Heart **Driller:** Casey	Depth to Water
Drilling Method: Hand Auger **Grout Materials and Method:** Cement free fall	**Initial:** 6.5 ft. **Static:** 6.5 ft.
Groundwater Sampling Method: Peristaltic pump	**Total Boring Depth:** 7.5 ft.
Soil Sampling Method:	**Lat.:** **Long:**

Depth, bgs (ft)	Recovery	OVM	Soil Sample	Water Sample	Saturated Zone	USCS	Graphic Log	Material Description	Remarks
0		0						Asphalt cap w/ 8" of concrete, gravelly fill material in silt matrix, damp-dry	
		0							
		0							
		0						Sandy silt (ML) dark brown, 10-20% sand mixed with gravel and clayey gravel sand at 4' bgs	No odor
5		0				ML			
		0							
		10			▼				Strong odor 6-7.5'
		666							
		50				GC		Clayey gravel (GC) dark gray, loose, wet	Hand auger to 7.5' bgs. Grab water sample at 7.5' bgs.
								Total Depth: 7.5 ft.	
10									
15									
20									
25									

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1600 Riviera Avenue, Suite 310
Walnut Creek, CA 94596
925 938.1600

Date: 09/22/09	Logged By: Tyson Fulmer	Specifications
Location: 6600 Foothill Blvd. Oakland, CA		Elevation
Client: Ravi Sekhon		**GSE:**
Drilling Co.: Clear Heart	**Driller:** Casey	Depth to Water
Drilling Method: Hand Auger	**Grout Materials and Method:** Free fall cement/asphalt cap	**Initial:** 7 ft. **Static:** 7 ft.
Groundwater Sampling Method: Peristaltic pump		**Total Boring Depth:** 8 ft.
Soil Sampling Method:		**Lat.:** **Long:**

Depth, bgs (ft)	Recovery	OVM	Soil Sample	Water Sample	Saturated Zone	USCS	Graphic Log	Material Description	Remarks
		0 0 0 0 0						Asphalt cap w/ 8" of concrete sub-base, gravels mixed with silty sand matrix angular fill material	
		1.5 30				ML		Sandy silt (ML) very dark brown, soft	No odor
5		144 100 638 43				SM		Silty sand-gravelly sand, 10-20% silt, wet	Odor at 5' bgs. Strong odor 5-7' bgs
								Total Depth: 8 ft.	Grab water sample in open hole at 8' bgs
10									
15									
20									
25									

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925 938.1600

Date: 09/22/09	Logged By: Tyson Fulmer	Specifications
Location: 6600 Foothill Blvd. Oakland, CA		Elevation
Client: Ravi Sekhon		**GSE:**
Drilling Co.: Clear Heart	**Driller:** Casey	Depth to Water
Drilling Method: Hand Auger	**Grout Materials and Method:** Freefall cement/asphalt cap	**Initial:** 6 ft. **Static:** 6 ft.
Groundwater Sampling Method: Peristaltic pump		**Total Boring Depth:** 7.5 ft.
Soil Sampling Method:		**Lat.:** **Long:**

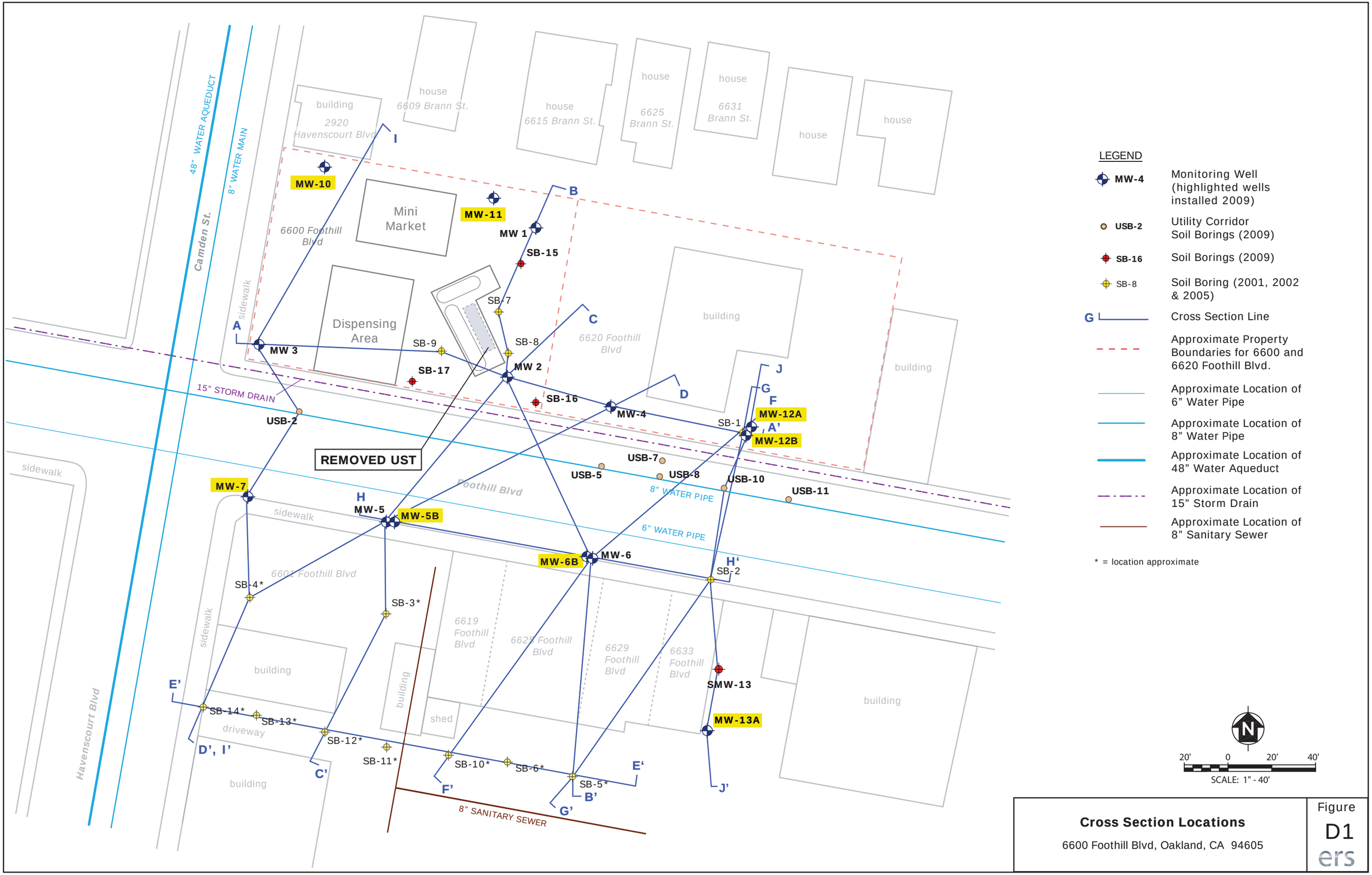
Depth, bgs (ft)	Recovery	OVM	Soil Sample	Water Sample	Saturated Zone	USCS	Graphic Log	Material Description	Remarks
0								Top asphalt and fill as described in USB-5	
		0						Sandy silt (ML) as described, trace-some gravels with depth	
		0							
		0				ML			
		0							
		1							Very slight odor at 4.5' bgs
5		5							
		469						Clayey gravel (GC) as described, fill material	Very strong odor at 5.5'-7.5' bgs
		1600							Collect grab ground water sample 6-7.5' bgs
		64				GC			
		427							
		1700							
								Total Depth: 7.5 ft.	
10									
15									
20									
25									

Environmental Risk Services, Corporation
1600 Riviera Avenue, Suite 310
Walnut Creek, CA 94596
925 938.1600

Date: 09/24/09	Logged By: Tyson Fulmer	Specifications
Location: 6600 Foothill Blvd. Oakland, CA		Elevation
Client: Ravi Sekhon		**GSE:**
Drilling Co.: ERS	**Driller:** Logan Linderman	Depth to Water
Drilling Method: Hand Auger	**Grout Materials and Method:** Cement w/ asphalt patch	**Initial:** 7 ft. **Static:** ft.
Groundwater Sampling Method: Peristaltic pump		**Total Boring Depth:** 8 ft.
Soil Sampling Method:		**Lat.:** **Long:**

Depth, bgs (ft)	Recovery	OVM	Soil Sample	Water Sample	Saturated Zone	USCS	Graphic Log	Material Description	Remarks
		0 0 0 0 0 0						Asphalt cap with 8" of concrete sub-base, road base aggregate fill material, sandy clay, fine-grained gravels 20%, large 1-3" rock	
		0							
5		2.5 50 308				SM		Silty sand (SM) yellowish-brown, 50% silt, 20% clay, some gravels and cobbles, moist	Slight odor at 5' bgs
		300 1313			▼	GW		Gravelly sand (GW) dark gray, poorly sorted, wet loose, 20% fines	Strong odor at 7' bgs
								Total Depth: 8 ft.	Collect water from screened 1" casing in open hole. Water has strong odor
10									
15									
20									
25									

APPENDIX D



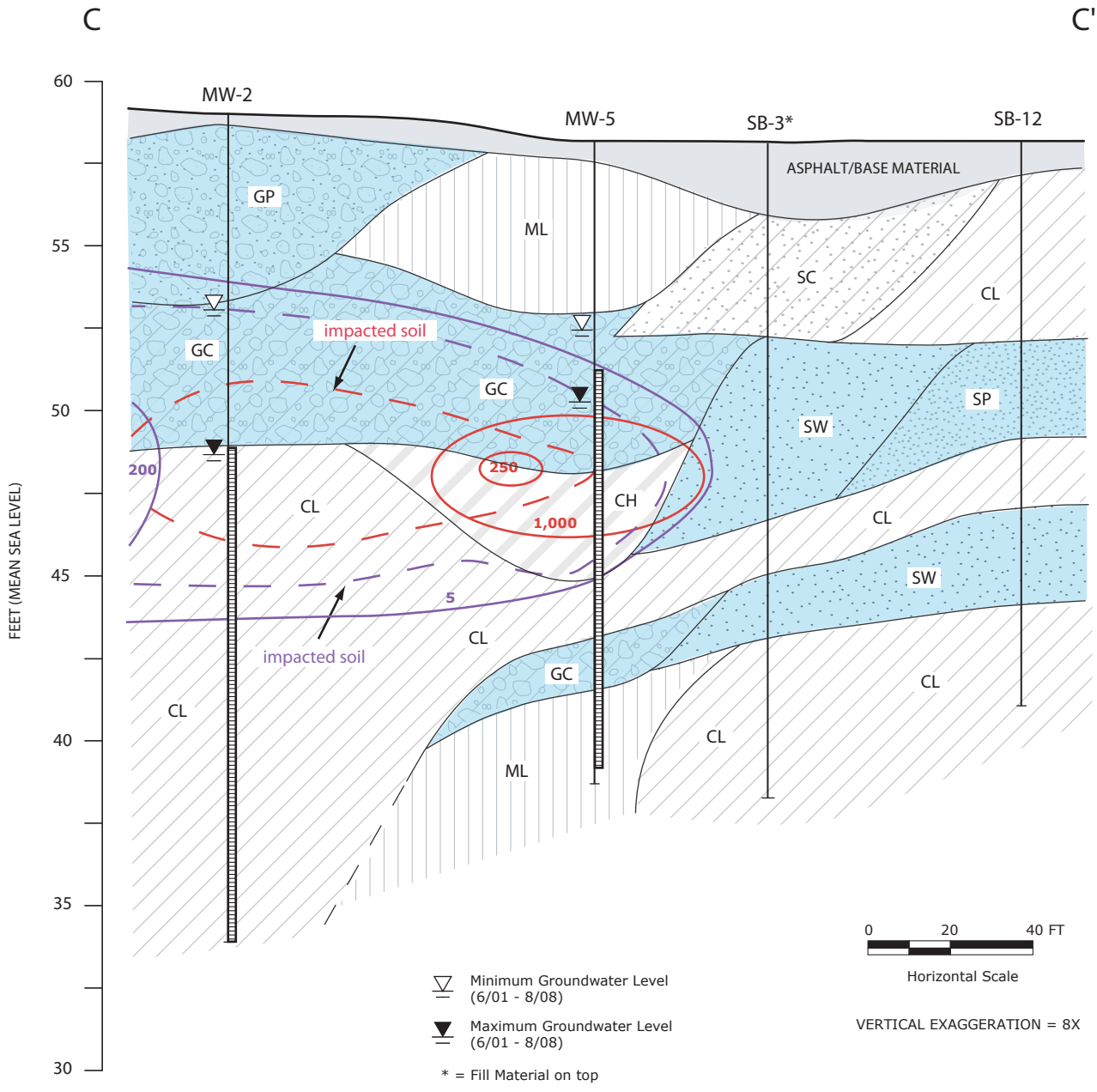
Cross Section Locations

6600 Foothill Blvd, Oakland, CA 94605

Figure D1

ers

Environmental Risk Specialties Corp



LEGEND

- Ground Surface
- Screen Interval
- Asphalt and Base Material
- Layer of Less Hydraulic Resistance
- ML — Silt
- CL — Clay
- CH — Fat Clay
- SW — Well Graded Sand
- SP — Poorly Graded Sand
- SC — Sandy Clay
- GP — Gravel Sand Mix
- GC — Clayey Gravels
- 1,000 — TPHg (ug/L)
- 5 — MTBE (ug/L)

Note: Soil boring elevations are projected

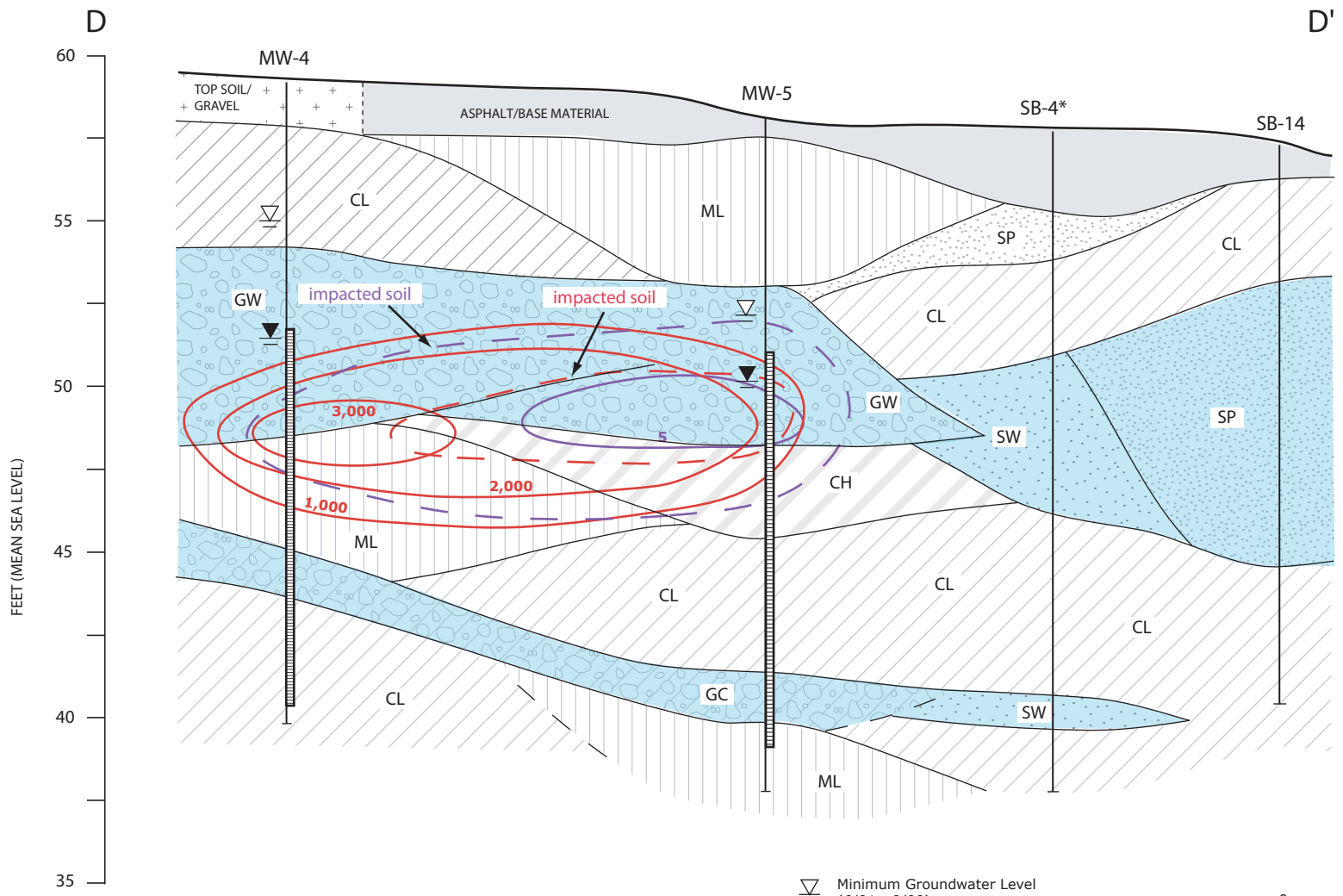
Cross-Section C - C'

6600 Foothilll Blvd, Oakland, CA 94605

Figure D2

ers

Environmental Risk Specialties Corporation



LEGEND

- Ground Surface
- Screen Interval
- Asphalt and Base Material
- Layer of Less Hydraulic Resistance
- 1,000 — TPHg (ug/L)
- 5 — MTBE (ug/L)
- CL — Clay
- CH — Fat Clay
- GW — Well Graded Gravel
- GC — Clayey Gravels
- ML — Silt
- SW — Well Graded Sand
- SP — Poorly Graded Sand

Note: Soil boring elevations are projected.

