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**SITE CHARACTERIZATION
and
QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT
at
FORMER SEKHON GAS STATION
6600 Foothill Boulevard
Oakland, California**

Prepared for:

Mr. Ravi Sekhon
21696 Knuppe Place
Castro Valley, California

December 5, 2005

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December 5, 2005

Mr. Donald Hwang
Alameda County Health Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

**Subject: Site Characterization and Quarterly Groundwater Monitoring and Sampling Report
FORMER SEKHON GAS STATION, 6600 Foothill Boulevard, Oakland, California**

Dear Mr. Hwang:

The enclosed report presents the results and findings of Site Characterization and Quarterly Groundwater Monitoring and Sampling for the above-referenced facility.

Should you have any questions regarding the report please contact Tridib Guha at (925) 363-1999.

Sincerely,

Advanced Assessment and Remediation Services

Tridib K. Guha, P.G.
Principal

cc: Mr. Ravi S. Sekhon, Castro Valley, CA
Mr. Sunil Ramdass, USTCF, Sacramento, CA
Ms. Jeanette L. Kim, Hayward, CA
Mr. Billy Jue, Oakland, CA
Mr. Joseph Le Blanc, Oakland, CA
Mr. Dylan Radke, Martinez, CA

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Oakland, California**

1.0 INTRODUCTION

This report presents the results and findings of additional site investigations and quarterly groundwater monitoring conducted by Advanced Assessment and Remediation Services (AARS) to delineate the extent of the contaminant plume at the Sekhon Gas Station, 6600 Foothill Boulevard, Oakland, California. The work performed was based on the analytical results of quarterly groundwater monitoring and sampling conducted at the site. Analytical results of the groundwater samples at the site detected high concentrations of petroleum hydrocarbon constituents. This investigative work evaluated the extent of the contaminant plume adjacent to the property. This work was performed pursuant to the requirements of the Alameda County Environmental Health Services (ACEHS), as described in the Work Plan Addendum for Site Characterization by AARS dated March 30, 2004.

2.0 SITE CHARACTERISTICS

A brief description of the site location and summary of past activities is presented below.

2.1 Site Description

The project site is located at 6600 Foothill Boulevard, Oakland, California. The site is set in a commercial development and is presently used as a retail gas station with a store building/convenience store with two dispenser islands, and two dispensers on each dispenser island.

The property is bounded by an empty commercial building to the east, Foothill Boulevard to the south, empty lot former gas station at the corner of Foothill Boulevard and Havenscourt Boulevard. Adjacent to the empty lot is a two story residential building with store; Camden Street is to the west and Evergreen Cemetery to the north. The Frick Jr. High School, Luther Burbank School and Markham School are located approximately 2000 feet from the property.

The site is located at an elevation of approximately 80 feet above mean sea level at the foothill of the Oakland Hills, to the north. San Francisco Bay is located approximately 2 miles west of the project site. A site vicinity map and a site plan are presented in Figure 1 and Figure 2 respectively.

2.2 Site History

"The site is presently used as a retail gasoline station. The site was formerly operated as a gasoline station by Beacon. Mr. Ravi Sekhon (present owner) purchased the property in 1998. At that time underground storage tank (UST) system consisted of two single wall fiberglass USTs and one single wall steel UST.

As part of the UST system upgrade effort, the steel UST and dispensers were removed on December 16, 1998. Mr. Steve Crawford of the Oakland Fire Department was on site to observe site conditions and to

direct sample collection. Soil samples were collected from the UST pit sidewalls and from beneath the dispenser islands. There was no evidence of contamination other than MTBE, which was reported in the laboratory reports. Mr. Crawford did not require the pipe trench samples be collected, since the pipe trench between the dispensers and the UST pit was less than 20 feet.

During the P&D Environmental site visit on January 9, 1999, approximately 6 inches of groundwater were observed in the bottom of the UST pit. The measured depth to groundwater was 8 feet below the ground surface. Sheen was observed on the water in the UST pit. No petroleum hydrocarbon odors were detected in any of the soil at the site.

Copies of the soil samples results for those collected from beneath the dispenser islands and from the UST pit sidewalls were forwarded to ACEHS on January 11, 1999. In addition, on December 1998, one groundwater grab sample was collected by Edd Clark & Associates. A copy of these results were also forwarded to the ACEHS.

Review of the laboratory reports shows that the only detected compound in the soil has been MTBE (with the exception of 25 ppb of toluene in the east dispenser island soil sample). Review of the groundwater sample from the pit shows that TPH-G, BTEX, and MTBE were detected in the groundwater.

Based on the sample results, P&D recommended that the UST pit be backfilled, the upgrade of remaining UST system be completed, and that a groundwater investigation be performed to determine the extent and origin of petroleum hydrocarbons in groundwater.

Subsequently, 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. In addition, the stockpiled soil generated during UST removal was characterized, profiled and removed from the site to the BFI Vasco Road landfill in Livermore, California (P&D Environmental, March 9, 1999)".

AARS conducted a preliminary site assessment in June 2001, and conducted quarterly sampling and monitoring in March 2002. The results of preliminary site investigation and quarterly monitoring and sampling confirmed the presence of elevated petroleum hydrocarbons. AARS conducted additional site investigation in June 2002, by installing three monitoring wells and two soil borings. AARS also conducted four quarterly monitoring and sampling. The analytical results indicated continued presence of elevated petroleum hydrocarbons in the farthest downgradient monitoring well, MW-6, with possible off-site migration. The ACEHS requires to define the lateral and vertical extent of the plume.

2.3 Regional Geology and Hydrogeology

The site is located on the foothill of the Oakland Hills, at the eastern edge of a broad alluvial plain on the east side of San Francisco Bay. The plain is characterized by nearly level topography. The uppermost lithologic member is the San Antonio Formation. The San Antonio sediments were deposited in a complex and ever-changing depositional environment that ranged from alluvial fans to flood plains to lakes to swamps to beaches. Locally, the alluvial deposits consist largely of interfingering lenses of clayey gravel, sandy and silty clays, and sand-silt-clay mixtures. Individual units are discontinuous and difficult to correlate over distance.

Groundwater at this site is shallow. Soil borings drilled during June 4, 2001, encountered groundwater at approximately 15 feet below ground surface (bgs) and stabilized at 10 feet bgs. The average depth to stabilized groundwater in on-site wells was approximately 8 1/2 feet bgs on August 11, 2005. However, the

groundwater level may vary with seasonal variations. The general groundwater flow direction is southeast toward the San Francisco Bay.

3.0 SCOPE OF WORK

This site characterization was conducted by AARS under the requirements of the ACEHS as described in the Work Plan dated July 2, 2003, Work Plan Addendum for Site Characterization by AARS dated March 30, 2004 and inclusion of technical comments ACEHS dated June 11, 2004.

The scope of work included the following tasks:

Task 1. Summarized the previous site activities; submitted a work plan and acquired necessary permits;

Task 2. Installed twelve soil borings, converted them into temporary wells;

Task 3. Sampled temporary wells; sampled six monitoring wells

Task 4. Analyzed soil samples for specified constituents;

Task 5. Analyzed groundwater samples;

Task 6. Evaluated soil and groundwater sampling and analytical results and other data;

Task 7. Prepared this report presenting the results and findings of the above activities and appropriate recommendations.

The location of the soil borings/temporary wells are presented in Figure 2. The various tasks associated with this site investigation are discussed below:

4.0 PRE FIELD WORK REQUIREMENTS

Prior to conducting fieldwork, an encroachment permit was obtained from the CSJDPW and a utility survey was performed.

4.1 Soil Boring Permits

Prior to commencement of drilling activities, permits for the proposed soil borings were obtained from the Alameda County Public Works Agency (ACPWA). The copies of the soil boring permits are presented in Appendix A.

4.2 Access Permission

Permission to drill soil borings, collect soil and groundwater samples at the adjacent properties were obtained from the following property owners:

Mrs Jeanette L. Kim	6601 Foothill Boulevard, Oakland
Mr. Billy Jue	6625 Foothill Boulevard, Oakland
Mr. Dylan Radke, Attorney-at-Law for Mr. Joseph LeBlanc	6620 Foothill Boulevard, Oakland

4.3 Utility Clearance

A horizontal conduit investigation and a quarter mile radius well search were performed earlier and results were included in the work plan dated July 2, 2003. The proposed soil borings were marked on August 3, 2005 and Underground Service Alert was notified for utility clearance prior to drilling.

5.0 FIELD METHODS AND PROCEDURES

Three soil borings (SB-7, SB-8 and SB-9) were drilled in 6600 Foothill Boulevard, two soil borings (SB-3 and SB-4) were drilled in 6601 Foothill Boulevard and seven soil borings (SB-5, SB-6, SB-10, SB-11, SB-12, SB-13 and SB-14) were drilled in the driveway and the backyard to 6625 Foothill Boulevard. All twelve soil borings were converted into temporary wells. Soil and groundwater samples were collected during drilling for laboratory analysis of petroleum hydrocarbon constituents specified in section 7.0. The existing on-site monitoring wells were developed and sampled. The methods utilized in drilling soil borings, in sampling, and in laboratory analyses are presented below.

5.1 Soil Borings and Sampling

On August 10 and 11, 2005, AARS supervised the drilling of twelve soil borings (SB-3 through SB-14). The drilling activities were performed by Gregg Drilling and Testing, Inc., of Martinez, California. Soil borings SB-3 through SB-6 and SB-10 through SB-14 were drilled on August 10, 2005. The soil borings were drilled with a limited access Geoprobe drill rig by using a 1 3/4-inch diameter push rod. Soil borings SB-3 and SB-4 were drilled to 20 feet bgs and soil borings SB-5, SB-6, SB-10 through SB-14 were drilled to 17 feet bgs. During drilling soil samples were collected from each boring continuously using a macrocore sampler lined with 1 1/2-inch diameter clear acetate tubes. Seven soil samples (SB-3/S-11', SB-4/S-11', SB-5/S-12', SB-6/S-11½', SB-10/S-11', SB-11/S-11', SB-12/S-11', SB-13/S-12 and SB-14/S-11') were collected, one from each borehole, for laboratory analyses. Selection of the samples for laboratory analyses was based on the depth of groundwater encountered, slightly above the wet zone or above the very moist zone.

On August 11, 2005, soil borings SB-7, SB-8 and SB-9 were drilled with a Geoprobe drill rig using a 1 3/4-inch diameter push rod. SB-7 was drilled to 30 feet bgs, SB-8 and SB-9 were drilled to 28 feet bgs.

During drilling of SB-7, concrete was struck at 2½', prompting a location change one foot east, where pea gravel was encountered. Again the location moved one foot east, where drilling continued to 13 feet bgs. Then a screen was set at 13 feet for two hours. The hole was dry for two hours. Afterward the casing was removed and drilling continued to 30 feet bgs. Wet zone was not encountered. The screen was set at 30 feet for five hours. After five hours there was just enough water to fill three 40-millimeter volatile organic analysis vials with teflon-lined septa (VOA). During drilling soil samples were collected continuously from the boring using a macrocore sampler lined with 1½-inch diameter clear acetate tubes. Five soil samples (SB-7/S-7½', SB-7/S-13', SB-7/S-17', SB-7/S-24' and SB-7/S-29') were collected for laboratory analyses. Selection of the samples for laboratory analyses was based on the changes of lithology, PID readings or location above the very moist zone.

During drilling of SB-8, concrete was hit at 2½', prompting a location change one foot east, where drilling continued to 28 feet bgs. Wet zone was not encountered. A screen was at 28 feet for two hours. After two hours there was just enough water to fill three VOAs. During drilling, soil samples were collected continuously from the boring using a macrocore sampler lined with 1½-inch diameter clear acetate tubes. Five soil samples (SB-8/S-6', SB-8/S-10', SB-8/S-13½', SB-8/S-19' and SB-8/S-27') were

collected for laboratory analyses. Selection of the samples for laboratory analyses was based on the changes of lithology or PID readings.

Soil boring, SB-9 was drilled to 28 feet bgs. Wet zone was not encountered. A screen was set at 28 feet for three hours. The hole was dry. During drilling soil samples were collected continuously from the boring using a macrocore sampler lined with 1½-inch diameter clear acetate tubes. Six soil samples (SB-9/S-6', SB-9/S-10', SB-9/S-12', SB-9/S-17', SB-9/S-21' and SB-9/S-27½') were collected for laboratory analyses. Selection of the samples for laboratory analyses was based on the changes of lithology or PID readings.

The soil samples recovered for chemical analyses were immediately sealed with teflon squares, polyethylene caps, and plastic tape. The samples were then labeled with the sample identification number, the sample depth, and the date and time of collection. Soil samples were placed immediately in an iced cooler for shipment under chain-of-custody documents (Appendix C) to McCampbell Analytical Inc. (MAI) of Pacheco, which is certified by the California Department of Health Services (DHS) to perform the specified analyses.

The soil borings were lithologically logged in the field using the Unified Soil Classification System. Soil samples were screened in the field using a PID. Soil type, color, density, moisture content, and depth were recorded on the boring logs (Appendix B).

5.2 Groundwater Sampling in Temporary Wells

All twelve soil borings SB-3 through SB-14 were converted into temporary wells. During drilling, groundwater was encountered in SB-5, SB-6, SB-10, SB-11 and SB-12 at approximately 11 to 12 feet bgs and water level stabilized to approximately 9 to 9½ bgs. These soil borings were converted into temporary wells. The temporary wells were constructed using a ten-foot, 3/4 inch diameter 0.010-inch slotted screen (Schedule 40 PVC), and a ten-foot long blank casing (flush-threaded) was installed in the borehole. The water level was allowed to stabilize and a small volume of water was purged. Following purging, a groundwater sample was collected from the temporary wells using a 1/2 inch diameter steel bailer, transferred into three 40-milliliter VOAs, preserved using hydrochloric acid at a pH of 2.0. The casings were then removed and the borings were completely backfilled to grade with neat cement.

The soil borings, SB-3, SB-4, SB-13 and SB-14 were drilled on August 10, 2005. These borings did not encounter wet zone. A slotted screen was inserted and the holes were left open with a temporary surface seal. The following day both SB-3 and SB-4 had approximately two feet of water and a groundwater sample was collected from each hole. However, SB-13 and SB-14 were dry. The casings from each borings were then removed and the borings were completely backfilled to grade with neat cement.

The soil borings, SB-7, SB-8, and SB-9 were drilled on August 11, 2005. These borings did not encounter wet zone. A slotted screen was inserted and holes were left open and periodically check for groundwater. After a few hours a groundwater sample was collected from SB-7 and SB-8. Just enough groundwater existed to fill three VOAs. SB-9 was dry. The casings from each boring was then removed and the borings were completely backfilled to grade with neat cement.