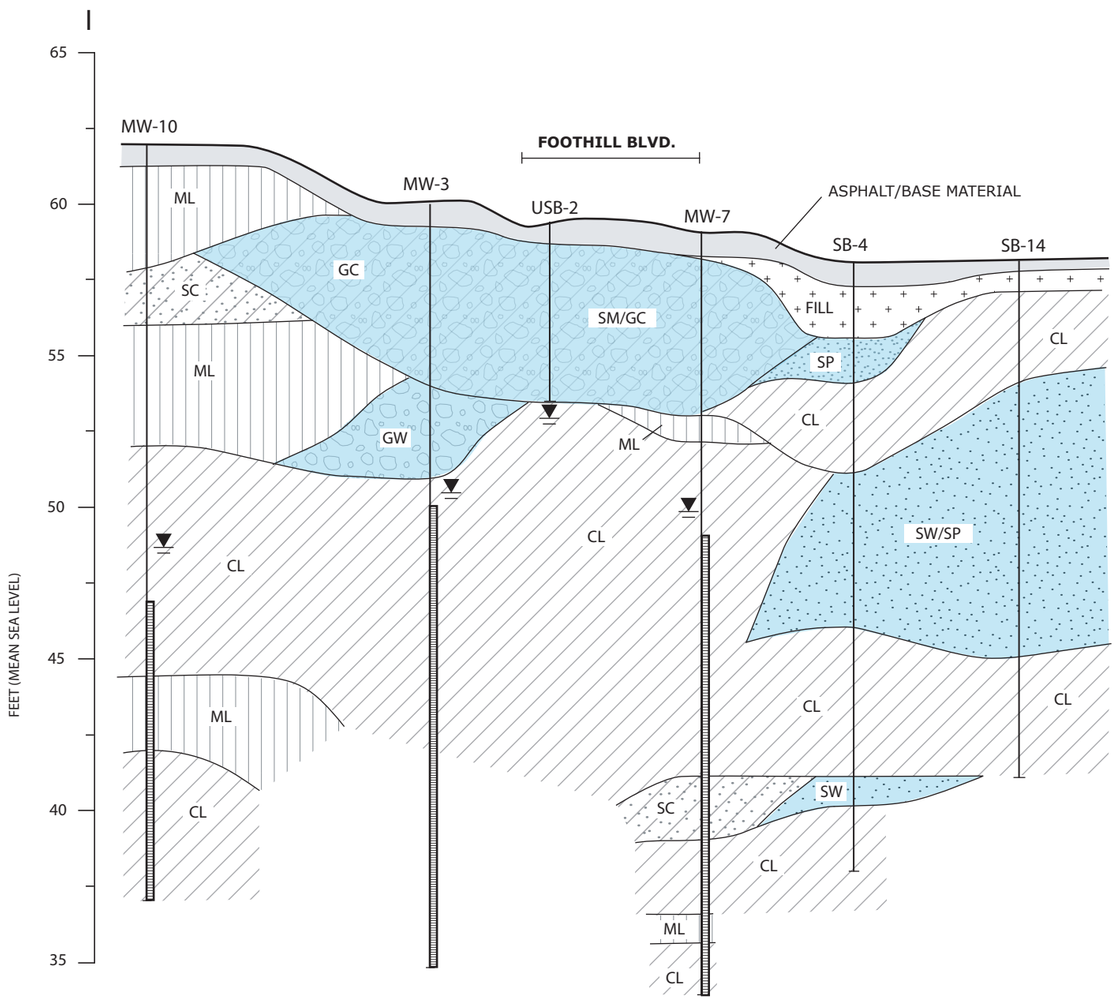
Cross-Section D - D'

6600 Foothilll Blvd, Oakland, CA 94605

Figure D3

ers

Environmental Risk Specialties Corporation



0 20 40 FT

Horizontal Scale

VERTICAL EXAGGERATION = 8X

Maximum Groundwater Level (10/09)

Note: Soil boring elevations are projected.

LEGEND

- Ground Surface
- Screen Interval
- Asphalt and Base Material
- Layer of Less Hydraulic Resistance
- CL — Clay
- GW — Well Graded Gravel
- GC — Clayey Gravels
- ML — Silt
- SW — Well Graded Sand
- SP — Poorly Graded Sand
- SC — Sandy Clay

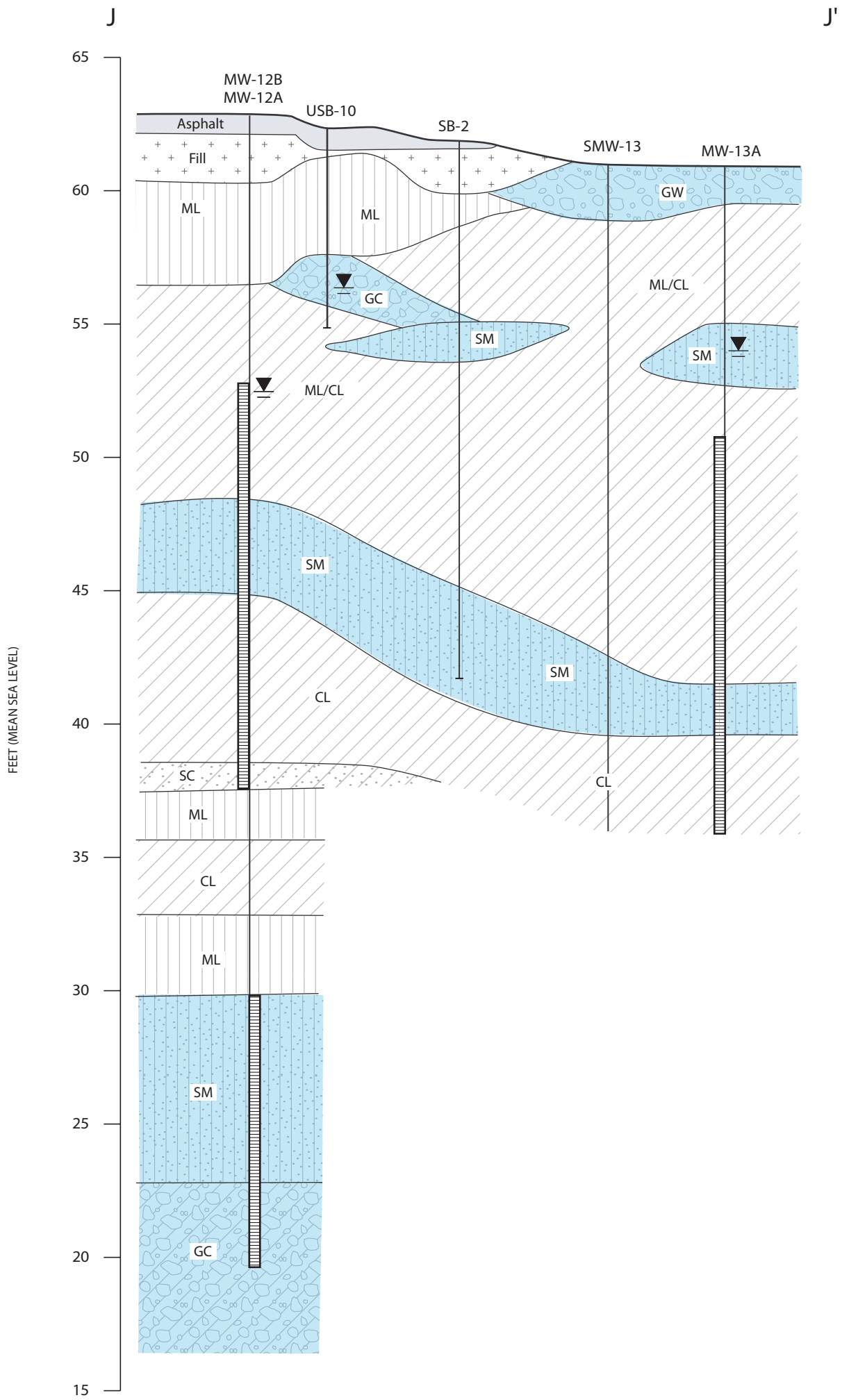
Cross-Section I - I'

6600 Foothilll Blvd, Oakland, CA 94605

Figure D4

ers

Environmental Risk Specialties Corp



LEGEND

- Ground Surface
- Screen Interval
- Asphalt and Base Material
- Layer of Less Hydraulic Resistance
- Fill Material
- Maximum Groundwater Level (10/2009)
- SC — Sandy Clay
- SM — Silty Sand
- GC — Clayey Gravels
- GW — Well Graded Gravel
- ML — Silt
- CL — Clay

Note: Soil boring elevations are projected

0 20 40 FT

Horizontal Scale

VERTICAL EXAGGERATION = 8X

Cross-Section J - J'

6600 Foothilll Blvd, Oakland, CA 94605

Figure D5

ers

Environmental Risk Specialties Corp

APPENDIX E

Monitoring Well Gauging and Purging Data Sheet

Date:	Project No.	Site:	Location:	Initials:
10/6/09	Sekhon	Sekhon Gas	6600 Foothill Blvd	TRF

Purge Method:	Gauging Time: Start	Gauging Time: End	Purge Starting Time:	Purge Ending Time:	Sampling Method:
NA	8:30	9:50	NA	NA	NA

Well ID	Diameter (in)	Depth to Bottom (ft)	Initial Depth to Water from TOC (ft)	Equilibrated Depth to Water from TOC (ft)	Static Water Column (ft)	Casing Volume (gal)	Purged Volume (gal)	Depth to Product (ft)	Note:
MW-3	2"	25		9.62				None	
MW-4	2"	20		5.94					

Casing Volume = Static Water Column x Conversion Factor

Conversion Factor: 2-in well = 0.163 gal/ft, 4-in well = 0.653 gal/ft, 6-in well = 1.469 gal/ft

Total purged volume from all wells (gals): NA

Monitoring Well Gauging and Purging Data Sheet

Date:	Project No.	Site:	Location:	Initials:
10/6/09	Sethco	Sethco Gas	6600 Foothill Blvd	TRF

Purge Method:	Gauging Time: Start	Gauging Time: End	Purge Starting Time:	Purge Ending Time:	Sampling Method:
NA	8:30	9:50	NA	NA	NA

Well ID	Diameter (in)	Depth to Bottom (ft)	Initial Depth to Water from TOC (ft)	Equilibrated Depth to Water from TOC (ft)	Static Water Column (ft)	Casing Volume (gal)	Purged Volume (gal)	Depth to Product (ft)	Note:
MW-5	2"	20		7.41				None	
MW-5B		45		13.16					
MW-6		20		5.78					
MW-6B		50		40.95					
MW-7		25		9.42					
MW-10		25		13.66					
MW-11		25		13.04					
MW-12A		25		10.65					
MW-12B		43		40.12					
MW-13		25		7.18					
MW-1		25		11.54					
MW-2		25		7.41					

Casing Volume = Static Water Column x Conversion Factor

Conversion Factor: 2-in well = 0.163 gal/ft, 4-in well = 0.653 gal/ft, 6-in well = 1.469 gal/ft

Total purged volume from all wells (gals): NA

Monitor Well Development Log

Site Name: Sekhon	Well/Sample ID: MW-5B
Location: 6600 Foothill, Oakland	Initial Depth to Water (DTW): 22.45
Client: Ravi Sekhon	Total Well Depth Before Development (TD): 45.41
Sampler: LTL	Total Well Depth After Development (TD):
Date: 10/1/09	Well Diameter (inches): 2"
Purge Method: Bailer	Did Well Dewater? yes
Casing Volume (gallons): 22.96 x 0.163 = 3.75	Purge Rate (gallons/min):
2" well x 1 foot = 0.163 gallon	4" well x 1 foot = 0.65 gallon

Time	pH	SC	Temp	DTW	Turbidity	Cumulative Volume	Notes
hh:mm	SU	µmhos/cm	°C	feet bgs	NTU	liters	
1142 - Swabbed well for 10 min						—	
1205				31.70	high	5	
1213				36.71	high	10	
1231 - Dewatered @ 17 gal - high						17	
16:41 - DTW = 19.29							
1717 - Dewatered @ ~~35~~ 32 gal.							
High turbidity, but low initially							

Type of surge: surge block	Development Start Time: 1142	Water Added? No
Screen Interval: 35-45	Development Stop Time: 1717	Amount of Sediment:
Total Gallons Purged: 32	Color: brown	Odor: none
Length of Tubing (ft)	Sheen: none	Product: none
Instrument ID: —	Last Calibrated: —	

Notes:

Monitor Well Development Log

Site Name: Sekhon	Well/Sample ID: MW-6B
Location: 6600 Foothill, Oakland	Initial Depth to Water (DTW): 38.35
Client: Sekhon, Ravi	Total Well Depth Before Development (TD): 50.15
Sampler: LTL	Total Well Depth After Development (TD):
Date: 10/1/09	Well Diameter (inches): 2"
Purge Method: Bailer	Did Well Dewater? Yes
Casing Volume (gallons): 11.8 x 0.163 = 1.93	Purge Rate (gallons/min):
2" well x 1 foot = 0.163 gallon	4" well x 1 foot = 0.65 gallon

Time	pH	SC	Temp	DTW	Turbidity	Cumulative Volume	Notes
hh:mm	SU	µmhos/cm	°C	feet bgs	NTU	liters	
1243	Swabbed for 10 min						
1256				41.45	high	4.5	
~~1326~~	Dewatered @ 9 gal				high	9	
1725	DTW = 42.73						
1745	Dewatered @ 13.5 gal						
	Very high turbidity						

Type of surge: surge block	Development Start Time: 1243	Water Added?: no
Screen Interval: 35-50'	Development Stop Time: 1326	Amount of Sediment:
Total Gallons Purged: 13.5	Color: brown	Odor: none
Length of Tubing (ft)	Sheen: none	Product: none
Instrument ID:		Last Calibrated:

Notes:

Monitor Well Development Log

Site Name: Sekhon	Well/Sample ID: MW-#7
Location: 6600 Foothill, Oakland	Initial Depth to Water (DTW): 14.11
Client: Ravi Sekhon	Total Well Depth Before Development (TD): 25.0
Sampler: LTL	Total Well Depth After Development (TD):
Date: 10/1/09	Well Diameter (inches): 2"
Purge Method: Bailer	Did Well Dewater? Yes
Casing Volume (gallons): 10.89 x 0.163 = 1.78	Purge Rate (gallons/min):
2" well x 1 foot = 0.163 gallon	4" well x 1 foot = 0.65 gallon

Time	pH	SC	Temp	DTW	Turbidity	Cumulative Volume	Notes
hh:mm	SU	µmhos/cm	°C	feet bgs	NTU	liters	
1113 — Swabbed well for 10 min							
1132 — Dewatered —					high to moderate 7.5		
1551: DTW = 19.84							
1602 — Dewatered @ ⇒						10.5 gal	
	Turb. still high, but initial turbidity upon return was low.						