The groundwater samples collected for chemical analysis were placed immediately into an iced cooler for shipment to MAI, under chain-of-custody documents (Appendix C).

5.3 Quarterly Groundwater Monitoring and Sampling

Quarterly groundwater monitoring and sampling was conducted for the on-site and off-site wells (MW-1, MW-2, MW-3, MW-4, MW-5 and MW-6) and the results were integrated for a better plume definition. Presented below are the field observations and groundwater elevation measurement, sampling, and analysis procedures. The location of the groundwater monitoring wells is presented in Figure 2.

5.3.1 Groundwater Elevations and Gradients

The groundwater elevation in each well was measured to the nearest 0.01 foot from the top of the PVC casing, using an electronic sounder tape. The survey data and groundwater elevation measurements are presented in Table 1. The site was surveyed as per Geotracker standard on July 30, 2003 by PLS Surveys, Inc., a California licensed surveyor. All groundwater elevations are reported with respect to Mean Sea Level (MSL). A groundwater surface elevation map based on interpretation of groundwater elevation measurements taken on August 11, 2005 and survey data are presented in Figure 3. The flow directions, based on groundwater elevation data, between monitoring wells MW-1, MW-2 and MW-3 was toward the S42^oW; between monitoring wells MW-2, MW-3 and MW-5 was toward the S50^oW; and between monitoring wells MW-2, MW-5 and MW-6 was toward the S16^oW. The average hydraulic gradient calculated was approximately 0.008 foot per foot. The average depth to groundwater in these wells was approximately 7.55 feet below ground surface (bgs). The depth to groundwater in monitoring well MW-4 was 6.65 feet bgs, which is the shallowest depth. Figure 3A is a rose diagram for historical groundwater flow direction for the site between June 2001 to August 2005.

5.3.2 Field Observations

Groundwater was purged from all six groundwater monitoring wells, MW-1 through MW-6. The purged water from all six monitoring wells was clear initially. As the purging proceeded, the water from monitoring wells MW-3 and MW-5 turned clear with small brownish gels, from monitoring wells MW-2 and MW-6 turned turbid gray, and the purged water from monitoring well MW-4, turned silty brownish gray. Approximately three well volumes of groundwater were purged from each well. After purging each well was allowed some time for groundwater recovery. Subsequently, the water was again clear and water samples were collected. Floating product and sheen were not observed in any of the groundwater samples from monitoring wells. Petroleum odor was noticed in the groundwater samples from monitoring wells MW-2, MW-4, and MW-6.

5.3.3 Sampling and Analytical Procedures

Groundwater samples from monitoring wells were collected on August 11, 2005, following groundwater elevation measurements. Samples were analyzed by MAI.

Before purging, groundwater elevations were measured in all wells with an electronic sounder tape. Purging preceded sampling in order to ensure collection of non-stagnant water. A minimum of three casing volumes was removed before sampling the wells. The purged water was monitored for temperature, pH, and conductivity. Purging was considered complete when these parameters had stabilized. The field parameters for groundwater sampling are presented in Table 4.

To prevent potential cross-contamination, all measuring, purging and sampling equipment was washed in an Alconox detergent solution, rinsed with tap water, and finally with distilled water between wells.

The sampling procedure for each monitoring well involved extracting well water with a clean PVC bailer on a clean nylon cord. Groundwater samples collected from each monitoring well and temporary well for analysis of Total Petroleum Hydrocarbon as gasoline (TPHg) and Benzene, Toluene, Ethylbenzene and total Xylenes (BTEX), Methyl Tertiary Butyl Ether (MTBE) was decanted into three 40-millimeter volatile organic analysis vials with Teflon-lined septa. Samples to be analyzed for TPHg/MBTEX were preserved using hydrochloric acid at a pH of 2.0. All samples were labeled and placed in an iced cooler, along with the chain-of-custody document (Appendix C). Samples transported to the laboratory were analyzed within the specified holding time.

Groundwater produced during purging and sampling was contained in 55-gallon steel drums. The drummed water was labeled with the source (i.e., well number) and sampling date.

5.4 Soil Cuttings and Well Development Water Storage and Disposal

Soil cuttings generated during drilling and sampling of the soil borings were transferred into 55-gallon DOT 17H drums, labeled and stored at the site for proper disposal.

All purged water generated from the well purging and sampling, as well as decontamination rinsate, were stored in properly-labeled 55-gallon DOT 17H drums for proper disposal.

6.0 ANALYTICAL METHODS

All soil and groundwater samples were analyzed by MAI. All chemical analyses of soil and groundwater samples were performed using standard test methods of the United States Environmental Protection Agency (EPA) and the California Department of Health Services (Cal-DHS), as discussed below.

6.1 Analysis of Soil Samples

A total of 25 soil samples were collected from 12 soil borings for chemical analysis. The depth of each sample is recorded in the boring logs (Appendix B). Soil samples were analyzed for total petroleum hydrocarbon as gasoline (TPHg) using EPA Methods 8015Cm, and for Benzene, Toluene, ethylbenzene and total Xylenes, Methyl Tertiary Butyl Ether (MBTEX) using EPA Method 8021B. Results of soil sample analyses are presented in Table 2. The official laboratory reports and chain of custody documents are included in Appendix C.

6.2 Analysis of Groundwater Samples

All groundwater samples from monitoring wells MW-1 through MW-6 and temporary wells SB-3 through SB-14 were analyzed for TPHg using EPA Method 8015Cm, MBTEX using EPA Method 8021B. Results of groundwater analyses are summarized in Tables 3. The official laboratory reports and chain of custody documents are included in Appendix C.

7.0 DISCUSSION OF RESULTS

A brief description of site geology and hydrogeology based on the results of the drilling activities is presented below. The results of the laboratory analysis of the soil and groundwater samples collected during this investigation are also discussed below.

7.1 Site Geology

The subsurface lithology in all twelve soil borings comprises a fine-grained alluvial material consisting of gravel-sand-clay mixture, stiff clay, poorly sorted clay and silty clay to the maximum explored depth of 30 feet bgs. Predominant soil types at the site are clays and silty clays with a stringer of clayey gravels, gravelly sand, as shown in Figure 7, north-south geologic cross-sections A-A', and Figure 8, east-west geologic cross-sections B-B'. Most of the clays and silty clays are very stiff with high plasticity.

As described in Section 2.3, Regional Geology and Hydrogeology, and as noted in soil boring logs, the surficial deposits are Quaternary alluvial deposits of irregularly stratified, poorly sorted, unconsolidated deposits of mud, silt, sand and gravel deposited in stream and river beds and on adjoining flood plains.

7.2 Site Hydrogeology

Groundwater was encountered at approximately 11 to 12 feet bgs during drilling and stabilized at 9 1/2 to 10 feet bgs on August 10, 2005. The average depth to groundwater in the on-site monitoring wells was approximately 7.55 feet bgs on August 11, 2005, which may vary with seasonal conditions. The depth to groundwater in monitoring well MW-4 was 6.65 feet bgs, which is the shallowest. A groundwater surface elevation map based on interpretation of groundwater elevation measurements taken on August 11, 2005 and survey data are presented in Figure 3. The flow directions, based on groundwater elevation data, between monitoring wells MW-1, MW-2 and MW-3 was toward the S42°W; between monitoring wells MW-2, MW-3 and MW-5 was toward the S50°W; and between monitoring wells MW-2, MW-5 and MW-6 was toward the S16°W. The average hydraulic gradient calculated was approximately 0.008 foot per foot. Figure 3A is a rose diagram for historical groundwater flow direction for the site between June 2001 to August 2005. A permeability barrier(s) exists at the site. Soil boring SB-9 was dry for 3 hours. Soil borings SB-13 and SB-14 were dry over 24 hours. Groundwater recharge in soil borings SB-3, SB-4, SB-7 and SB-8 was extremely slow. All these soil borings encountered sand/gravel layers below 11 feet bgs (depth of 1st groundwater). However, these sand/gravel layers were moist, not wet.

7.3 Soil analysis

Analytical results of soil samples from SB-3, SB-5, SB-6, SB-10, through SB14 were non-detect (ND) for TPHg, benzene, toluene, ethylbenzene, xylenes and MTBE. Soil sample from SB-4 detected TPHg at a concentration of 4.7 parts per million (ppm). Benzene, toluene, ethylbenzene, xylenes and MTBE were not detected in this sample. The laboratory reported strongly aged gasoline or diesel range compounds are significant. Analytical results of five soil samples from SB-7 detected TPHg ranging from ND to 3.2 ppm; benzene ranging from ND to 0.0063 ppm; toluene ranging from ND to 0.0097 ppm; ethylbenzene ranging from ND to 0.047 ppm; xylenes ranging from ND to 0.077 ppm; MTBE ranging from ND to 3.2 ppm. Analytical results of five soil samples from SB-8 detected TPHg ranging from ND to 18 ppm; benzene ranging from ND to 0.014 ppm; toluene ranging from ND to 0.14 ppm; ethylbenzene ranging from ND to 0.089 ppm; xylenes ranging from ND to 0.32 ppm; MTBE ranging from ND to 3.4 ppm. Analytical results of six soil samples from SB-9 detected TPHg ranging from ND to 200 ppm; benzene ranging from ND to 0.012 ppm; toluene ranging from ND to 0.18 ppm; ethylbenzene ND; xylenes ranging from ND to 0.33 ppm; MTBE ranging from ND to 4.9 ppm. Laboratory reported strongly aged gasoline or diesel range compounds are significant in soil samples from SB-9. Results of soil sample analyses are presented in Table 2. The official laboratory reports, chain of custody documents and chromatograms are included in Appendix C.

7.4 Groundwater Analysis

Analytical results for groundwater samples from six monitoring wells and nine temporary wells (SB-3 through SB-8 and SB-9 through SB-12) are presented in Table 3. The concentrations of TPHg, benzene and MTBE measured in groundwater during August 10 and August 11, 2005, are presented in Figure 4, 5 and 6 respectively. Groundwater samples from monitoring wells MW-2, MW-4, MW-6, SB-7 and SB-8 found to contain TPHg ranging from 91 to 9300 parts per billion (ppb); benzene concentrations ranging from ND to 470 ppb. Toluene concentrations ranging from ND to 260 ppb; ethylbenzene concentrations ranging from ND to 460 ppb; xylenes concentrations ranging from ND to 1550 ppb. MTBE was detected in all groundwater samples from monitoring wells and temporary wells (SB-3, 4, 7, 8, 10 and 11) concentrations ranging from 13 to 23000 ppb. Groundwater sample from soil boring SB-4 and monitoring well MW-5 detected TPHg range hydrocarbons at 160 and 410 ppb. However, the laboratory reported does not match the gasoline pattern. Groundwater sample from soil boring SB-5 detected TPHg range hydrocarbons at 13000 ppb. However, the laboratory reported does not match the gasoline pattern, also MTBE was not detected. Personal communication with Mr. Billy Jue, property owner, suggest this may be due to the past railroad activities of GM Automotive Plant.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the present site characterization, the following conclusions are drawn:

1. The predominant soil types at the site are clays and silty clays, which have low transmissivity with respect to groundwater movement. Therefore, the migration of dissolved-phase hydrocarbon contaminants in groundwater is restricted.
2. The groundwater flow direction has been calculated to be to the southeast, with an average gradient of approximately 0.008-foot per foot. The average depth to stabilized groundwater in the monitoring wells was approximately 8.5 feet bgs on August 11, 2005.
3. The highest dissolved-phase petroleum hydrocarbon constituents were detected in SB-7, SB-8 (adjacent to the removed tank area), MW-4 and furthest downgradient monitoring well, MW-6.
4. Multiple layer groundwater sampling was not accomplished from SB-7, SB-8 and SB-9 due to the absence of wet zone or extremely sluggish groundwater recharge.
5. TPHg range constituents (not gasoline) detected in groundwater from SB-5 is not part of the same plume.
6. MTBE concentrations in MW-1, MW-2, MW-4, MW-6, SB-7 and SB-8 are high at 4,900, 6,500, 1,200, 3,200, 23,000 and 11,000 ppb respectively.
7. Maps showing contours TPHg, benzene and MTBE concentrations in groundwater, developed from the results of groundwater analyses indicate that the dissolved-phase petroleum hydrocarbon plume is restricted in the vicinity of the removed tank area and has migrated to the southeast in the direction of groundwater flow.
8. Based on the above findings, no further site characterization is necessary at this time as the nature and extent of groundwater contaminant plume has been defined.

Recommendations are as follows:

9. Conduct a Feasibility Study/ Interim Corrective Action Plan for an expedited clean up and closure of the site.
10. Quarterly groundwater monitoring and sampling should be continued at the site to establish a history for water levels, and hydrocarbon concentrations.

9.0 CERTIFICATION

The information provided in this report is based on groundwater and soil sampling activities conducted at the site. All data presented in this report are believed to be accurate, unless proven otherwise. Any conclusions or recommendations provided herein are based on our expertise and experience conducting work of a similar nature.