Type of surge: Surgeblock	Development Start Time: 1113	Water Added? No
Screen Interval: 10 - 25'	Development Stop Time: 1602 ~~1132~~	Amount of Sediment:
Total Gallons Purged: 10.5	Color: brown	Odor: none
Length of Tubing (ft)	Sheen: none	Product: none
Instrument ID: /	Last Calibrated: /	

Notes:

Monitor Well Development Log

Site Name: Sekhon	Well/Sample ID: MW-10
Location: 6600 Foothill	Initial Depth to Water (DTW): 13.45
Client: Ravi Sekhon	Total Well Depth Before Development (TD): 25.17
Sampler: LTL	Total Well Depth After Development (TD):
Date: 10/1/09	Well Diameter (inches): 2"
Purge Method: Bailer	Did Well Dewater? Yes
Casing Volume (gallons): 11.72 × 0.163 = 1.91	Purge Rate (gallons/min):
2" well x 1 foot = 0.163 gallon	4" well x 1 foot = 0.65 gallon

Time	pH	SC	Temp	DTW	Turbidity	Cumulative Volume	Notes
hh:mm	SU	µmhos/cm	°C	feet bgs	NTU	~~liters~~ gal	
0942	— Swabbed well for 10 min						
1003				22.50	high → moderate	6	
1012	— Dewatered @ 8 gallons (high to moderate)						
1507	DTW = 17.75						
1517	Dewatered at 13 gallons; turbidity moderate, but much lower than before						

Type of surge: Surge block	Development Start Time: 0942	Water Added? No
Screen Interval: 15-25	Development Stop Time: 1517	Amount of Sediment:
Total Gallons Purged: 13	Color: brown	Odor: none
Length of Tubing (ft)	Sheen: none	Product: none
Instrument ID:		Last Calibrated:

Notes:

Monitor Well Development Log

Site Name: Sekhon	Well/Sample ID: MW-11
Location: 6600 Foothill	Initial Depth to Water (DTW): 12.76
Client: Ravi Sekhon	Total Well Depth Before Development (TD): 24.95
Sampler: LTC	Total Well Depth After Development (TD):
Date: 10/1/09	Well Diameter (inches): 2"
Purge Method: Bailer	Did Well Dewater? yes
Casing Volume (gallons): 12.19 x 0.163 = 1.99	Purge Rate (gallons/min):
2" well x 1 foot = 0.163 gallon	4" well x 1 foot = 0.65 gallon

Time	pH	SC	Temp	DTW	Turbidity	Cumulative Volume	Notes
hh:mm	SU	µmhos/cm	°C	feet bgs	NTU	~~liters~~ gal	
1027	— Swabbed well for				10 min		
1048				18.20	~~very~~ high	~~36~~	
1100	— Dewatered —				high	12.5	
1522	— DTW = 13.14						
1541	— Well dewatered @ 23.5 gallons —						
	Turbidity still high.						

Type of surge: surge block	Development Start Time: 1027	Water Added?
Screen Interval: 10-25	Development Stop Time: ~~1550~~ 1541	Amount of Sediment:
Total Gallons Purged: 23.5	Color: brown	Odor: none
Length of Tubing (ft)	Sheen: none	Product: none
Instrument ID: —	Last Calibrated: —	

Notes:

Monitor Well Development Log

Site Name: Sekhon	Well/Sample ID: MW-12A
Location: 6600 Foothill, Oakland	Initial Depth to Water (DTW): 10.66
Client: Ravi Sekhon	Total Well Depth Before Development (TD): 24.95
Sampler: LTL	Total Well Depth After Development (TD):
Date: 10/1/09	Well Diameter (inches): 2"
Purge Method: Bailer	Did Well Dewater?
Casing Volume (gallons): 14.29 x 0.163 = 2.33	Purge Rate (gallons/min):
2" well x 1 foot = 0.163 gallon	4" well x 1 foot = 0.65 gallon

Time	pH	SC	Temp	DTW	Turbidity	Cumulative Volume	Notes
hh:mm	SU	µmhos/cm	°C	feet bgs	NTU	~~liters~~ gal	
1400 – Surged well for 10 min							
1421				17.66	high	7.5	
1435				21.97	high	15	

Type of surge: Surge block	Development Start Time: 1400	Water Added? No
Screen Interval: 10-25	Development Stop Time:	Amount of Sediment:
Total Gallons Purged:	Color:	Odor:
Length of Tubing (ft)	Sheen:	Product:
Instrument ID:		Last Calibrated:

Notes:

Monitor Well Development Log

Site Name: Sethon	Well/Sample ID: MW-12B
Location: 6600 Foothill, Oakland	Initial Depth to Water (DTW): 39.09
Client: Ravi Sekhon	Total Well Depth Before Development (TD): 43.57
Sampler: LTL	Total Well Depth After Development (TD):
Date: 10/1/09	Well Diameter (inches): 2"
Purge Method: Baller	Did Well Dewater? Yes
Casing Volume (gallons): 4.48 x 0.163 = 0.74	Purge Rate (gallons/min):
2" well x 1 foot = 0.163 gallon	4" well x 1 foot = 0.65 gallon

Time	pH	SC	Temp	DTW	Turbidity	Cumulative Volume	Notes
hh:mm	SU	µmhos/cm	°C	feet bgs	NTU	liters	
1340 – Swabbed well for 10 min.						–	
1355 – Well dewatered @ (high)						~~5~~ 2.5 gal –	

Type of surge: Surge block	Development Start Time:	Water Added?
Screen Interval: 33-43'	Development Stop Time:	Amount of Sediment:
Total Gallons Purged:	Color: brown	Odor: none
Length of Tubing (ft)	Sheen: none	Product: none
Instrument ID: /	Last Calibrated: /	

Notes:

Monitor Well Development Log

Site Name: Sekhon	Well/Sample ID: MW-13A
Location: 6600 Foothill	Initial Depth to Water (DTW): 7.10
Client: Sekhon	Total Well Depth Before Development (TD): 25.18
Sampler: LTL	Total Well Depth After Development (TD): 25.19
Date: 10/1/09	Well Diameter (inches): 2"
Purge Method: Bailer	Did Well Dewater? No
Casing Volume (gallons): 18.08 x 0.163 = 2.95	Purge Rate (gallons/min):
2" well x 1 foot = 0.163 gallon	4" well x 1 foot = 0.65 gallon

Time	pH	SC	Temp	DTW	Turbidity	Cumulative Volume	Notes
hh:mm	SU	µmhos/cm	°C	feet bgs	NTU	~~liters~~ gal	
0812	Swabbed well for 10 min						
0850				12.65	high	10	slight odor
0906				17.54	high	20	no odor
0924				21.15	high	30	↓
Note: low turbidity @ top of water column							

Type of surge: swab.	Development Start Time: 0812	Water Added?
Screen Interval: ~~5~~ 25	Development Stop Time: 0924	Amount of Sediment:
Total Gallons Purged: 30	Color: brown	Odor: slight, initially
Length of Tubing (ft)	Sheen: none	Product: none
Instrument ID: —	Last Calibrated: —	

Notes:

APPENDIX F

KIFF Analytical LLC

Report Number : 70125
Date : 09/28/2009

Jim Ho
Environmental Risk Services Corporation
1600 Riviera Avenue, Suite 310
Walnut Creek, CA 94596

Subject : 4 Soil Samples
Project Name : Sekhon Gas
Project Number :

Dear Dr. Ho,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

KIFF Analytical LLC

Report Number : 70125

Date : 09/28/2009

Project Name : **Sekhon Gas**

Project Number :

Sample : **SB15-9.5** Matrix : Soil Lab Number : 70125-01

Sample Date :09/21/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/21/2009
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/21/2009
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/21/2009
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/21/2009
Methyl-t-butyl ether (MTBE)	**0.015**	0.0050	mg/Kg	EPA 8260B	09/21/2009
Tert-Butanol	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/21/2009
1,2-Dichloroethane-d4 (Surr)	99.2		% Recovery	EPA 8260B	09/21/2009
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	09/21/2009

KIFF Analytical LLC

Report Number : 70125
Date : 09/28/2009

Project Name : **Sekhon Gas**
Project Number :

Sample : **SB17-7.5** Matrix : Soil Lab Number : 70125-02
Sample Date :09/21/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.025**	0.025	mg/Kg	EPA 8260B	09/22/2009
Toluene	**< 0.025**	0.025	mg/Kg	EPA 8260B	09/22/2009
Ethylbenzene	**< 0.025**	0.025	mg/Kg	EPA 8260B	09/22/2009
Total Xylenes	**< 0.025**	0.025	mg/Kg	EPA 8260B	09/22/2009
Methyl-t-butyl ether (MTBE)	**< 0.025**	0.025	mg/Kg	EPA 8260B	09/22/2009
Tert-Butanol	**< 0.15**	0.15	mg/Kg	EPA 8260B	09/22/2009
1,2-Dichloroethane-d4 (Surr)	99.0		% Recovery	EPA 8260B	09/22/2009
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	09/22/2009
2-Bromochlorobenzene (Surr)	90.2		% Recovery	EPA 8260B	09/22/2009

KIFF Analytical LLC

Report Number : 70125
Date : 09/28/2009

Project Name : **Sekhon Gas**
Project Number :

Sample : **SB16-7.5** Matrix : Soil Lab Number : 70125-03
Sample Date :09/21/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/21/2009
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/21/2009
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/21/2009
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/21/2009
Methyl-t-butyl ether (MTBE)	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/21/2009
Tert-Butanol	**0.015**	0.015	mg/Kg	EPA 8260B	09/21/2009
1,2-Dichloroethane-d4 (Surr)	95.6		% Recovery	EPA 8260B	09/21/2009
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	09/21/2009

KIFF Analytical LLC

Report Number : 70125
Date : 09/28/2009

Project Name : **Sekhon Gas**
Project Number :

Sample : **MW-10 - 10** Matrix : Soil Lab Number : 70125-04
Sample Date :09/21/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/21/2009
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/21/2009
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/21/2009
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/21/2009
Methyl-t-butyl ether (MTBE)	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/21/2009
Tert-Butanol	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/21/2009
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	09/21/2009
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	09/21/2009

Report Number : 70125

Date : 09/28/2009

QC Report : Method Blank Data

Project Name : **Sekhon Gas**

Project Number :

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/21/2009
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/21/2009
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/21/2009
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/21/2009
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/21/2009
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/21/2009
1,2-Dichloroethane-d4 (Surr)	111		%	EPA 8260B	09/21/2009
Toluene - d8 (Surr)	105		%	EPA 8260B	09/21/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 70125

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 09/28/2009

Project Name : **Sekhon Gas**

Project Number :

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	70100-02	<0.0050	0.0399	0.0400	0.0322	0.0308	mg/Kg	EPA 8260B	9/21/09	80.7	77.1	4.48	70-130	25
Methyl-t-butyl ether	70100-02	<0.0050	0.0399	0.0400	0.0313	0.0297	mg/Kg	EPA 8260B	9/21/09	78.4	74.3	5.35	70-130	25
Tert-Butanol	70100-02	<0.0050	0.198	0.198	0.160	0.150	mg/Kg	EPA 8260B	9/21/09	81.0	75.3	7.30	70-130	25
Toluene	70100-02	<0.0050	0.0394	0.0395	0.0306	0.0293	mg/Kg	EPA 8260B	9/21/09	77.7	74.3	4.48	70-130	25

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 70125

QC Report : Laboratory Control Sample (LCS)

Date : 09/28/2009

Project Name : **Sekhon Gas**

Project Number :

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	0.0404	mg/Kg	EPA 8260B	9/21/09	84.9	70-130
Methyl-t-butyl ether	0.0405	mg/Kg	EPA 8260B	9/21/09	78.6	70-130
Tert-Butanol	0.201	mg/Kg	EPA 8260B	9/21/09	77.6	70-130
Toluene	0.0399	mg/Kg	EPA 8260B	9/21/09	84.8	70-130

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC
2795 2nd Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 70125 Page ___ of ___

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): Tim Ito

California EDF Report? ☐ Yes ☒ No

Company / Address: ERS/1600 Riviera Walnut Creek 94596

Sampling Company Log Code:

Phone Number: 925 938-1600

Global ID:

Fax Number: " " 1610

EDF Deliverable To (Email Address): jho@erscorp.us

Project #:

P.O. #:

Bill to: ERS

Project Name: Sekhar Gas

Sampler Print Name: Tyson Fulmer

Sampler Signature: [signature]

Project Address:

TAT: ☐ 12 hr ☐ 24 hr ☐ 48hr ☐ 72hr ☑ 1 wk

Sample Designation	Date	Time	40 ml VOA	Sleeve	Poly	Glass	Tedlar	Encore	HCl	HNO_3	None	Water	Soil	Air	MTBE @ 0.5 ppb (EPA 8260B) + TBA	BTEX (EPA 8260B)	TPH Gas (EPA 8260B)	5 Oxygenates (MTBE, DIPE, ETBE, TAME, TBA) (EPA 8260B)	7 Oxygenates (5 oxy + EtOH, MeOH) (EPA 8260B)	Lead Scav. (1,2 DCA & 1,2 EDB) (EPA 8260B)	Volatile Halocarbons (EPA 8260B)	Volatile Organics Full List (EPA 8260B)	Volatile Organics (EPA 524.2 Drinking Water)	TPH as Diesel (EPA 8015M)	TPH as Motor Oil (EPA 8015M)	CAM 17 Metals (EPA 200.7 / 6010)	5 Waste Oil Metals (Cd,Cr,Ni,Pb,Zn) (EPA 200.7 / 6010)	Mercury (EPA 245.1 / 7470 / 7471)	Total Lead (EPA 200.7 / 6010)	W.E.T. Lead (STLC)	TPH gas by 8015(M)	Hold	For Lab Use Only
SB15-9.5	9/21	13:30				1		6					X		X	X															X		01
SB17-7.5	↓	11:20				1		6					X		X	X															X		02
SB16-7.5	↓	13:00				1		6					X		X	X															X		03
MW10-10	↓	14:00				1		6					X		X	X															X		04
SB16-10	↓	10:00				1		6					X		X	X	TF														X	X	05

Relinquished by:	Date	Time	Received by:
Tyson Fulmer	9/21/09	15:22	
	092109	1522	Received by Laboratory: [signature] Kiff Analytical

Remarks: Gas by 8015, MTBE + TBA, BTEX by 8260B

Distribution: White - Lab; Pink - Originator
Rev: 060409

Page 00140

KIFF Analytical LLC

SAMPLE RECEIPT CHECKLIST

RECEIVER: TJB (Initials)

SRG#: 70125 Date: 092109

Project ID: Sekhon Gas

Method of Receipt: [X] Courier [ ] Over-the-counter [ ] Shipper

COC Inspection

Is COC present?		[X] Yes	[ ] No	
Custody seals on shipping container?		[ ] Intact	[ ] Broken	[ ] Not present [X] N/A
Is COC Signed by Relinquisher?	[X] Yes [ ] No	Dated? [X] Yes	[ ] No	
Is sampler name legibly indicated on COC?		[X] Yes	[ ] No	
Is analysis or hold requested for all samples		[X] Yes	[ ] No	
Is the turnaround time indicated on COC?		[X] Yes	[ ] No	
Is COC free of whiteout and uninitialed cross-outs?		[X] Yes	[ ] No, Whiteout	[ ] No, Cross-outs