Advanced Assessment and Remediation Services



Tridib K. Guha
Professional Geologist Number 5836

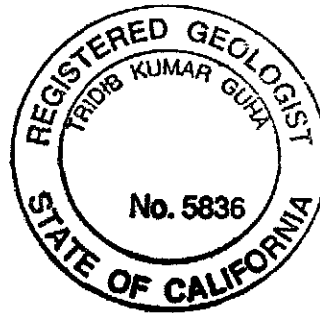


TABLE 1: SURVEY AND WATER LEVEL MONITORING DATA**SEKHON GAS STATION**

6600 Foothill Blvd.

Oakland, California

Well No.	Date of Measurement	Casing Elevation (Feet - MSL)	Depth to Groundwater (Feet - MSL)	Product Thickness (Feet)	Groundwater Elevation (Feet - MSL)
MW-1	7/11/2003	160.25	8.66	0	151.59
MW-1	11/13/2003	160.25	8.10	0	152.15
MW-1	2/19/2004	160.25	8.24	0	152.01
MW-1	5/21/2004	160.25	8.51	0	151.74
MW-1	8/11/2005	160.25	8.34	0	151.91
MW-2	7/11/2003	158.97	7.58	0	150.39
MW-2	11/13/2003	158.97	8.01	0	150.96
MW-2	2/19/2004	158.97	6.43	0	152.54
MW-2	5/21/2004	158.97	6.83	0	152.14
MW-2	8/11/2005	158.97	7.31	0	151.66
MW-3	7/11/2003	160.17	9.35	0	150.82
MW-3	11/13/2003	160.17	8.85	0	151.32
MW-3	2/19/2004	160.17	8.46	0	151.71
MW-3	5/21/2004	160.17	9.09	0	151.08
MW-3	8/11/2005	160.17	8.87	0	151.30
MW-4	7/11/2003	158.42	6.73	0	151.69
MW-4	11/13/2003	158.42	6.54	0	151.88
MW-4	2/19/2004	158.42	4.37	0	154.05
MW-4	5/21/2004	158.42	5.79	0	152.63
MW-4	8/11/2005	158.42	6.65	0	151.77
MW-5	7/11/2003	158.03	7.94	0	150.09
MW-5	11/13/2003	158.03	7.41	0	150.62
MW-5	2/19/2004	158.03	6.14	0	151.89
MW-5	5/21/2004	158.03	7.42	0	150.61
MW-5	8/11/2005	158.03	7.67	0	150.36
MW-6	7/11/2003	157.24	7.98	0	149.26
MW-6	11/13/2003	157.24	7.47	0	149.77
MW-6	2/19/2004	157.24	5.09	0	152.15
MW-6	5/21/2004	157.24	6.38	0	150.86
MW-6	8/11/2005	157.24	6.68	0	150.56

Note:

The site was surveyed as per Geotracker standard on July 11, 2003, by PLS Surveys, Inc., a California licensed surveyor
 All elevations reported with respect to feet above mean sea level (MSL).

**TABLE 2: SUMMARY OF ANALYTICAL RESULTS OF SOIL SAMPLING
SEKHON GAS STATION
6600 Foothill Blvd.
Oakland, California**

Sample ID	Date of Sampling	TPHg (mg/kg)	MTBE (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylenes (mg/kg)
SB-3/S-11'	8/10/2005	ND	ND	ND	ND	ND	ND
SB-4/S-11'	8/10/2005	4.7**#	ND	ND	ND	ND	ND
SB-5/S-12'	8/10/2005	ND	ND	ND	ND	ND	ND
SB-6/S-11½'	8/10/2005	ND	ND	ND	ND	ND	ND
SB-7/S-7½'	8/11/2005	1.7*	ND	ND	0.0087	0.037	0.047
SB-7/S-13'	8/11/2005	1.3	0.50	0.0063	0.0067	0.047	0.077
SB-7/S-17'	8/11/2005	3.2	ND	ND	ND	ND	ND
SB-7/S-24'	8/11/2005	ND	3.2	ND	0.0097	0.015	0.034
SB-7/S-29'	8/11/2005	ND	ND	ND	ND	ND	ND
SB-8/S-6'	8/11/2005	ND	1.9	ND	ND	ND	ND
SB-8/S-10'	8/11/2005	ND	3.2	0.0061	0.006	0.0098	0.034
SB-8/S-13½'	8/11/2005	8.4**	0.65	0.014	0.14	0.089	0.32
SB-8/S-19'	8/11/2005	ND	3.4	ND	ND	0.011	0.036
SB-8/S-27'	8/11/2005	18	ND<1.0	0.014	0.14	0.089	0.32
SB-9/S-6'	8/11/2005	200**#	ND<0.50	ND<0.50	0.5	ND<0.50	0.2
SB-9/S-10'	8/11/2005	ND	4.9	ND	ND	ND	ND
SB-9/S-12'	8/11/2005	190**#	1.2	ND<0.10	1.3	ND<0.10	0.33
SB-9/S-17'	8/11/2005	12**#	0.97	ND	0.085	ND	0.033
SB-9/S-21'	8/11/2005	39**#	ND<1.0	0.012	0.18	ND	0.077
SB-9/S-27½'	8/11/2005	5.6**#	0.59	ND	0.051	ND	0.0075
SB-10/S-11'	8/10/2005	ND	ND	ND	ND	ND	ND
SB-11/S-11'	8/10/2005	ND	ND	ND	ND	ND	ND
SB-12/S-11'	8/10/2005	ND	ND	ND	ND	ND	ND
SB-13/S-12'	8/10/2005	ND	ND	ND	ND	ND	ND
SB-14/S-11'	8/10/2005	ND	ND	ND	ND	ND	ND
RL	8/12-17/2005	1	0.05	0.005	0.005	0.005	0.005

Notes:

ND- Not Detected NA- Not Analyzed RL- Reporting Limit
mg/kg- Milligram per kilogram (parts per million)
TPHg- Total petroleum hydrocarbon as gasoline (EPA method modified 8015Cm)
MTBE- Methyl Tertiary Butyl Ether (EPA method 8021B)
Benzene, toluene, ethlybenzene, and total xylenes(EPA method 8021B)
* Heavier gasoline range compounds are significant (aged gasoline?)
** Strongly aged gasoline or diesel range compounds are significant
no recognizable pattern

TABLE 3: SUMMARY OF ANALYTICAL RESULTS OF GROUNDWATER SAMPLING

Sekhon Gas Station

6600 Foothill Boulevard, Oakland, California

Sample ID	Date of Sampling	TPHg ug/L	MTBE ug/L	Benzene ug/L	Toluene ug/L	Ethylbenzene ug/L	Xylenes ug/L	TBA ug/L
MW-1/GW	6/13/2001	ND	130	ND	ND	ND	ND	NA
MW-1/GW	3/21/2002	95	72.5	ND	ND	ND	ND	NA
MW-1/GW	7/9/2002	ND	208	ND	ND	ND	ND	NA
MW-1/GW	7/11/2003	ND	636	0.7	ND	ND	1.2	NA
MW-1/GW	11/13/2003	ND<5000#	72000	ND	ND	ND	ND	22000
MW-1/GW	2/19/2004	1350	82000	460	ND	ND	ND	8630
MW-1/GW	5/21/2004	ND	12000	ND<50	ND<50	ND<50	ND<100	ND<1000
MW-1/GW	8/11/2005	ND	4900	ND	ND	ND	ND	ND
MW-2/GW	6/13/2001	5800	94000*	160	210	290	980	980
MW-2/GW	3/21/2002	452	79100*	3.4	ND	1.6	2.1	NA
MW-2/GW	7/9/2002	497	37600*	61.6	ND	ND	1.6	NA
MW-2/GW	7/11/2003	553	38200*	48.9	ND	ND	ND	NA
MW-2/GW	11/13/2003	ND<2500#	47000	ND	ND	ND	ND	11000
MW-2/GW	2/19/2004	4390	26700	410	265	160	490	3930
MW-2/GW	5/21/2004	1150	24600	254	ND<200	ND<200	ND<400	ND<4000
MW-2/GW	8/11/2005	91	6500	ND	1.1	ND	ND	NA
MW-3/GW	6/13/2001	300	450	1	ND	0.07	2	NA
MW-3/GW	3/21/2002	274	7520	1.1	ND	1	2.5	NA
MW-3/GW	7/9/2002	ND	40.8	ND	ND	ND	ND	NA
MW-3/GW	7/11/2003	ND	24.3	ND	ND	ND	ND	NA
MW-3/GW	11/13/2003	ND	37	ND	ND	ND	ND	27
MW-3/GW	2/19/2004	83	42.7	ND	ND	ND	ND	508
MW-3/GW	5/21/2004	ND	54	ND	ND	ND	ND	1100
MW-3/GW	8/11/2005	ND	27	ND	ND	ND	ND	ND
MW-4/GW	7/9/2002	9680	28300	43	17	369	1990	NA
MW-4/GW	7/11/2003	3170	16600	16.5	6.4	71.7	244	NA
MW-4/GW	11/13/2003	ND<1000#	16000	49	ND	340	900	4500
MW-4/GW	2/19/2004	7230	14300	107	7	497	1063	1440
MW-4/GW	5/21/2004	9340	7380	194	ND	309	860	ND<2000
MW-4/GW	8/11/2005	3000	1200	15	24	87	190	NA
MW-5/GW	7/9/2002	275	18600	30.2	ND	ND	3	NA
MW-5/GW	7/11/2003	890	5090	10	0.6	ND	7.1	NA
MW-5/GW	11/13/2003	ND<1000#	3400	ND	ND	ND	ND	3100
MW-5/GW	2/19/2004	1310	438	ND	0.7	ND	2.2	1340
MW-5/GW	5/21/2004	1960	214	9.7	0.7	ND	ND	436
MW-5/GW	8/11/2005	410**	100	ND	3.3	ND	ND	NA
MW-6/GW	7/9/2002	12000	11300	432	22	637	1740	NA
MW-6/GW	7/11/2003	2970	18000	534	6.3	70.1	278	NA
MW-6/GW	11/13/2003	ND<2500#	18000	300	ND	ND	52	ND
MW-6/GW	2/19/2004	5340	5310	184	5	65	127	4260
MW-6/GW	5/21/2004	6110	3900	340	12.7	205	308.8	4060
MW-6/GW	8/11/2005	6100	3200	470	48	23	30	NA

SB-1/GW	6/27/2002	554	74.1	1	0.8	11.6	76.2	NA
SB-2/GW	6/27/2002	3000	485*	95.6	10.2	394	831	NA
SB-3/GW	8/11/2005	ND	32	ND	ND	ND	ND	NA
SB-4/GW	8/11/2005	160**	180	ND	ND	ND	ND	NA
SB-5/GW	8/10/2005	13000**	ND<50	ND<5.0	260	ND<5.0	ND<5.0	NA
SB-6/GW	8/10/2005	ND	ND	ND	ND	ND	ND	NA
SB-7/GW	8/11/2005	2900	23000	19	ND<10	160	ND<10	NA
SB-8/GW	8/11/2005	9300	11000	230	10	460	1500	NA
SB-10/GW	8/10/GW	ND	16	ND	ND	ND	ND	NA
SB-11/GW	8/10/GW	ND	13	ND	ND	ND	ND	NA
SB-12/GW	8/10/GW	ND	ND	ND	ND	ND	ND	NA
PQL	8/12-17/05	#	0.5	0.5	0.5	0.5	1	1

Notes:

ND- Not Detected NA- Not Analyzed PQL- Practical Quantitation Limit
 ug/L- Microgram per liter (parts per billion)
 TPHg- Total petroleum hydrocarbon as gasoline (EPA method 8015 Cm)
 MTBE- Methyl Tertiary Butyl Ether (EPA Method 8021B)
 BTEX- Benzene, toluene, ethylbenzene, and xylenex (EPA Method 8021B)
 TBA- tert-Butanol (EPA Method 8260B) Other oxygenates were not detected
 * Confirmed by GC/MS method 8260B
 ** Laboratory reported does not match gasoline pattern
 # See Laboratory explanations (dated November 26 & December 8, 2003)

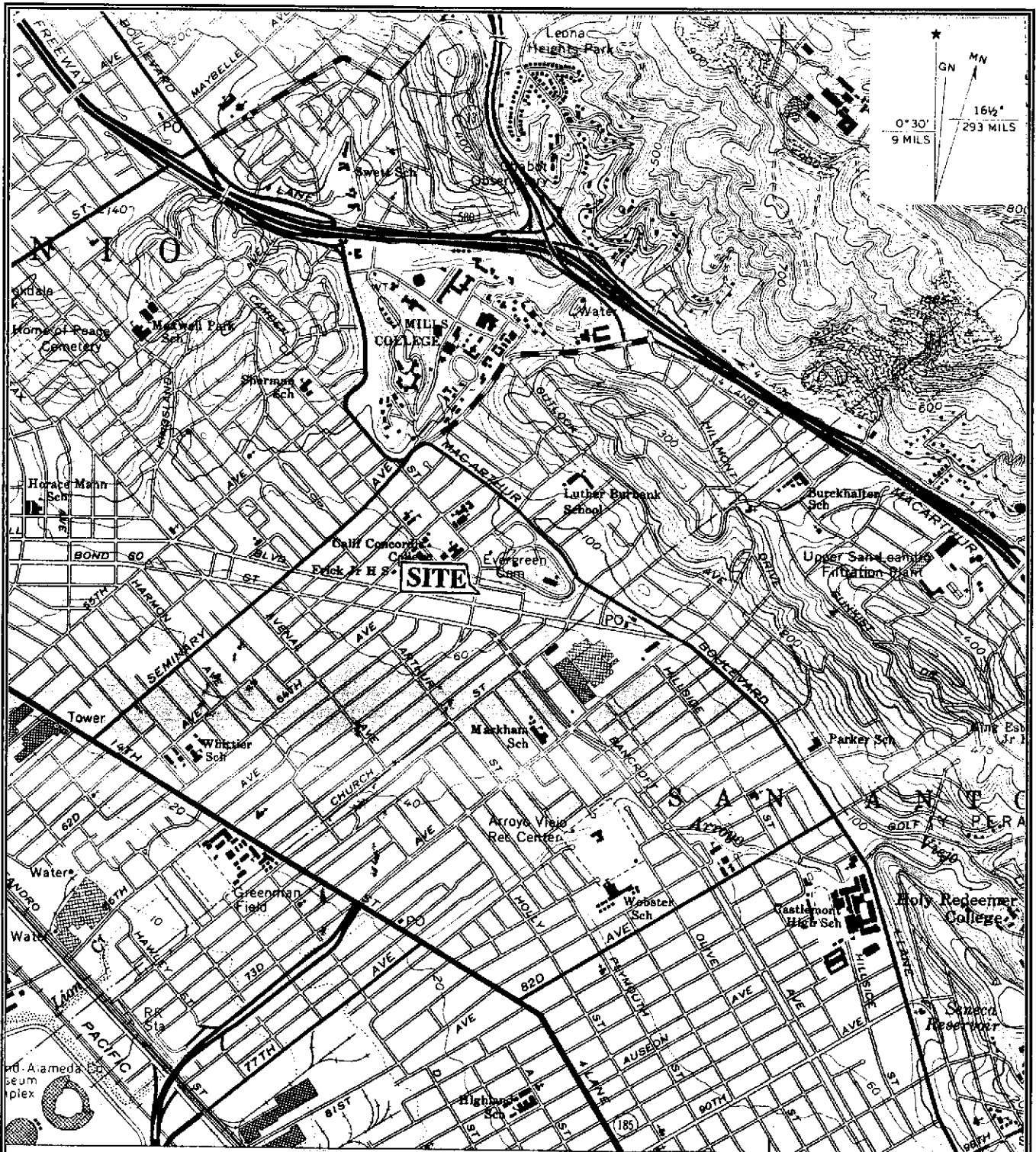
TABLE 4: FIELD PARAMETERS OF GROUNDWATER SAMPLING
Sekhon Gas Station
6600 Foothill Boulevard
Oakland , California