Sample Inspection

Coolant Present: [X] Yes [ ] No (includes water)

Temperature °C 2.8 Therm. ID# IR-5 Initial TJB Date/Time 092109 / 2001 [ ] N/A

Are there custody seals on sample containers?		[ ] Intact	[ ] Broken	[X] Not present
Do containers match COC?	[X] Yes [ ] No	[ ] No, COC lists absent sample(s)	[ ] No, Extra sample(s) present	
Are there samples matrices other than soil, water, air or carbon?		[ ] Yes	[X] No	
Are any sample containers broken, leaking or damaged?		[ ] Yes	[X] No	
Are preservatives indicated?	[ ] Yes, on sample containers	[ ] Yes, on COC	[ ] Not indicated	[X] N/A
Are preservatives correct for analyses requested?		[ ] Yes	[ ] No	[X] N/A
Are samples within holding time for analyses requested?		[X] Yes	[ ] No	
Are the correct sample containers used for the analyses requested?		[X] Yes	[ ] No	
Is there sufficient sample to perform testing?		[X] Yes	[ ] No	

Does any sample contain product, have strong odor or are otherwise suspected to be hot? [ ] Yes [X] No

Receipt Details

Matrix SO Container type 8 oz glass # of containers received 5

Matrix SO Container type encore # of containers received 30

Matrix _____ Container type _____ # of containers received _____

Date and Time Sample Put into Temp Storage Date: 092109 Time: 2004

Quicklog

Are the Sample ID's indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated
If Sample ID's are listed on both COC and containers, do they all match?	[X] Yes	[ ] No	[ ] N/A	
Is the Project ID indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated
If project ID is listed on both COC and containers, do they all match?	[X] Yes	[ ] No	[ ] N/A	
Are the sample collection dates indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated
If collection dates are listed on both COC and containers, do they all match?	[X] Yes	[ ] No	[ ] N/A	
Are the sample collection times indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated
If collection times are listed on both COC and containers, do they all match?	[X] Yes	[ ] No	[ ] N/A	

COMMENTS:

O:\old_ed\samprec\Forms\Sample Receipt Checklist rev 051409.doc

Leaders in Analytical Science and Service

KIFF Analytical LLC

Subcontract Laboratory Report Attachments

2795 Second Street, Suite 300 Davis, CA 95618
tel 530.297.4800 fax 530.297.4808
www.kiffanalytical.com

Calscience
Environmental
Laboratories, Inc.

September 28, 2009

Joel Kiff
Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Subject: **Calscience Work Order No.: 09-09-1592**
Client Reference: Sekhon Gas

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 9/22/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Amanda Porter

Calscience Environmental
Laboratories, Inc.
Amanda Porter
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 09/22/09
Work Order No: 09-09-1592
Preparation: EPA 5035
Method: EPA 8015B (M)

Project: Sekhon Gas

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB15-9.5	**09-09-1592-1-B**	**09/21/09 13:20**	**Solid**	**GC 11**	**09/22/09**	**09/22/09 21:23**	**090922B01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	0.17	0.693		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	78	60-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB17-7.5	**09-09-1592-2-D**	**09/21/09 11:20**	**Solid**	**GC 11**	**09/22/09**	**09/25/09 16:22**	**090925B02**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	73	8.9	35.7		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	94	60-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB16-7.5	**09-09-1592-3-D**	**09/21/09 13:00**	**Solid**	**GC 11**	**09/22/09**	**09/24/09 23:17**	**090924B02**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	410	110	451		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	90	60-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW10-10	**09-09-1592-4-B**	**09/21/09 14:00**	**Solid**	**GC 11**	**09/22/09**	**09/22/09 23:04**	**090922B01**

Comment(s): -The sample chromatographic pattern for TPH does not match the chromatographic pattern of the specified standard. Quantitation of the unknown hydrocarbon(s) in the sample was based upon the specified standard.

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	0.48	0.34	1.34		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	80	60-126	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 09/22/09
Work Order No: 09-09-1592
Preparation: EPA 5035
Method: EPA 8015B (M)

Project: Sekhon Gas

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-285-1,688**	**N/A**	**Solid**	**GC 11**	**09/22/09**	**09/22/09 17:27**	**090922B01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	0.25	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	72	60-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-285-1,693**	**N/A**	**Solid**	**GC 11**	**09/24/09**	**09/24/09 15:25**	**090924B02**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	10	40		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	69	60-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-285-1,694**	**N/A**	**Solid**	**GC 11**	**09/25/09**	**09/25/09 15:48**	**090925B02**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	10	40		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	80	60-126	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 09-09-1592
Preparation: EPA 5035
Method: EPA 8015B (M)

Project: Sekhon Gas

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-285-1,688	**Solid**	**GC 11**	**09/22/09**	**09/22/09**	**090922B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	84	81	55-139	2	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 09-09-1592
Preparation: EPA 5035
Method: EPA 8015B (M)

Project: Sekhon Gas

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-285-1,693	**Solid**	**GC 11**	**09/24/09**	**09/24/09**	**090924B02**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	90	89	55-139	0	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical	Date Received: N/A
2795 2nd Street, Suite 300	Work Order No: 09-09-1592
Davis, CA 95616-6593	Preparation: EPA 5035
	Method: EPA 8015B (M)

Project: Sekhon Gas

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-285-1,694	**Solid**	**GC 11**	**09/25/09**	**09/25/09**	**090925B02**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	84	85	55-139	1	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-09-1592

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.

KIFF Analytical LLC

2795 2nd Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 1592

Page 1 of 1

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): Scott Forbes

California EDF Report? ☐ Yes ☒ No

Company / Address: Kiff Analytical 2795 2ND ST 300 Davis, CA 95618

Sampling Company Log Code:

Phone Number: (530) 297-4800

Global ID:

Fax Number: (530) 297-4802

EDF Deliverable To (Email Address):

Project #:

P.O. #: 70125

Bill to:

Project Name: Sekhon Gas

Sampler Print Name:

Sampler Signature:

Project Address:

Sample Designation	Sampling: Date	Sampling: Time	Container: 40 ml VOA	Container: Sleeve	Container: Poly	Container: Glass	Container: Tedlar	Container: Encore	Preservative: HCl	Preservative: HNO_3	Preservative: None	Preservative:	Preservative:	Matrix: Water	Matrix: Soil	Matrix: Air
SB15-9.5	092109	1320						3			X				X	
SB17-7.5	092109	1120						3			X				X	
SB16-7.5	092109	1300						3			X				X	
MW10-10	092109	1400						3			X				X	
SB16-10	092109	1000						3			X				X	

Analysis Request — PLEASE CIRCLE METHOD

MTBE @ 0.5 ppb (EPA 8260B)	BTEX (EPA 8260B)	TPH Gas (EPA 8260B)	5 Oxygenates (MTBE, DIPE, ETBE, TAME, TBA) (EPA 8260B)	7 Oxygenates (5 oxy + EtOH, MeOH) (EPA 8260B)	Lead Scav. (1,2 DCA & 1,2 EDB) (EPA 8260B)	Volatile Halocarbons (EPA 8260B)	Volatile Organics Full List (EPA 8260B)	Volatile Organics (EPA 524.2 Drinking Water)	TPH as Diesel (EPA 8015M)	TPH as Motor Oil (EPA 8015M)	CAM 17 Metals (EPA 200.7 / 6010)	5 Waste Oil Metals (Cd,Cr,Ni,Pb,Zn) (EPA 200.7 / 6010)	Mercury (EPA 245.1 / 7470 / 7471)	Total Lead (EPA 200.7 / 6010)	W.E.T. Lead (STLC)	TPH Gas (EPA 8015)	Hold			TAT	For Lab Use Only
																X					4 Days	1
																X					4 Days	2
																X					4 Days	3
																X					4 Days	4
															TSB	X	X				4 Days	5

☐ 12 hr ☐ 24 hr ☐ 48hr ☐ 72hr ☐ 1 wk

Relinquished by:	Date	Time	Received by:
Kiff Analytical	092109	1650	
Relinquished by:	Date	Time	Received by:
Relinquished by: Fedex 9667 1568 8150	Date 9/22/09	Time 1015	Received by Laboratory:

Remarks:

For Lab Use Only: Sample Receipt

Temp °C	Initials	Date	Time	Therm. ID #	Coolant Present Yes / No

Distribution: White - Lab; Pink - Originator
Rev: 061708

Page 8 of 9

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-09-1592

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Kiff DATE: 9/22/09

TEMPERATURE: (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 4.9 °C - 0.2 °C (CF) = 4.7 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter ☐ Metals Only ☐ PCBs Only Initial: JP

CUSTODY SEALS INTACT:

☑ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☐ N/A Initial: JP

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Initial: YC

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ COC not relinquished. ☐ No date relinquished. ☐ No time relinquished.			
Sampler's name indicated on COC	☑ YC 9/24/09	☑	☑ YC 9/24/09
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Correct containers and volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: 3

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve ☑EnCores® ☐TerraCores® ☐_____

Water: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na** ☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® ☐_____ **Other:** ☐_____ **Checked/Labeled by:** YC

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelop **Reviewed by:** WSC

Preservative: **h:** HCL **n:** HNO3 **na$_2$:** $Na_2S_2O_3$ **Na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **znna:** $ZnAc_2$+NaOH **f:** Field-filtered **Scanned by:** YC

KIFF Analytical LLC

Report Number : 70145
Date : 10/01/2009

Jim Ho
Environmental Risk Services Corporation
1600 Riviera Avenue, Suite 310
Walnut Creek, CA 94596

Subject : 2 Soil Samples and 5 Water Samples
Project Name : Sekhon Gas
Project Number :

Dear Dr. Ho,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

KIFF Analytical LLC

Report Number : 70145
Date : 10/01/2009

Project Name : **Sekhon Gas**
Project Number :

Sample : **COMP-1** Matrix : Soil Lab Number : 70145-01
Sample Date :09/22/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Lead	**9.2**	0.50	mg/Kg	EPA 6010B	09/23/2009
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/22/2009
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/22/2009
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/22/2009
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/22/2009
Methyl-t-butyl ether (MTBE)	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/22/2009
Tert-Butanol	**0.017**	0.0050	mg/Kg	EPA 8260B	09/22/2009
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	09/22/2009
1,2-Dichloroethane-d4 (Surr)	106		% Recovery	EPA 8260B	09/22/2009
Toluene - d8 (Surr)	98.9		% Recovery	EPA 8260B	09/22/2009

KIFF Analytical LLC

Report Number : 70145
Date : 10/01/2009

Project Name : **Sekhon Gas**
Project Number :

Sample : **USB5-8** Matrix : Water Lab Number : 70145-02
Sample Date :09/22/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 1.0**	1.0	ug/L	EPA 8260B	09/26/2009
Toluene	**< 0.80**	0.80	ug/L	EPA 8260B	09/24/2009
Ethylbenzene	**3.2**	0.80	ug/L	EPA 8260B	09/24/2009
Total Xylenes	**2.0**	0.80	ug/L	EPA 8260B	09/24/2009
Methyl-t-butyl ether (MTBE)	**8.6**	0.80	ug/L	EPA 8260B	09/24/2009
Tert-Butanol	**54**	5.0	ug/L	EPA 8260B	09/24/2009
1,2-Dichloroethane-d4 (Surr)	88.4		% Recovery	EPA 8260B	09/24/2009
Toluene - d8 (Surr)	90.9		% Recovery	EPA 8260B	09/24/2009
TPH as Gasoline	**14000**	500	ug/L	EPA 8015B	09/24/2009
4-Bromofluorobenzene (Surr)	120		% Recovery	EPA 8015B	09/24/2009

KIFF Analytical LLC

Report Number : 70145
Date : 10/01/2009

Project Name : **Sekhon Gas**
Project Number :

Sample : **USB8-7** Matrix : Water Lab Number : 70145-03
Sample Date :09/22/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.90**	0.90	ug/L	EPA 8260B	09/25/2009
Toluene	**< 0.90**	0.90	ug/L	EPA 8260B	09/25/2009
Ethylbenzene	**< 0.90**	0.90	ug/L	EPA 8260B	09/25/2009
Total Xylenes	**1.3**	0.90	ug/L	EPA 8260B	09/25/2009
Methyl-t-butyl ether (MTBE)	**1.7**	0.90	ug/L	EPA 8260B	09/25/2009
Tert-Butanol	**24**	5.0	ug/L	EPA 8260B	09/25/2009
1,2-Dichloroethane-d4 (Surr)	83.4		% Recovery	EPA 8260B	09/25/2009
Toluene - d8 (Surr)	85.9		% Recovery	EPA 8260B	09/25/2009
TPH as Gasoline	**8900**	500	ug/L	EPA 8015B	09/24/2009
4-Bromofluorobenzene (Surr)	99.1		% Recovery	EPA 8015B	09/24/2009

KIFF Analytical LLC

Report Number : 70145
Date : 10/01/2009

Project Name : **Sekhon Gas**
Project Number :

Sample : **MW12A-5.5** Matrix : Soil Lab Number : 70145-04
Sample Date :09/22/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/23/2009
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/23/2009
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/23/2009
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/23/2009
Methyl-t-butyl ether (MTBE)	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/23/2009
Tert-Butanol	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	09/23/2009
1,2-Dichloroethane-d4 (Surr)	105		% Recovery	EPA 8260B	09/23/2009
Toluene - d8 (Surr)	98.4		% Recovery	EPA 8260B	09/23/2009

KIFF Analytical LLC

Report Number : 70145
Date : 10/01/2009

Project Name : **Sekhon Gas**
Project Number :

Sample : **SB16-15** Matrix : Water Lab Number : 70145-05
Sample Date :09/22/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 20**	20	ug/L	EPA 8260B	09/28/2009
Toluene	**< 20**	20	ug/L	EPA 8260B	09/28/2009
Ethylbenzene	**< 20**	20	ug/L	EPA 8260B	09/28/2009
Total Xylenes	**< 20**	20	ug/L	EPA 8260B	09/28/2009
Methyl-t-butyl ether (MTBE)	**7000**	20	ug/L	EPA 8260B	09/28/2009
Tert-Butanol	**36000**	90	ug/L	EPA 8260B	09/28/2009
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	09/28/2009
Toluene - d8 (Surr)	98.7		% Recovery	EPA 8260B	09/28/2009
TPH as Gasoline	**< 500**	500	ug/L	EPA 8015B	09/25/2009
4-Bromofluorobenzene (Surr)	106		% Recovery	EPA 8015B	09/25/2009

KIFF Analytical LLC

Report Number : 70145
Date : 10/01/2009

Project Name : **Sekhon Gas**
Project Number :

Sample : **USB10-7.5** Matrix : Water Lab Number : 70145-06
Sample Date :09/22/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**4.6**	4.0	ug/L	EPA 8260B	09/26/2009
Toluene	**< 4.0**	4.0	ug/L	EPA 8260B	09/26/2009
Ethylbenzene	**28**	4.0	ug/L	EPA 8260B	09/26/2009
Total Xylenes	**10**	4.0	ug/L	EPA 8260B	09/26/2009
Methyl-t-butyl ether (MTBE)	**5.6**	4.0	ug/L	EPA 8260B	09/26/2009
Tert-Butanol	**51**	20	ug/L	EPA 8260B	09/26/2009
1,2-Dichloroethane-d4 (Surr)	88.3		% Recovery	EPA 8260B	09/26/2009
Toluene - d8 (Surr)	91.1		% Recovery	EPA 8260B	09/26/2009
TPH as Gasoline	**22000**	1500	ug/L	EPA 8015B	09/25/2009
4-Bromofluorobenzene (Surr)	108		% Recovery	EPA 8015B	09/25/2009