Sample I.D. No.	Date of Sampling	Temperature °F	pH	Conductivity uS
MW-1	7/11/2003	70.1	7.57	682
MW-1	11/13/2003	70.2	6.88	658
MW-1	2/19/2004	65.8	7.12	964
MW-1	5/21/2004	67.5	6.98	642
MW-1	8/11/2005	73.1	7.56	529
MW-2	7/11/2003	71.6	6.50	598
MW-2	11/13/2003	72.3	6.79	863
MW-2	2/19/2004	66.2	6.55	816
MW-2	5/21/2004	70.3	6.33	817
MW-2	8/11/2005	74.4	6.58	811
MW-3	7/11/2003	71.2	6.87	166
MW-3	11/13/2003	73.6	7.28	144
MW-3	2/19/2004	67.4	6.73	403
MW-3	5/21/2004	69.0	6.82	392
MW-3	8/11/2005	74.4	6.82	222
MW-4	7/11/2003	71.3	6.61	1012
MW-4	11/13/2003	73.0	6.71	1002
MW-4	2/19/2004	65.2	6.49	958
MW-4	5/21/2004	68.7	6.38	921
MW-4	8/11/2005	74.9	6.65	954
MW-5	7/11/2003	70.6	6.81	515
MW-5	11/13/2003	69.3	6.73	558
MW-5	2/19/2004	64.3	7.18	455
MW-5	5/21/2004	67.3	6.82	396
MW-5	8/11/2005	71.0	6.82	424
MW-6	7/11/2003	70.6	6.64	978
MW-6	11/13/2003	67.1	6.75	983
MW-6	2/19/2004	61.2	6.85	682
MW-6	5/21/2004	65.6	6.63	860
MW-6	8/11/2005	70.3	6.73	893

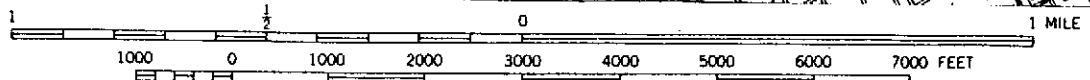
Note:

°F = degree Fahrenheit

uS = microSiemens



SCALE 1:24 000



Source: U.S.G.S. Maps; 7.5 Minute Series (Topographic)
 Oakland East Quadrangle, CA
 Aerial Photograph taken 1959 Photorevised 1980

FIGURE 1: SITE VICINITY MAP
SEKHON GAS STATION
 6600 Foothill Blvd.
 Oakland, California

**ADVANCED ASSESSMENT AND
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 Concord, California

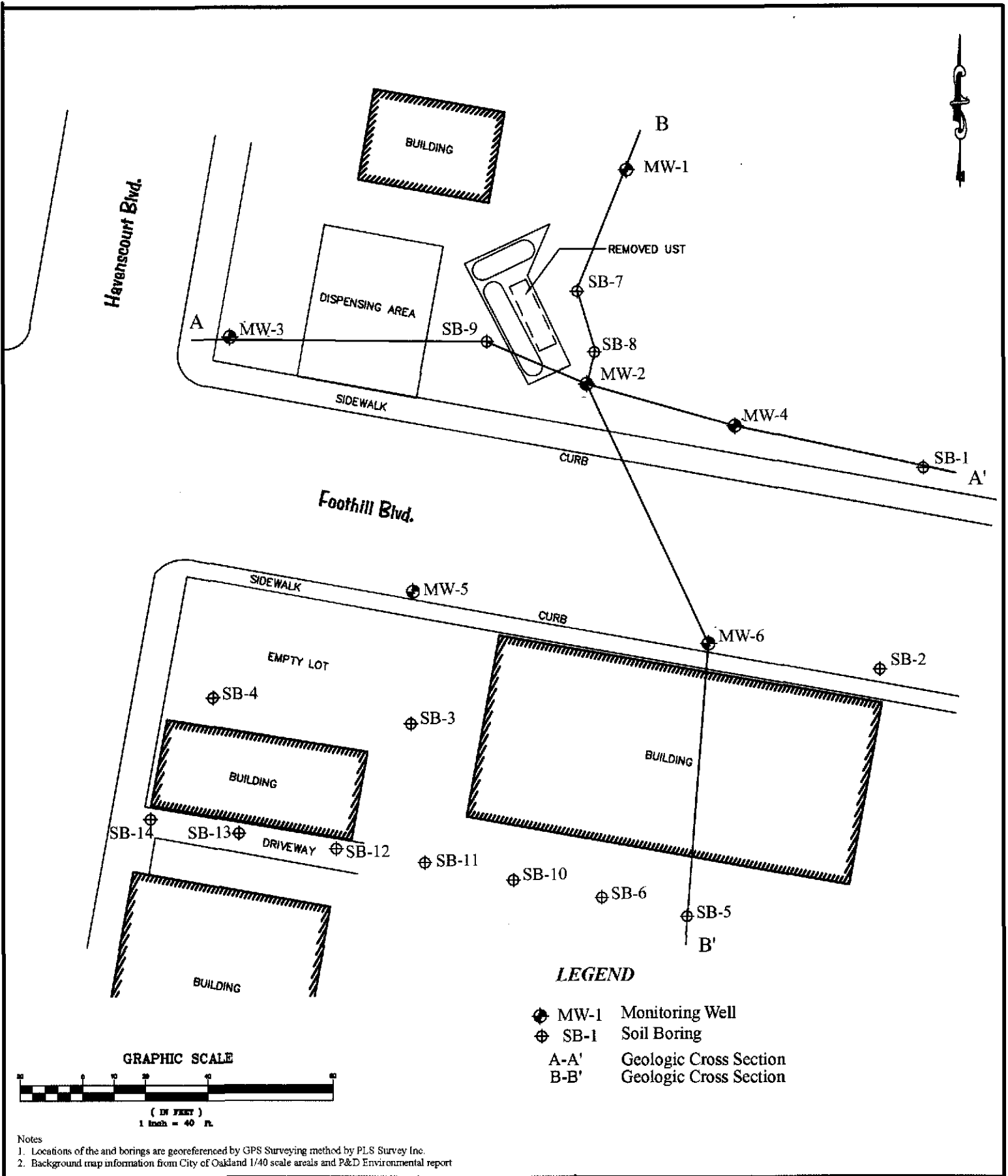
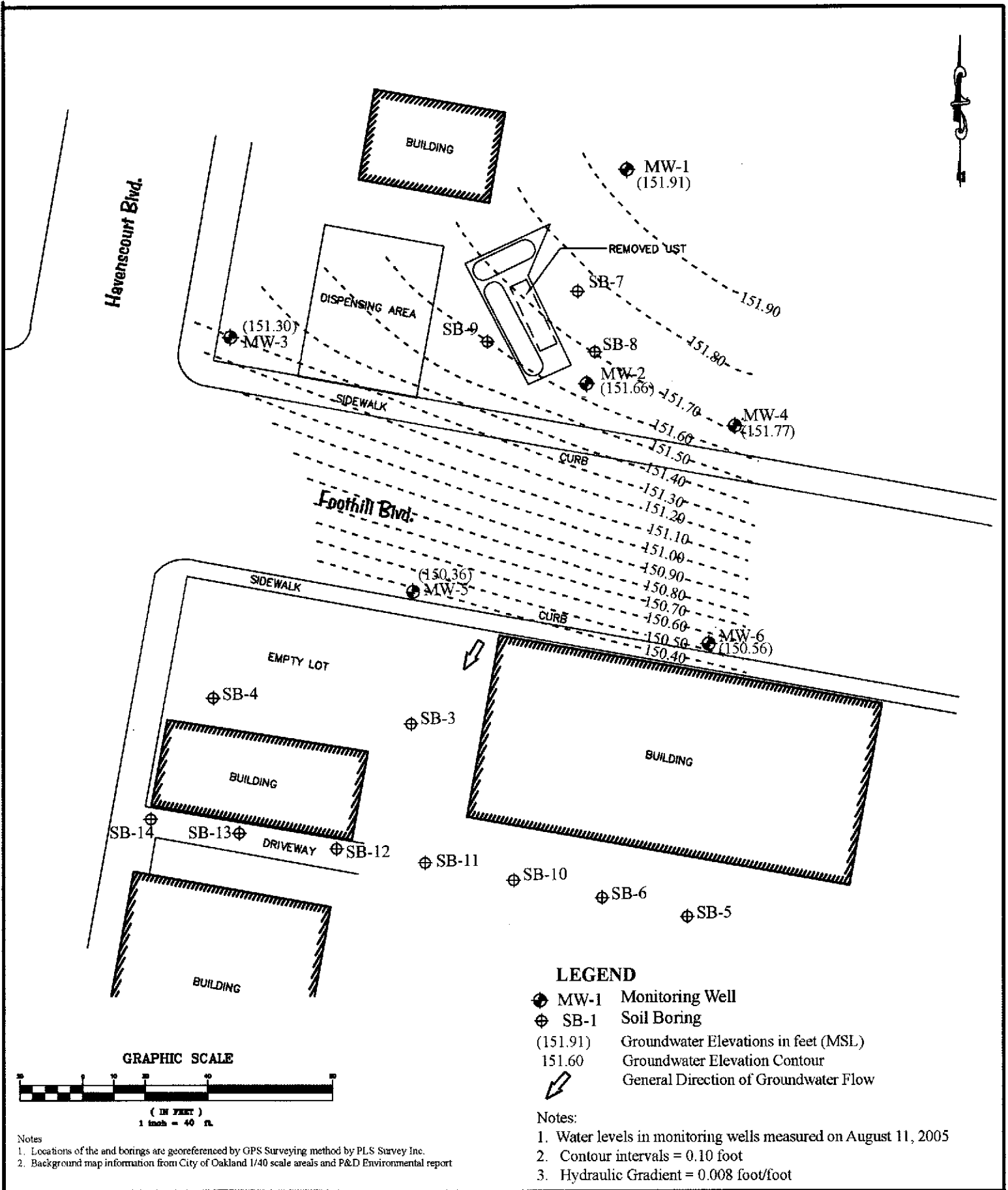


FIGURE 2: SITE PLAN
FORMER SEKHON GAS STATION
6600 Foothill Boulevard
Oakland, CA 94544

**ADVANCED ASSESSMENT AND
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 2380 Salvio Street, Suite 202
 Concord, CA 94520



**FIGURE 3: GROUNDWATER SURFACE ELEVATIONS
 FORMER SEKHON GAS STATION
 6600 Foothill Boulevard
 Oakland, CA 94544**

**ADVANCED ASSESSMENT AND
 REMEDIATION SERVICES
 2380 Salvio Street, Suite 202
 Concord, CA 94520**

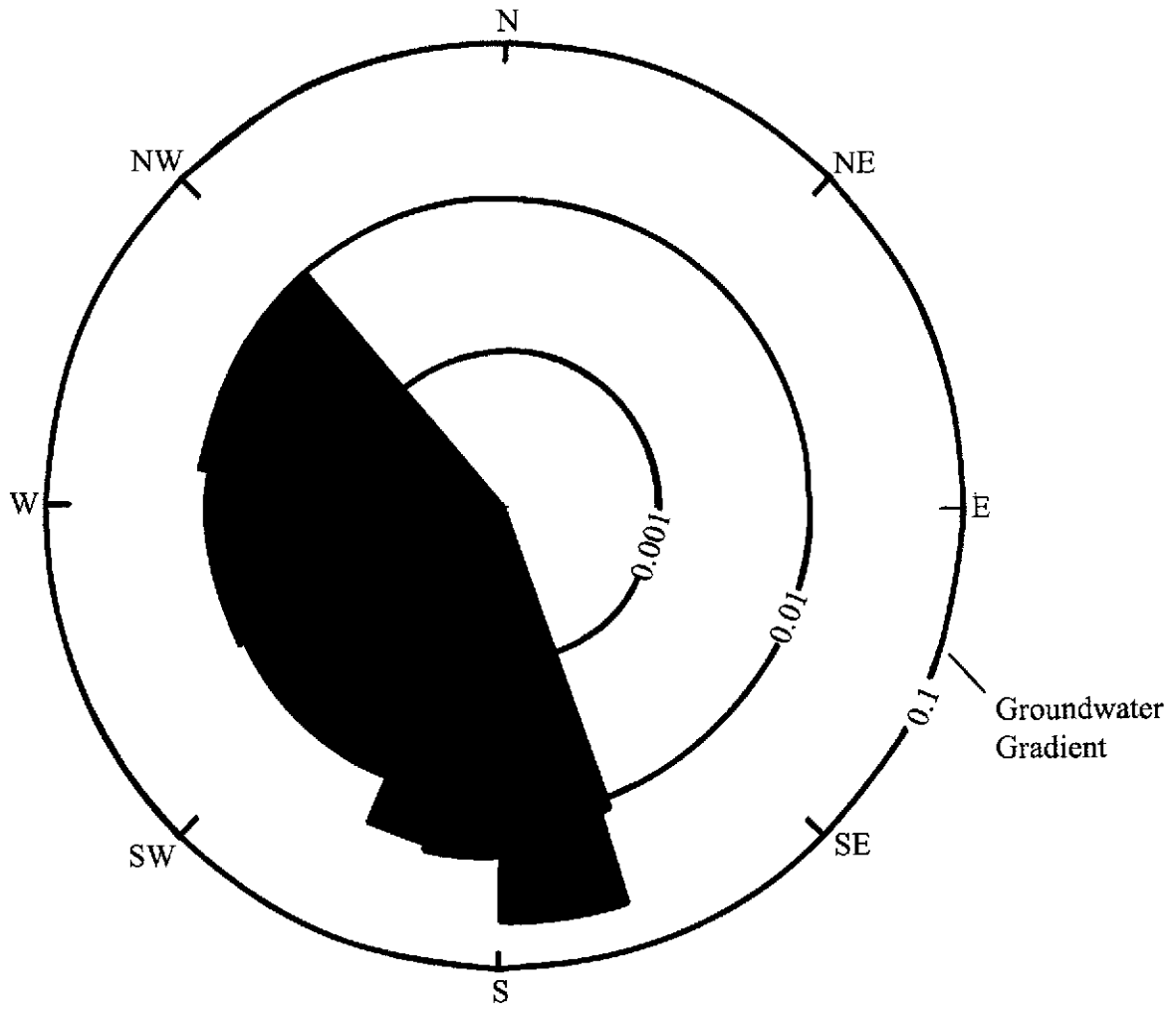


FIGURE 3A: HISTORICAL GROUNDWATER FLOW DIRECTION
FORMER SEKHON GAS STATION (June 2001 - August 2005)
6600 Foothill Blvd.
Oakland, California

ADVANCED ASSESSMENT and
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2380 Salvio Street, Suite 202
Concord, CA 94520