KIFF Analytical LLC

Report Number : 70145
Date : 10/01/2009

Project Name : **Sekhon Gas**
Project Number :

Sample : **USB7-7** Matrix : Water Lab Number : 70145-07
Sample Date :09/22/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.70**	0.70	ug/L	EPA 8260B	09/25/2009
Toluene	**< 0.70**	0.70	ug/L	EPA 8260B	09/25/2009
Ethylbenzene	**< 0.70**	0.70	ug/L	EPA 8260B	09/25/2009
Total Xylenes	**< 0.70**	0.70	ug/L	EPA 8260B	09/25/2009
Methyl-t-butyl ether (MTBE)	**< 0.70**	0.70	ug/L	EPA 8260B	09/25/2009
Tert-Butanol	**16**	5.0	ug/L	EPA 8260B	09/25/2009
1,2-Dichloroethane-d4 (Surr)	94.6		% Recovery	EPA 8260B	09/25/2009
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	09/25/2009
TPH as Gasoline	**3700**	500	ug/L	EPA 8015B	09/25/2009
4-Bromofluorobenzene (Surr)	106		% Recovery	EPA 8015B	09/25/2009

Report Number : 70145

Date : 10/01/2009

QC Report : Method Blank Data

Project Name : **Sekhon Gas**

Project Number :

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	< 50	50	ug/L	EPA 8015B	09/24/2009
4-Bromofluorobenzene (Surr)	110		%	EPA 8015B	09/24/2009
TPH as Gasoline	< 50	50	ug/L	EPA 8015B	09/25/2009
4-Bromofluorobenzene (Surr)	108		%	EPA 8015B	09/25/2009
Lead	< 0.50	0.50	mg/Kg	EPA 6010B	09/23/2009
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/21/2009
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/21/2009
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/21/2009
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/21/2009
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/21/2009
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/21/2009
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	09/21/2009
1,2-Dichloroethane-d4 (Surr)	111		%	EPA 8260B	09/21/2009
Toluene - d8 (Surr)	105		%	EPA 8260B	09/21/2009
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/24/2009
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/24/2009
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/24/2009
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/24/2009
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/24/2009
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	09/24/2009
1,2-Dichloroethane-d4 (Surr)	105		%	EPA 8260B	09/24/2009
Toluene - d8 (Surr)	104		%	EPA 8260B	09/24/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/26/2009
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/26/2009
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/26/2009
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/26/2009
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/26/2009
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	09/26/2009
1,2-Dichloroethane-d4 (Surr)	105		%	EPA 8260B	09/26/2009
Toluene - d8 (Surr)	98.4		%	EPA 8260B	09/26/2009

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 70145

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 10/01/2009

Project Name : **Sekhon Gas**

Project Number :

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	70100-02	<0.0050	0.0399	0.0400	0.0322	0.0308	mg/Kg	EPA 8260B	9/21/09	80.7	77.1	4.48	70-130	25
Methyl-t-butyl ether	70100-02	<0.0050	0.0399	0.0400	0.0313	0.0297	mg/Kg	EPA 8260B	9/21/09	78.4	74.3	5.35	70-130	25
Tert-Butanol	70100-02	<0.0050	0.198	0.198	0.160	0.150	mg/Kg	EPA 8260B	9/21/09	81.0	75.3	7.30	70-130	25
Toluene	70100-02	<0.0050	0.0394	0.0395	0.0306	0.0293	mg/Kg	EPA 8260B	9/21/09	77.7	74.3	4.48	70-130	25
Lead	70145-01	9.2	50.0	50.0	54.2	53.8	mg/Kg	EPA 6010B	9/23/09	89.9	89.2	0.648	75-125	20
TPH as Gasoline	70153-04	<50	1100	1100	915	909	ug/L	EPA 8015B	9/24/09	83.1	82.7	0.573	70-130	25
TPH as Gasoline	70153-02	200	1100	1100	1110	1110	ug/L	EPA 8015B	9/25/09	82.8	82.1	0.805	70-130	25
Benzene	70136-17	<0.50	40.1	40.4	38.7	38.9	ug/L	EPA 8260B	9/24/09	96.4	96.5	0.140	70-130	25
Methyl-t-butyl ether	70136-17	<0.50	40.2	40.4	32.1	35.9	ug/L	EPA 8260B	9/24/09	80.0	88.9	10.6	70-130	25
Tert-Butanol	70136-17	<5.0	199	200	190	190	ug/L	EPA 8260B	9/24/09	95.2	94.8	0.405	70-130	25
Toluene	70136-17	<0.50	39.6	39.9	38.4	38.5	ug/L	EPA 8260B	9/24/09	96.9	96.6	0.366	70-130	25
Benzene	70156-04	<0.50	40.5	40.5	37.5	37.4	ug/L	EPA 8260B	9/26/09	92.5	92.3	0.235	70-130	25
Methyl-t-butyl ether	70156-04	<0.50	40.6	40.6	36.2	35.3	ug/L	EPA 8260B	9/26/09	89.3	87.0	2.54	70-130	25
Tert-Butanol	70156-04	<5.0	201	201	190	186	ug/L	EPA 8260B	9/26/09	94.5	92.6	2.07	70-130	25
Toluene	70156-04	<0.50	40.0	40.0	36.8	37.0	ug/L	EPA 8260B	9/26/09	92.0	92.6	0.538	70-130	25

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

QC Report : Laboratory Control Sample (LCS)

Project Name : **Sekhon Gas**

Project Number :

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
TPH as Gasoline	494	ug/L	EPA 8015B	9/24/09	93.7	70-130
TPH as Gasoline	490	ug/L	EPA 8015B	9/25/09	108	70-130
Lead	50.0	mg/Kg	EPA 6010B	9/23/09	107	85-115
Benzene	0.0404	mg/Kg	EPA 8260B	9/21/09	84.9	70-130
Methyl-t-butyl ether	0.0405	mg/Kg	EPA 8260B	9/21/09	78.6	70-130
Tert-Butanol	0.201	mg/Kg	EPA 8260B	9/21/09	77.6	70-130
Toluene	0.0399	mg/Kg	EPA 8260B	9/21/09	84.8	70-130
Benzene	40.6	ug/L	EPA 8260B	9/24/09	96.5	70-130
Methyl-t-butyl ether	40.6	ug/L	EPA 8260B	9/24/09	104	70-130
Tert-Butanol	202	ug/L	EPA 8260B	9/24/09	101	70-130
Toluene	40.1	ug/L	EPA 8260B	9/24/09	102	70-130
Benzene	40.6	ug/L	EPA 8260B	9/26/09	92.4	70-130
Methyl-t-butyl ether	40.6	ug/L	EPA 8260B	9/26/09	79.3	70-130
Tert-Butanol	202	ug/L	EPA 8260B	9/26/09	90.9	70-130
Toluene	40.1	ug/L	EPA 8260B	9/26/09	93.1	70-130

KIFF ANALYTICAL, LLC
2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

2795 2nd Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 70145

Page 1 of 1

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): Jim Ho	California EDF Report? ~~Yes~~ ☐ No
Company / Address: ERS / 1600 Riviera, Walnut Creek, CA 94596	Sampling Company Log Code:
Phone Number: (925)-938-1600	Global ID: T0600102286
Fax Number: " - 1610	EDF Deliverable To (Email Address): jho@erscorp.us
Project #: / P.O. #:	Bill to: ERS
Project Name: Sekhon G/S	Sampler Print Name: Logan Lindeman
	Sampler Signature: Logan Lindeman

Project Address:

Sample Designation	Sampling Date	Sampling Time	Container: 40 ml VOA	Container: Sleeve	Container: Poly	Container: Glass	Container: Tedlar	Container: Encore	Preservative: HCl	Preservative: HNO_3	Preservative: None	Matrix: Water	Matrix: Soil	Matrix: Air
COMP-1	9/22/09	1600				3							X	
USB5-8		1250	8						X			X		
USB8-7		1330	6						X			X		
SB1-5.5		1030				1		6					X	
SB16-15		0810	6						X			X		
USB10-7.5		1530	6						X			X		
USB7-7		1445	6						X			X		
MW10-GW		0800	1						X			X		

Analysis Request	CIRCLE METHOD
MTBE @ 0.5 ppb (EPA 8260B) + TBA	
BTEX (EPA 8260B)	
TPH Gas (EPA 8260B)	
5 Oxygenates (MTBE, DIPE, ETBE, TAME, TBA) (EPA 8260B)	
7 Oxygenates (5 oxy + EtOH, MeOH) (EPA 8260B)	
Lead Scav. (1,2 DCA & 1,2 EDB) (EPA 8260B)	
Volatile Halocarbons (EPA 8260B)	
Volatile Organics Full List (EPA 8260B)	
Volatile Organics (EPA 524.2 Drinking Water)	
TPH as Diesel (EPA 8015M)	
TPH as Motor Oil (EPA 8015M)	
CAM 17 Metals (EPA 200.7 / 6010)	
5 Waste Oil Metals (Cd,Cr,Ni,Pb,Zn) (EPA 200.7 / 6010)	
Mercury (EPA 245.1 / 7470 / 7471)	
Total Lead (EPA 200.7 / 6010)	
W.E.T. Lead (STLC)	
TPH gas by 8015	
HOLD	

Sample Designation	MTBE + TBA	BTEX	TPH gas by 8015	HOLD	TAT	For Lab Use Only
COMP-1	X	X	X		24 hr	01
USB5-8	X	X	X		X	02
USB8-7	X	X	X		X	03
SB1-5.5	X	X	X		X	04
SB16-15	X	X	X		X	05
USB10-7.5	X	X	X		X	06
USB7-7	X	X	X		X	07
MW10-GW	X	X		X		08

TAT: ☐ 12 hr ☐ 24 hr ☐ 48hr ☐ 72hr ☒ 1 wk

	Date	Time	
Relinquished by: Logan Lindeman	9/22/09	1705	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date 092209	Time 1705	Received by Laboratory: Kiff Analytical

Remarks:
- 24 hour TAT for COMP-1 only.
- Gas by 8015; BTEX, MTBE, TBA by 8260

Distribution: White - Lab; Pink - Originator
Rev: 060409

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KIFF Analytical LLC

SAMPLE RECEIPT CHECKLIST

RECEIVER: LDR (Initials)

SRG#: 70145 Date: 092209

Project ID: Sekhon GAS

Method of Receipt: [X] Courier [ ] Over-the-counter [ ] Shipper

COC Inspection

Is COC present?	[X] Yes	[ ] No		
Custody seals on shipping container?	[ ] Intact	[ ] Broken	[ ] Not present	[X] N/A
Is COC Signed by Relinquisher? [X] Yes [ ] No Dated?	[X] Yes	[ ] No		
Is sampler name legibly indicated on COC?	[X] Yes	[ ] No		
Is analysis or hold requested for all samples	[X] Yes	[ ] No		
Is the turnaround time indicated on COC?	[X] Yes	[ ] No		
Is COC free of whiteout and uninitialed cross-outs?	[X] Yes	[ ] No, Whiteout	[ ] No, Cross-outs	

Sample Inspection

Coolant Present: [X] Yes [ ] No (includes water)

Temperature °C 0.8 Therm. ID# ER-5 Initial LDR Date/Time 092209/2027 [ ] N/A

Are there custody seals on sample containers?	[ ] Intact	[ ] Broken	[X] Not present	
Do containers match COC?	[X] Yes	[ ] No	[ ] No, COC lists absent sample(s)	[ ] No, Extra sample(s) present
Are there samples matrices other than soil, water, air or carbon?	[ ] Yes	[X] No		
Are any sample containers broken, leaking or damaged?	[ ] Yes	[X] No		
Are preservatives indicated? [ ] Yes, on sample containers	[X] Yes, on COC	[ ] Not indicated	[ ] N/A	
Are preservatives correct for analyses requested?	[X] Yes	[ ] No	[ ] N/A	
Are samples within holding time for analyses requested?	[X] Yes	[ ] No		
Are the correct sample containers used for the analyses requested?	[X] Yes	[ ] No		
Is there sufficient sample to perform testing?	[X] Yes	[ ] No		
Does any sample contain product, have strong odor or are otherwise suspected to be hot?	[ ] Yes	[X] No		

Receipt Details

Matrix WA	Container type VOA	# of containers received 33
Matrix SO	Container type encore LDR	# of containers received 6
Matrix SO glass	Container type ~~sleeve~~ LDR	# of containers received 4

Date and Time Sample Put into Temp Storage Date: 092209 Time: 2031

Quicklog

Are the Sample ID's indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated
If Sample ID's are listed on both COC and containers, do they all match?	[X] Yes	[ ] No	[ ] N/A	
Is the Project ID indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated
If project ID is listed on both COC and containers, do they all match?	[X] Yes	[ ] No	[ ] N/A	
Are the sample collection dates indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated
If collection dates are listed on both COC and containers, do they all match?	[X] Yes	[ ] No	[ ] N/A	
Are the sample collection times indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated
If collection times are listed on both COC and containers, do they all match?	[X] Yes	[ ] No	[ ] N/A	

COMMENTS: Gas by 8015 for samples -01 and -04 direct shipped to Calscience via FedEx Priority Overnight, by Kiff Courier. LDR 092209-2020

O:\old_ed\samprec\Forms\Sample Receipt Checklist rev 051409.doc

Leaders in Analytical Science and Service

KIFF Analytical LLC

Subcontract Laboratory Report Attachments

2795 Second Street, Suite 300 Davis, CA 95618
tel 530.297.4800 fax 530.297.4808
www.kiffanalytical.com

Calscience
Environmental
Laboratories, Inc.

Supplemental Report 1

October 02, 2009

The original report has been revised/corrected.

Joel Kiff
Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Subject: **Calscience Work Order No.: 09-09-1708**
Client Reference: Sekhon Gas

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 9/23/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Wendy Hsiao for

Calscience Environmental
Laboratories, Inc.
Amanda Porter
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 09/23/09
Work Order No: 09-09-1708
Preparation: EPA 5035
Method: EPA 8015B (M)

Project: Sekhon Gas

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW12A-5.5	**09-09-1708-2-B**	**09/22/09 10:30**	**Solid**	**GC 11**	**09/23/09**	**09/24/09 03:43**	**090923B01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	0.17	0.698		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	82	60-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-285-1,690**	**N/A**	**Solid**	**GC 11**	**09/23/09**	**09/23/09 13:41**	**090923B01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	0.25	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	76	60-126	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 09-09-1708
Preparation: EPA 5035
Method: EPA 8015B (M)

Project: Sekhon Gas

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-285-1,690	**Solid**	**GC 11**	**09/23/09**	**09/23/09**	**090923B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	87	89	55-139	2	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-09-1708

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.

KIFF Analytical LLC

2795 2nd Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 1708

Page ___ of ___

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): Jim Ho	California EDF Report? ☒ Yes ☐ No
Company / Address: ERS/1600 Riviera Walnut Creek CA	Sampling Company Log Code:
Phone Number: 925-938-1600	Global ID: T0600102286
Fax Number: 925-938-1610	EDF Deliverable To (Email Address): jho@erscorp.us
Project #: / P.O. #: 7014S	Bill to: ERS
Project Name: Sekhon GAS	Sampler Print Name:
	Sampler Signature:

Project Address:	Sampling		Container					Preservative					Matrix			
Sample Designation	Date	Time	40 ml VOA	Sleeve	Poly	Glass	Tedlar	Encore	HCl	HNO_3	None			Water	Soil	Air
COMP-1	9/22/09	1600				1					X				X	
SB1-5.5	9/22/09	1030						3			X				X	

Analysis Request

CIRCLE METHOD

MTBE @ 0.5 ppb (EPA 8260B)	BTEX (EPA 8260B)	TPH Gas (EPA 8260B)	5 Oxygenates (MTBE, DIPE, ETBE, TAME, TBA) (EPA 8260B)	7 Oxygenates (5 oxy + EtOH, MeOH) (EPA 8260B)	Lead Scav. (1,2 DCA & 1,2 EDB) (EPA 8260B)	Volatile Halocarbons (EPA 8260B)	Volatile Organics Full List (EPA 8260B)	Volatile Organics (EPA 524.2 Drinking Water)	TPH as Diesel (EPA 8015M)	TPH as Motor Oil (EPA 8015M)	CAM 17 Metals (EPA 200.7 / 6010)	5 Waste Oil Metals (Cd,Cr,Ni,Pb,Zn) (EPA 200.7 / 6010)	Mercury (EPA 245.1 / 7470 / 7471)	Total Lead (EPA 200.7 / 6010)	W.E.T. Lead (STLC)	TPH 8015 by 8015				
																X	X				

TAT: ☐ 12 hr ☒ 24 hr ☐ 48hr ☐ 72hr ☒ 1 wk

For Lab Use Only

COMP-1	24hr
SB1-5.5	1wk

Relinquished by:	Date	Time	Received by:
Kiff Analytical	092209	1900	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
FedEx 866715688024	9/23/09	1015	Wbatu CEA

Remarks:

Distribution: White - Lab; Pink - Originator
Rev: 060409

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Calscience
7440 Lincoln Way
Garden Grove, CA 92841-1427
714-895-5494

1708

COC No. **70145** Page 1 of 1

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? YES

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Phone No.: 530-297-4800 | FAX No.: 530-297-4808

Project Number: | P.O. No.: 70145

Sampling Company Log Code: ERWC

Global ID: T0600102286

Deliverables to (Email Address): inbox@kiffanalytical.com

Project Name: Sekhon Gas

Project Address:

Sample Designation	Sampling Date	Sampling Time	Container / Preservative: ENCORE None	Container / Preservative: 8 Oz. Glass None	Matrix: Soil	Analysis Request: Hold Sub	Analysis Request: TPH as Gasoline BY EPA 8015 SUB	TAT: 4-Days	For Lab Use Only
COMP-1	09/22/09	16:00		1	X	X			
SB1-5.5	09/22/09	10:30	3		X		X	X	

Relinquished by:	Date	Time	Received by:
Troy H. Turpen	9/23/09	09:45	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:

Remarks: This is a revised COC for Work Order No. 09-09-1592, placing sample COMP-1 on Hold.

Bill to: Accounts Payable

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-09-1708

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: KIFF ANALYTICAL DATE: 9/23/09

TEMPERATURE: (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 3.1 °C - 0.2 °C (CF) = 2.9 °C ☑ **Blank** ☐ **Sample**

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter ☐ Metals Only ☐ PCBs Only **Initial:** WB

CUSTODY SEALS INTACT:

☑ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☐ N/A **Initial:** WB

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Initial:** WB

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ COC not relinquished. ☐ No date relinquished. ☐ No time relinquished.			
Sampler's name indicated on COC	☐	☑	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Correct containers and volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☐

CONTAINER TYPE:

Solid: ☐4ozCGJ ☑8ozCGJ ☐16ozCGJ ☐Sleeve ☑EnCores® ☐TerraCores® ☐_____

Water: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na** ☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® ☐_____ **Other:** ☐_____ **Checked/Labeled by:** WB

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelop **Reviewed by:** _____

Preservative: **h:** HCL **n:** HNO3 **na$_2$:** $Na_2S_2O_3$ **Na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **znna:** $ZnAc_2$+NaOH **f:** Field-filtered **Scanned by:** WB

KIFF Analytical LLC

Report Number : 70166
Date : 10/02/2009

Jim Ho
Environmental Risk Services Corporation
1600 Riviera Avenue, Suite 310
Walnut Creek, CA 94596

Subject : 1 Soil Sample and 2 Water Samples
Project Name : Sekhon Gas
Project Number :

Dear Dr. Ho,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

KIFF Analytical LLC

Report Number : 70166
Date : 10/02/2009

Project Name : **Sekhon Gas**
Project Number :

Sample : **MW5B-9** Matrix : Water Lab Number : 70166-01
Sample Date :09/23/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	09/25/2009
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	09/25/2009
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	09/25/2009
Total Xylenes	**1.6**	0.50	ug/L	EPA 8260B	09/25/2009
Methyl-t-butyl ether (MTBE)	**5.1**	0.50	ug/L	EPA 8260B	09/25/2009
Tert-Butanol	**58**	5.0	ug/L	EPA 8260B	09/25/2009
1,2-Dichloroethane-d4 (Surr)	98.3		% Recovery	EPA 8260B	09/25/2009
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	09/25/2009
TPH as Gasoline (Note: Moderately Weathered Gasoline)	**1000**	150	ug/L	EPA 8015B	09/26/2009
4-Bromofluorobenzene (Surr)	109		% Recovery	EPA 8015B	09/26/2009

KIFF Analytical LLC

Report Number : 70166

Date : 10/02/2009

Project Name : **Sekhon Gas**

Project Number :

Sample : **MW11-GW** Matrix : Water Lab Number : 70166-02

Sample Date :09/23/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	09/26/2009
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	09/26/2009
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	09/26/2009
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	09/26/2009
Methyl-t-butyl ether (MTBE)	**140**	0.50	ug/L	EPA 8260B	09/26/2009
Tert-Butanol	**< 5.0**	5.0	ug/L	EPA 8260B	09/26/2009
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	09/26/2009
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	09/26/2009
TPH as Gasoline	**< 50**	50	ug/L	EPA 8015B	09/26/2009
4-Bromofluorobenzene (Surr)	110		% Recovery	EPA 8015B	09/26/2009

KIFF Analytical LLC

Report Number : 70166

Date : 10/02/2009

Project Name : **Sekhon Gas**

Project Number :

Sample : **SMW13-7.5** Matrix : Soil Lab Number : 70166-03

Sample Date :09/23/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**0.044**	0.025	mg/Kg	EPA 8260B	09/24/2009
Toluene	**< 0.025**	0.025	mg/Kg	EPA 8260B	09/24/2009
Ethylbenzene	**1.6**	0.025	mg/Kg	EPA 8260B	09/24/2009
Total Xylenes	**3.9**	0.025	mg/Kg	EPA 8260B	09/24/2009
Methyl-t-butyl ether (MTBE)	**< 0.025**	0.025	mg/Kg	EPA 8260B	09/24/2009
Tert-Butanol	**< 0.15**	0.15	mg/Kg	EPA 8260B	09/24/2009
1,2-Dichloroethane-d4 (Surr)	97.8		% Recovery	EPA 8260B	09/24/2009
Toluene - d8 (Surr)	96.9		% Recovery	EPA 8260B	09/24/2009
2-Bromochlorobenzene (Surr)	95.4		% Recovery	EPA 8260B	09/24/2009

Report Number : 70166

Date : 10/02/2009

QC Report : Method Blank Data

Project Name : **Sekhon Gas**

Project Number :

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	< 50	50	ug/L	EPA 8015B	09/26/2009
4-Bromofluorobenzene (Surr)	110		%	EPA 8015B	09/26/2009
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/23/2009
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/23/2009
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/23/2009
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/23/2009
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/23/2009
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/23/2009
1,2-Dichloroethane-d4 (Surr)	106		%	EPA 8260B	09/23/2009
Toluene - d8 (Surr)	101		%	EPA 8260B	09/23/2009
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/26/2009
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/26/2009
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/26/2009
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/26/2009
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/26/2009
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	09/26/2009
1,2-Dichloroethane-d4 (Surr)	101		%	EPA 8260B	09/26/2009
Toluene - d8 (Surr)	99.9		%	EPA 8260B	09/26/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/25/2009
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/25/2009
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/25/2009
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/25/2009
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/25/2009
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	09/25/2009
1,2-Dichloroethane-d4 (Surr)	99.5		%	EPA 8260B	09/25/2009
Toluene - d8 (Surr)	101		%	EPA 8260B	09/25/2009

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 70166

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 10/02/2009

Project Name : **Sekhon Gas**

Project Number :

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH as Gasoline	70166-02	<50	1100	1100	843	837	ug/L	EPA 8015B	9/26/09	76.6	76.1	0.735	70-130	25
Benzene	70145-01	<0.0050	0.0400	0.0396	0.0359	0.0359	mg/Kg	EPA 8260B	9/23/09	89.8	90.8	1.10	70-130	25
Methyl-t-butyl ether	70145-01	<0.0050	0.0400	0.0396	0.0326	0.0329	mg/Kg	EPA 8260B	9/23/09	81.5	83.1	1.93	70-130	25
Tert-Butanol	70145-01	0.025	0.198	0.197	0.190	0.199	mg/Kg	EPA 8260B	9/23/09	83.3	88.4	5.93	70-130	25
Toluene	70145-01	<0.0050	0.0395	0.0391	0.0358	0.0356	mg/Kg	EPA 8260B	9/23/09	90.6	91.1	0.497	70-130	25
Benzene	70154-09	2.7	40.6	40.6	43.7	41.9	ug/L	EPA 8260B	9/26/09	101	96.5	4.55	70-130	25
Methyl-t-butyl ether	70154-09	<0.50	40.6	40.6	37.8	37.6	ug/L	EPA 8260B	9/26/09	93.1	92.4	0.741	70-130	25
Tert-Butanol	70154-09	<5.0	202	202	204	198	ug/L	EPA 8260B	9/26/09	101	98.3	2.67	70-130	25
Toluene	70154-09	<0.50	40.1	40.1	41.0	39.4	ug/L	EPA 8260B	9/26/09	102	98.2	3.99	70-130	25
Benzene	70165-12	<0.50	40.6	40.6	39.4	38.5	ug/L	EPA 8260B	9/25/09	97.0	94.7	2.36	70-130	25
Methyl-t-butyl ether	70165-12	<0.50	40.6	40.6	41.5	38.4	ug/L	EPA 8260B	9/25/09	102	94.6	7.70	70-130	25
Tert-Butanol	70165-12	<5.0	202	202	200	198	ug/L	EPA 8260B	9/25/09	98.9	98.2	0.758	70-130	25
Toluene	70165-12	<0.50	40.1	40.1	40.8	38.2	ug/L	EPA 8260B	9/25/09	102	95.2	6.67	70-130	25

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 70166

QC Report : Laboratory Control Sample (LCS)

Date : 10/02/2009

Project Name : **Sekhon Gas**

Project Number :

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
TPH as Gasoline	494	ug/L	EPA 8015B	9/26/09	94.0	70-130
Benzene	0.0387	mg/Kg	EPA 8260B	9/23/09	89.0	70-130
Methyl-t-butyl ether	0.0387	mg/Kg	EPA 8260B	9/23/09	81.6	70-130
Tert-Butanol	0.192	mg/Kg	EPA 8260B	9/23/09	82.0	70-130
Toluene	0.0382	mg/Kg	EPA 8260B	9/23/09	89.8	70-130
Benzene	40.0	ug/L	EPA 8260B	9/26/09	97.6	70-130
Methyl-t-butyl ether	40.6	ug/L	EPA 8260B	9/26/09	91.6	70-130
Tert-Butanol	202	ug/L	EPA 8260B	9/26/09	98.4	70-130
Toluene	40.0	ug/L	EPA 8260B	9/26/09	98.7	70-130
Benzene	40.5	ug/L	EPA 8260B	9/25/09	96.1	70-130
Methyl-t-butyl ether	40.5	ug/L	EPA 8260B	9/25/09	99.0	70-130
Tert-Butanol	201	ug/L	EPA 8260B	9/25/09	98.3	70-130
Toluene	40.0	ug/L	EPA 8260B	9/25/09	101	70-130

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

2795 2nd Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 70166

Page 1 of 1

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): Jim Ho

California EDF Report? ☒ Yes ☐ No

Company / Address: 1600 Riviera Ave Suite 310, Walnut Creek CA 94596

~~Sampling Company Log Code:~~

Phone Number: 925 938-1600

Global ID: T0600102286

Fax Number: 925 938-1610

EDF Deliverable To (Email Address): jhoa@cambriaco.us

Project #: ~~6600 Foothill~~

P.O. #:

Bill to: EPS

Project Name: Sethon Gas

Sampler Print Name: Tyson Fulmer

Sampler Signature: [signature]

Project Address: 6600 Foothill Oakland CA

Sample Designation	Date	Time	40 ml VOA	Sleeve	Poly	Glass	Tedlar	5035	HCl	HNO3	None		Water	Soil	Air	MTBE @ 0.5 ppb (EPA 8260B) TBA	BTEX (EPA 8260B)	TPH Gas ~~(EPA 8260B)~~ 8015	5 Oxygenates (MTBE, DIPE, ETBE, TAME, TBA) (EPA 8260B)	7 Oxygenates (5 oxy + EtOH, MeOH) (EPA 8260B)	Lead Scav. (1,2 DCA & 1,2 EDB) (EPA 8260B)	Volatile Halocarbons (EPA 8260B)	Volatile Organics Full List (EPA 8260B)	Volatile Organics (EPA 524.2 Drinking Water)	TPH as Diesel (EPA 8015M)	TPH as Motor Oil (EPA 8015M)	CAM 17 Metals (EPA 200.7 / 6010)	5 Waste Oil Metals (Cd,Cr,Ni,Pb,Zn) (EPA 200.7 / 6010)	Mercury (EPA 245.1 / 7470 / 7471)	Total Lead (EPA 200.7 / 6010)	W.E.T. Lead (STLC)					For Lab Use Only
MWSB-9	9/23/09	11:00	6						6				6			X	X	X																		01
MW11-GW	9/23/09	7:30	6						6				6			X	X	X																		02
MW13-7.5	9/23	15:30				1		6			~~6~~ 7			~~6~~ 7		X	X	X																		03

CIRCLE METHOD

TAT: ☐ 12 hr ☐ 24 hr ☐ 48hr ☐ 72hr ☒ 1 wk

Relinquished by:	Date	Time	Received by:
Tyson Fulmer	9/23/09	1535	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
	092309	1535	[signature] Kiff Analytical

Remarks: MTBE, BTEX, TBA by 8260B
TPHg by 8015

Distribution: White - Lab; Pink - Originator
Rev: 060409

KIFF Analytical LLC

SAMPLE RECEIPT CHECKLIST

RECEIVER: TJB (Initials)

SRG#: 70166 Date: 092309

Project ID: Sekhon Gas

Method of Receipt: [X] Courier [ ] Over-the-counter [ ] Shipper

COC Inspection

Is COC present?	[X] Yes	[ ] No		
Custody seals on shipping container?	[ ] Intact	[ ] Broken	[ ] Not present	[X] N/A
Is COC Signed by Relinquisher? [X] Yes [ ] No Dated?	[X] Yes	[ ] No		
Is sampler name legibly indicated on COC?	[X] Yes	[ ] No		
Is analysis or hold requested for all samples	[X] Yes	[ ] No		
Is the turnaround time indicated on COC?	[X] Yes	[ ] No		
Is COC free of whiteout and uninitialed cross-outs?	[ ] Yes	[ ] No, Whiteout	[X] No, Cross-outs	

Sample Inspection

Coolant Present: [X] Yes [ ] No (includes water)

Temperature °C 3.2 Therm. ID# IR-5 Initial NLP Date/Time 092309 /1695 [ ] N/A

Are there custody seals on sample containers?	[ ] Intact	[ ] Broken	[X] Not present	
Do containers match COC? [X] Yes [ ] No [ ] No, COC lists absent sample(s)	[ ] No, Extra sample(s) present			
Are there samples matrices other than soil, water, air or carbon?	[ ] Yes	[X] No		
Are any sample containers broken, leaking or damaged?	[ ] Yes	[X] No		
Are preservatives indicated? [X] Yes, on sample containers	[X] Yes, on COC	[ ] Not indicated	[ ] N/A	
Are preservatives correct for analyses requested?	[X] Yes	[ ] No	[ ] N/A	
Are samples within holding time for analyses requested?	[X] Yes	[ ] No		
Are the correct sample containers used for the analyses requested?	[X] Yes	[ ] No		
Is there sufficient sample to perform testing?	[X] Yes	[ ] No		
Does any sample contain product, have strong odor or are otherwise suspected to be hot?	[ ] Yes	[X] No		

Receipt Details

Matrix WA Container type VOA # of containers received 12

Matrix SO Container type 8oz glass # of containers received 1

Matrix SO Container type encore # of containers received 6

Date and Time Sample Put into Temp Storage Date: 092309 Time: 1905

Quicklog

Are the Sample ID's indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated	
If Sample ID's are listed on both COC and containers, do they all match?	[X] Yes	[ ] No	[ ] N/A		
Is the Project ID indicated:	[X] On COC	[ ] On sample container(s)	[ ] On Both	[ ] Not indicated	
If project ID is listed on both COC and containers, do they all match?	[ ] Yes	[ ] No	[X] N/A		
Are the sample collection dates indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated	
If collection dates are listed on both COC and containers, do they all match?	[X] Yes	[ ] No	[ ] N/A		
Are the sample collection times indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated	
If collection times are listed on both COC and containers, do they all match?	[X] Yes	[ ] No	[ ] N/A		

COMMENTS:

Leaders in Analytical Science and Service

KIFF Analytical LLC

Subcontract Laboratory Report Attachments

2795 Second Street, Suite 300 Davis, CA 95618
tel 530.297.4800 fax 530.297.4808
www.kiffanalytical.com

Calscience Environmental Laboratories, Inc.

Supplemental Report 1

October 02, 2009

The original report has been revised/corrected.

Joel Kiff
Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Subject: **Calscience Work Order No.: 09-09-1799**
Client Reference: Sekhon Gas

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 9/24/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Wendy Hsiao for

Calscience Environmental
Laboratories, Inc.
Amanda Porter
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 09/24/09
Work Order No: 09-09-1799
Preparation: EPA 5035
Method: EPA 8015B (M)

Project: Sekhon Gas

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SMW13-7.5	**09-09-1799-1-D**	**09/23/09 15:30**	**Solid**	**GC 11**	**09/24/09**	**09/25/09 22:32**	**090925B02**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	170	11	42.1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	103	60-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-285-1,694**	**N/A**	**Solid**	**GC 11**	**09/25/09**	**09/25/09 15:48**	**090925B02**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	10	40		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	80	60-126	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 09-09-1799
Preparation: EPA 5035
Method: EPA 8015B (M)

Project: Sekhon Gas

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-285-1,694	**Solid**	**GC 11**	**09/25/09**	**09/25/09**	**090925B02**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	84	85	55-139	1	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-09-1799

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.

KIFF Analytical LLC

2795 2nd Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 1799

Page 1 of 1

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): Troy Jurpen

Company / Address: Kiff Analytical 2795 2nd st, ste. 300 Davis, CA 95618

Phone Number: (530) 297-4800

Fax Number: (530) 297-4802

Project #:

P.O. #: 70166

Project Name: Sekhon Gas

Project Address:

California EDF Report? ☒ Yes ☐ No

Sampling Company Log Code: ERWC

Global ID: T0600102286

EDF Deliverable To (Email Address): inbox@kiffanalytical.com

Bill to:

Sampler Print Name:

Sampler Signature:

Sample Designation	Sampling: Date	Sampling: Time	Container: 40 ml VOA	Container: Sleeve	Container: Poly	Container: Glass	Container: Tedlar	Container: Encore	Preservative: HCl	Preservative: HNO_3	Preservative: None	Matrix: Water	Matrix: Soil	Matrix: Air
MW13-7.5	092309	1530						3			3		3	

Analysis Request

MTBE @ 0.5 ppb (EPA 8260B)	BTEX (EPA 8260B)	TPH Gas (EPA 8260B)	5 Oxygenates (MTBE, DIPE, ETBE, TAME, TBA) (EPA 8260B)	7 Oxygenates (5 oxy + EtOH, MeOH) (EPA 8260B)	Lead Scav. (1,2 DCA & 1,2 EDB) (EPA 8260B)	Volatile Halocarbons (EPA 8260B)	Volatile Organics Full List (EPA 8260B)	Volatile Organics (EPA 524.2 Drinking Water)	TPH as Diesel (EPA 8015M)	TPH as Motor Oil (EPA 8015M)	CAM 17 Metals (EPA 200.7 / 6010)	5 Waste Oil Metals (Cd,Cr,Ni,Pb,Zn) (EPA 200.7 / 6010)	Mercury (EPA 245.1 / 7470 / 7471)	Total Lead (EPA 200.7 / 6010)	W.E.T. Lead (STLC)	CIRCLE METHOD: TPH Gas (EPA 8015)				
																X					

TAT: ☐ 12 hr ☐ 24 hr ☐ 48hr ☐ 72hr ☐ 1 wk — 4 Days

For Lab Use Only

Relinquished by:	Date	Time	Received by:
Tim Kiff Analytical	092309	1600	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
FEDEX #866715859218	9/24/09	10:30	Peggy A. CEL

Remarks:

Distribution: White - Lab; Pink - Originator
Rev: 060409

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-09-1179

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: KIFF

DATE: 09/24/09

TEMPERATURE: (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 3.0 °C - 0.2 °C (CF) = 2.8 °C ☐ Blank ☑ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter ☐ Metals Only ☐ PCBs Only **Initial:** PS

CUSTODY SEALS INTACT:

☑ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☐ N/A **Initial:** PS

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Initial:** JP

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ COC not relinquished. ☐ No date relinquished. ☐ No time relinquished.			
Sampler's name indicated on COC	☐	☑	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Correct containers and volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve ☑3 EnCores® ☐TerraCores® ~~☑ Bag/Tube~~ YL 9/24/09

Water: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na** ☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® ☐_____ **Other:** ☐_____ **Checked/Labeled by:** JP

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelop **Reviewed by:** YL

Preservative: **h:** HCL **n:** HNO3 **na$_2$:** $Na_2S_2O_3$ **Na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **znna:** $ZnAc_2$+NaOH **f:** Field-filtered **Scanned by:** _____

KIFF Analytical LLC

Report Number : 70190
Date : 10/02/2009

Jim Ho
Environmental Risk Services Corporation
1600 Riviera Avenue, Suite 310
Walnut Creek, CA 94596

Subject : 1 Soil Sample and 1 Water Sample
Project Name : Sekhon Gas
Project Number :

Dear Dr. Ho,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

KIFF Analytical LLC

Report Number : 70190

Date : 10/02/2009

Project Name : **Sekhon Gas**

Project Number :

Sample : **MW13A-8** Matrix : Soil Lab Number : 70190-01

Sample Date :09/24/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.025**	0.025	mg/Kg	EPA 8260B	09/24/2009
Toluene	**< 0.025**	0.025	mg/Kg	EPA 8260B	09/24/2009
Ethylbenzene	**< 0.025**	0.025	mg/Kg	EPA 8260B	09/24/2009
Total Xylenes	**< 0.025**	0.025	mg/Kg	EPA 8260B	09/24/2009
Methyl-t-butyl ether (MTBE)	**< 0.025**	0.025	mg/Kg	EPA 8260B	09/24/2009
Tert-Butanol	**< 0.15**	0.15	mg/Kg	EPA 8260B	09/24/2009
1,2-Dichloroethane-d4 (Surr)	99.2		% Recovery	EPA 8260B	09/24/2009
Toluene - d8 (Surr)	112		% Recovery	EPA 8260B	09/24/2009
2-Bromochlorobenzene (Surr)	91.4		% Recovery	EPA 8260B	09/24/2009

KIFF Analytical LLC

Report Number : 70190
Date : 10/02/2009

Project Name : **Sekhon Gas**
Project Number :

Sample : **SMW13-GW** Matrix : Water Lab Number : 70190-02
Sample Date :09/24/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**0.72**	0.50	ug/L	EPA 8260B	09/26/2009
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	09/26/2009
Ethylbenzene	**0.52**	0.50	ug/L	EPA 8260B	09/26/2009
Total Xylenes	**0.76**	0.50	ug/L	EPA 8260B	09/26/2009
Methyl-t-butyl ether (MTBE)	**2.0**	0.50	ug/L	EPA 8260B	09/26/2009
Tert-Butanol	**< 5.0**	5.0	ug/L	EPA 8260B	09/26/2009
1,2-Dichloroethane-d4 (Surr)	98.2		% Recovery	EPA 8260B	09/26/2009
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	09/26/2009
TPH as Gasoline	**< 50**	50	ug/L	EPA 8015B	09/26/2009
4-Bromofluorobenzene (Surr)	108		% Recovery	EPA 8015B	09/26/2009

Report Number : 70190

Date : 10/02/2009

QC Report : Method Blank Data

Project Name : **Sekhon Gas**

Project Number :

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	< 50	50	ug/L	EPA 8015B	09/26/2009
4-Bromofluorobenzene (Surr)	110		%	EPA 8015B	09/26/2009
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/23/2009
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/23/2009
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/23/2009
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/23/2009
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/23/2009
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/23/2009
1,2-Dichloroethane-d4 (Surr)	106		%	EPA 8260B	09/23/2009
Toluene - d8 (Surr)	101		%	EPA 8260B	09/23/2009
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/26/2009
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/26/2009
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/26/2009
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/26/2009
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/26/2009
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	09/26/2009
1,2-Dichloroethane-d4 (Surr)	100		%	EPA 8260B	09/26/2009
Toluene - d8 (Surr)	102		%	EPA 8260B	09/26/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 70190

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 10/02/2009

Project Name : **Sekhon Gas**

Project Number :

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH as Gasoline	70166-02	<50	1100	1100	843	837	ug/L	EPA 8015B	9/26/09	76.6	76.1	0.735	70-130	25
Benzene	70145-01	<0.0050	0.0400	0.0396	0.0359	0.0359	mg/Kg	EPA 8260B	9/23/09	89.8	90.8	1.10	70-130	25
Methyl-t-butyl ether	70145-01	<0.0050	0.0400	0.0396	0.0326	0.0329	mg/Kg	EPA 8260B	9/23/09	81.5	83.1	1.93	70-130	25
Tert-Butanol	70145-01	0.025	0.198	0.197	0.190	0.199	mg/Kg	EPA 8260B	9/23/09	83.3	88.4	5.93	70-130	25
Toluene	70145-01	<0.0050	0.0395	0.0391	0.0358	0.0356	mg/Kg	EPA 8260B	9/23/09	90.6	91.1	0.497	70-130	25
Benzene	70154-10	<0.50	40.6	40.6	39.9	39.5	ug/L	EPA 8260B	9/26/09	98.4	97.3	1.11	70-130	25
Methyl-t-butyl ether	70154-10	0.98	40.6	40.6	42.2	41.9	ug/L	EPA 8260B	9/26/09	101	101	0.716	70-130	25
Tert-Butanol	70154-10	<5.0	202	202	203	202	ug/L	EPA 8260B	9/26/09	100	100	0.242	70-130	25
Toluene	70154-10	<0.50	40.1	40.1	41.6	41.2	ug/L	EPA 8260B	9/26/09	104	103	0.799	70-130	25

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 70190

QC Report : Laboratory Control Sample (LCS)

Date : 10/02/2009

Project Name : **Sekhon Gas**

Project Number :

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
TPH as Gasoline	494	ug/L	EPA 8015B	9/26/09	94.0	70-130
Benzene	0.0387	mg/Kg	EPA 8260B	9/23/09	89.0	70-130
Methyl-t-butyl ether	0.0387	mg/Kg	EPA 8260B	9/23/09	81.6	70-130
Tert-Butanol	0.192	mg/Kg	EPA 8260B	9/23/09	82.0	70-130
Toluene	0.0382	mg/Kg	EPA 8260B	9/23/09	89.8	70-130
Benzene	40.8	ug/L	EPA 8260B	9/26/09	96.7	70-130
Methyl-t-butyl ether	40.8	ug/L	EPA 8260B	9/26/09	100	70-130
Tert-Butanol	203	ug/L	EPA 8260B	9/26/09	98.2	70-130
Toluene	40.3	ug/L	EPA 8260B	9/26/09	101	70-130

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

2795 2nd Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 70190

Page 1 of 1

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): Jim Ho	California EDF Report? ☒ Yes ☐ No
Company / Address: ERS, 1600 Riviera Ave, Walnut Creek, CA 94596	Sampling Company Log Code:
Phone Number: (925) 938-1600	Global ID: T0600102286
Fax Number: " -1610	EDF Deliverable To (Email Address): jho@erscorp.us
Project #:	P.O. #:
	Bill to: ERS
Project Name: Sekhon Cars	Sampler Print Name: Logan Linderman
	Sampler Signature:
Project Address: 6600 Foothill	

Analysis Request

CIRCLE METHOD

TAT: ☐ 12 hr ☐ 24 hr ☐ 48hr ☐ 72hr ☒ 1 wk

Sample Designation	Sampling Date	Sampling Time	Container: 40 ml VOA	Container: Sleeve	Container: Poly	Container: Glass	Container: Tedlar	Container: Encore	Preservative: HCl	Preservative: HNO_3	Preservative: None	Preservative:	Preservative:	Matrix: Water	Matrix: Soil	Matrix: Air	MTBE @ 0.5 ppb (EPA 8260B) + TBA	BTEX (EPA 8260B)	TPH Gas (EPA 8260B)	5 Oxygenates (MTBE, DIPE, ETBE, TAME, TBA) (EPA 8260B)	7 Oxygenates (5 oxy + EtOH, MeOH) (EPA 8260B)	Lead Scav. (1,2 DCA & 1,2 EDB) (EPA 8260B)	Volatile Halocarbons (EPA 8260B)	Volatile Organics Full List (EPA 8260B)	Volatile Organics (EPA 524.2 Drinking Water)	TPH as Diesel (EPA 8015M)	TPH as Motor Oil (EPA 8015M)	CAM 17 Metals (EPA 200.7 / 6010)	5 Waste Oil Metals (Cd,Cr,Ni,Pb,Zn) (EPA 200.7 / 6010)	Mercury (EPA 245.1 / 7470 / 7471)	Total Lead (EPA 200.7 / 6010)	W.E.T. Lead (STLC)	TPH Gas by 8015				For Lab Use Only
MW13B-8	9/24/09	1500				X		6			X				X		X	X															X				01
MW13-GW	↓	0830	6						X					X			X	X															X				02

Relinquished by:	Date: 9/24/09	Time: 1530	Received by:
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date: 092409	Time: 1530	Received by Laboratory: Kiff Analytical

Remarks:

Distribution: White - Lab; Pink - Originator
Rev: 060409

KIFF Analytical LLC

SAMPLE RECEIPT CHECKLIST

RECEIVER: LJR (Initials)

SRG#: 70190 Date: 092409

Project ID: Sekhon Gas

Method of Receipt: [X] Courier [ ] Over-the-counter [ ] Shipper

COC Inspection

Is COC present?	[X] Yes	[ ] No		
Custody seals on shipping container?	[X] Intact	[ ] Broken	[ ] Not present	[X] N/A
Is COC Signed by Relinquisher? [X] Yes [ ] No Dated?	[X] Yes	[ ] No		
Is sampler name legibly indicated on COC?	[X] Yes	[ ] No		
Is analysis or hold requested for all samples	[X] Yes	[ ] No		
Is the turnaround time indicated on COC?	[X] Yes	[ ] No		
Is COC free of whiteout and uninitialed cross-outs?	[ ] Yes	[ ] No, Whiteout	[X] No, Cross-outs	

Sample Inspection

Coolant Present: [X] Yes [ ] No (includes water)

Temperature °C 1.8 Therm. ID# IR-5 Initial LJR Date/Time 092409/1928 [ ] N/A

Are there custody seals on sample containers?	[ ] Intact	[ ] Broken	[X] Not present	
Do containers match COC? [X] Yes [ ] No	[ ] No, COC lists absent sample(s)	[ ] No, Extra sample(s) present		
Are there samples matrices other than soil, water, air or carbon?	[ ] Yes	[X] No		
Are any sample containers broken, leaking or damaged?	[ ] Yes	[X] No		
Are preservatives indicated? [ ] Yes, on sample containers	[X] Yes, on COC	[ ] Not indicated	[ ] N/A	
Are preservatives correct for analyses requested?	[X] Yes	[ ] No	[ ] N/A	
Are samples within holding time for analyses requested?	[X] Yes	[ ] No		
Are the correct sample containers used for the analyses requested?	[X] Yes	[ ] No		
Is there sufficient sample to perform testing?	[X] Yes	[ ] No		
Does any sample contain product, have strong odor or are otherwise suspected to be hot?	[ ] Yes	[X] No		

Receipt Details

Matrix WA	Container type VOA	# of containers received 6
Matrix SO	Container type encore	# of containers received 6
Matrix	Container type	# of containers received

Date and Time Sample Put into Temp Storage Date: 092409 Time: 1928

Quicklog

Are the Sample ID's indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated
If Sample ID's are listed on both COC and containers, do they all match?	[X] Yes	[ ] No	[ ] N/A	
Is the Project ID indicated:	[X] On COC	[ ] On sample container(s)	[ ] On Both	[ ] Not indicated
If project ID is listed on both COC and containers, do they all match?	[ ] Yes	[ ] No	[ ] N/A	
Are the sample collection dates indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated
If collection dates are listed on both COC and containers, do they all match?	[X] Yes	[ ] No	[ ] N/A	
Are the sample collection times indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated
If collection times are listed on both COC and containers, do they all match?	[X] Yes	[ ] No	[ ] N/A	

COMMENTS:

Leaders in Analytical Science and Service

KIFF Analytical LLC

Subcontract Laboratory Report Attachments

2795 Second Street, Suite 300 Davis, CA 95618
tel 530.297.4800 fax 530.297.4808
www.kiffanalytical.com

Calscience
Environmental
Laboratories, Inc.

Supplemental Report 1

October 02, 2009

The original report has been revised/corrected.

Joel Kiff
Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Subject: **Calscience Work Order No.: 09-09-1915**
Client Reference: Sekhon Gas

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 9/25/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Wendy Hsiao for

Calscience Environmental
Laboratories, Inc.
Amanda Porter
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 09/25/09
Work Order No: 09-09-1915
Preparation: EPA 5035
Method: EPA 8015B (M)

Project: Sekhon Gas

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW13A-8	**09-09-1915-1-D**	**09/24/09 15:00**	**Solid**	**GC 4**	**09/25/09**	**09/28/09 21:06**	**090928B02**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	800	48	194		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	86	60-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-285-1,700**	**N/A**	**Solid**	**GC 4**	**09/28/09**	**09/28/09 12:15**	**090928B02**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	10	40		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	70	60-126	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 09-09-1915
Preparation: EPA 5035
Method: EPA 8015B (M)

Project: Sekhon Gas

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-285-1,700	**Solid**	**GC 4**	**09/28/09**	**09/28/09**	**090928B02**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	87	89	55-139	2	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-09-1915

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.

KIFF Analytical LLC

2795 2nd Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 1915

Page ___ of ___

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): Troy Turpen

Company / Address: Kiff Analytical 2795 2nd st ste 300 Davis CA

Phone Number: 530-297-4800

Fax Number: 530-297-4808

Project #: P.O. #: 70190

Project Name: Sekhon Gas

California EDF Report? ☒ Yes ☐ No

Sampling Company Log Code: ERWC

Global ID: T0600102286

EDF Deliverable To (Email Address): inbox@kiffanalytical.com

Bill to: Accounts Payable

Sampler Print Name:

Sampler Signature:

Project Address: 6600 Foothill Oakland, CA

Sample Designation	Sampling: Date	Sampling: Time	Container: 40 ml VOA	Container: Sleeve	Container: Poly	Container: Glass	Container: Tedlar	Container: Encore	Preservative: HCl	Preservative: HNO_3	Preservative: None	Preservative:	Preservative:	Matrix: Water	Matrix: Soil	Matrix: Air	Matrix:
MW 13B-8	9/24/09	1500						3			X				X		

Analysis Request — CIRCLE METHOD

MTBE @ 0.5 ppb (EPA 8260B)	BTEX (EPA 8260B)	TPH Gas (EPA 8260B)	5 Oxygenates (MTBE, DIPE, ETBE, TAME, TBA) (EPA 8260B)	7 Oxygenates (5 oxy + EtOH, MeOH) (EPA 8260B)	Lead Scav. (1,2 DCA & 1,2 EDB) (EPA 8260B)	Volatile Halocarbons (EPA 8260B)	Volatile Organics Full List (EPA 8260B)	Volatile Organics (EPA 524.2 Drinking Water)	TPH as Diesel (EPA 8015M)	TPH as Motor Oil (EPA 8015M)	CAM 17 Metals (EPA 200.7 / 6010)	5 Waste Oil Metals (Cd,Cr,Ni,Pb,Zn) (EPA 200.7 / 6010)	Mercury (EPA 245.1 / 7470 / 7471)	Total Lead (EPA 200.7 / 6010)	W.E.T. Lead (STLC)					
																	X TPH gas by 8015				

TAT: ☐ 12 hr ☐ 24 hr ☐ 48hr ☐ 72hr ☒ 1 wk

For Lab Use Only

Relinquished by:	Date	Time	Received by:
Kiff Analytical	092409	1900	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
Fedex 866715688149	9/25/09	1030	

Remarks:

Distribution: White - Lab; Pink - Originator
Rev: 060409

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-09-[1][9][1][5]

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Kiff

DATE: 9/25/09

TEMPERATURE: (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 5.1 °C - 0.2 °C (CF) = 4.9 °C ☑ **Blank** ☐ **Sample**

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter ☐ Metals Only ☐ PCBs Only **Initial:** JH

CUSTODY SEALS INTACT:

☑ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☐ N/A **Initial:** JH

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Initial:** YL

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ COC not relinquished. ☐ No date relinquished. ☐ No time relinquished.			
Sampler's name indicated on COC	☐	☑	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Correct containers and volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve ☑3 ☑EnCores® ☐TerraCores® ☐_____

Water: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na** ☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® ☐_____ **Other:** ☐_____ **Checked/Labeled by:** YL

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelop **Reviewed by:** HL

Preservative: **h:** HCL **n:** HNO3 **na$_2$:** $Na_2S_2O_3$ **Na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **znna:** $ZnAc_2$+NaOH **f:** Field-filtered **Scanned by:** YL

KIFF Analytical LLC

Report Number : 70211
Date : 10/01/2009

Jim Ho
Environmental Risk Services Corporation
1600 Riviera Avenue, Suite 310
Walnut Creek, CA 94596

Subject : 1 Water Sample
Project Name : Sekhon Gas
Project Number :

Dear Dr. Ho,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

KIFF Analytical LLC

Report Number : 70211
Date : 10/01/2009

Subject : 1 Water Sample
Project Name : Sekhon Gas
Project Number :

Case Narrative

Matrix Spike/Matrix Spike Duplicate results associated with sample USB11-8 for the analyte TPH as Gasoline were affected by the analyte concentrations already present in the un-spiked sample.

KIFF Analytical LLC

Report Number : 70211
Date : 10/01/2009

Project Name : **Sekhon Gas**
Project Number :

Sample : **USB11-8** Matrix : Water Lab Number : 70211-01
Sample Date :09/24/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 4.0**	4.0	ug/L	EPA 8260B	09/30/2009
Toluene	**< 4.0**	4.0	ug/L	EPA 8260B	09/30/2009
Ethylbenzene	**27**	4.0	ug/L	EPA 8260B	09/30/2009
Total Xylenes	**18**	4.0	ug/L	EPA 8260B	09/30/2009
Methyl-t-butyl ether (MTBE)	**8.3**	4.0	ug/L	EPA 8260B	09/30/2009
Tert-Butanol	**95**	20	ug/L	EPA 8260B	09/30/2009
1,2-Dichloroethane-d4 (Surr)	91.5		% Recovery	EPA 8260B	09/30/2009
Toluene - d8 (Surr)	92.4		% Recovery	EPA 8260B	09/30/2009
TPH as Gasoline	**81000**	2500	ug/L	EPA 8015B	09/30/2009
(Note: Gasoline, with some compounds in abnormal ratios.)					
4-Bromofluorobenzene (Surr)	106		% Recovery	EPA 8015B	09/30/2009

Report Number : 70211

QC Report : Method Blank Data

Date : 10/01/2009

Project Name : **Sekhon Gas**

Project Number :

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	< 50	50	ug/L	EPA 8015B	09/30/2009
4-Bromofluorobenzene (Surr)	109		%	EPA 8015B	09/30/2009
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/29/2009
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/29/2009
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/29/2009
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/29/2009
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/29/2009
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	09/29/2009
1,2-Dichloroethane-d4 (Surr)	99.1		%	EPA 8260B	09/29/2009
Toluene - d8 (Surr)	102		%	EPA 8260B	09/29/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 70211

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 10/01/2009

Project Name : **Sekhon Gas**

Project Number :

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	70198-07	<0.50	40.6	40.6	38.9	38.2	ug/L	EPA 8260B	9/29/09	95.7	94.1	1.68	70-130	25
Methyl-t-butyl ether	70198-07	<0.50	40.6	40.6	40.8	38.0	ug/L	EPA 8260B	9/29/09	100	93.6	7.16	70-130	25
Tert-Butanol	70198-07	<5.0	202	202	198	195	ug/L	EPA 8260B	9/29/09	98.4	96.6	1.86	70-130	25
Toluene	70198-07	<0.50	40.1	40.1	39.1	38.4	ug/L	EPA 8260B	9/29/09	97.6	95.7	1.90	70-130	25
TPH as Gasoline	70225-06	2900	1100	1100	3290	3120	ug/L	EPA 8015B	9/30/09	32.0	16.4	64.0	70-130	25

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 70211

QC Report : Laboratory Control Sample (LCS)

Date : 10/01/2009

Project Name : **Sekhon Gas**

Project Number :

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
TPH as Gasoline	493	ug/L	EPA 8015B	9/30/09	89.8	70-130
Benzene	40.6	ug/L	EPA 8260B	9/29/09	95.1	70-130
Methyl-t-butyl ether	40.6	ug/L	EPA 8260B	9/29/09	97.7	70-130
Tert-Butanol	202	ug/L	EPA 8260B	9/29/09	94.4	70-130
Toluene	40.1	ug/L	EPA 8260B	9/29/09	95.5	70-130

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC
2795 2nd Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 70211

Page ___ of ___

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): Tim Ho

California EDF Report? ☒ Yes ☐ No

Company / Address: 1600 Riviera Ave Suite 310, Walnut Creek

Sampling Company Log Code:

Phone Number: 925 938 1600

Global ID: T0600102286

Fax Number: 925 938 1610

EDF Deliverable To (Email Address): jho@ese-corp.us

Project #:

P.O. #:

Bill to: ERS

Project Name: Sutton Gas

Sampler Print Name: Tyson Falmer

Sampler Signature: [signature]

Project Address: 6000 Foothill

TAT: ☐ 12 hr ☐ 24 hr ☐ 48hr ☐ 72hr ☒ 1 wk

Analysis Request (CIRCLE METHOD)

Sample Designation	Sampling Date	Sampling Time	Container: 40 ml VOA	Sleeve	Poly	Glass	Tedlar	Preservative: HCl	HNO_3	None	Matrix: Water	Soil	Air	MTBE @ 0.5 ppb (EPA 8260B) TBA	BTEX (EPA 8260B)	TPH Gas (~~EPA 8260B~~) 8015	5 Oxygenates (MTBE, DIPE, ETBE, TAME, TBA) (EPA 8260B)	7 Oxygenates (5 oxy + EtOH, MeOH) (EPA 8260B)	Lead Scav. (1,2 DCA & 1,2 EDB) (EPA 8260B)	Volatile Halocarbons (EPA 8260B)	Volatile Organics Full List (EPA 8260B)	Volatile Organics (EPA 524.2 Drinking Water)	TPH as Diesel (EPA 8015M)	TPH as Motor Oil (EPA 8015M)	CAM 17 Metals (EPA 200.7 / 6010)	5 Waste Oil Metals (Cd,Cr,Ni,Pb,Zn) (EPA 200.7 / 6010)	Mercury (EPA 245.1 / 7470 / 7471)	Total Lead (EPA 200.7 / 6010)	W.E.T. Lead (STLC)	For Lab Use Only
USB11-8	9/24/09	16:30	6					6			6			X	X	X														01

Relinquished by:	Date	Time	Received by:
Tyson Falmer	9/25/09	15:00	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date LTR ~~0926~~ 092509	Time 1500	Received by Laboratory: [signature] Kiff Analytical

Remarks:

Distribution: White - Lab; Pink - Originator
Rev: 060409

KIFF Analytical LLC

SAMPLE RECEIPT CHECKLIST

RECEIVER: LJR Initials

SRG#: 70211 Date: 092509

Project ID: Sekhon Gas

Method of Receipt: [X] Courier [ ] Over-the-counter [ ] Shipper

COC Inspection

Is COC present?	[X] Yes	[ ] No		
Custody seals on shipping container?	[ ] Intact	[ ] Broken	[ ] Not present	[X] N/A
Is COC Signed by Relinquisher? [X] Yes [ ] No Dated?	[X] Yes	[ ] No		
Is sampler name legibly indicated on COC?	[X] Yes	[ ] No		
Is analysis or hold requested for all samples	[X] Yes	[ ] No		
Is the turnaround time indicated on COC?	[X] Yes	[ ] No		
Is COC free of whiteout and uninitialed cross-outs?	[ ] Yes	[ ] No, Whiteout	[X] No, Cross-outs	

Sample Inspection

Coolant Present: [X] Yes [ ] No (includes water)

Temperature °C 5-2 Therm. ID# IR-5 Initial LJR Date/Time 092509/1816 [ ] N/A

Are there custody seals on sample containers?	[ ] Intact	[ ] Broken	[X] Not present	
Do containers match COC? [X] Yes [ ] No [ ] No, COC lists absent sample(s)	[ ] No, Extra sample(s) present			
Are there samples matrices other than soil, water, air or carbon?	[ ] Yes	[X] No		
Are any sample containers broken, leaking or damaged?	[ ] Yes	[X] No		
Are preservatives indicated? [ ] Yes, on sample containers	[X] Yes, on COC	[ ] Not indicated	[ ] N/A	
Are preservatives correct for analyses requested?	[X] Yes	[ ] No	[ ] N/A	
Are samples within holding time for analyses requested?	[X] Yes	[ ] No		
Are the correct sample containers used for the analyses requested?	[X] Yes	[ ] No		
Is there sufficient sample to perform testing?	[X] Yes	[ ] No		

Does any sample contain product, have strong odor or are otherwise suspected to be hot? [ ] Yes [X] No

Receipt Details

Matrix WA	Container type VOA	# of containers received 6
Matrix	Container type	# of containers received
Matrix	Container type	# of containers received

Date and Time Sample Put into Temp Storage Date: 092509 Time: 1817

Quicklog

Are the Sample ID's indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated
If Sample ID's are listed on both COC and containers, do they all match?	[X] Yes	[ ] No	[ ] N/A	
Is the Project ID indicated:	[X] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated
If project ID is listed on both COC and containers, do they all match?	[X] Yes	[ ] No	[X] N/A	
Are the sample collection dates indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated
If collection dates are listed on both COC and containers, do they all match?	[X] Yes	[ ] No	[ ] N/A	
Are the sample collection times indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated
If collection times are listed on both COC and containers, do they all match?	[X] Yes	[ ] No	[ ] N/A	

COMMENTS: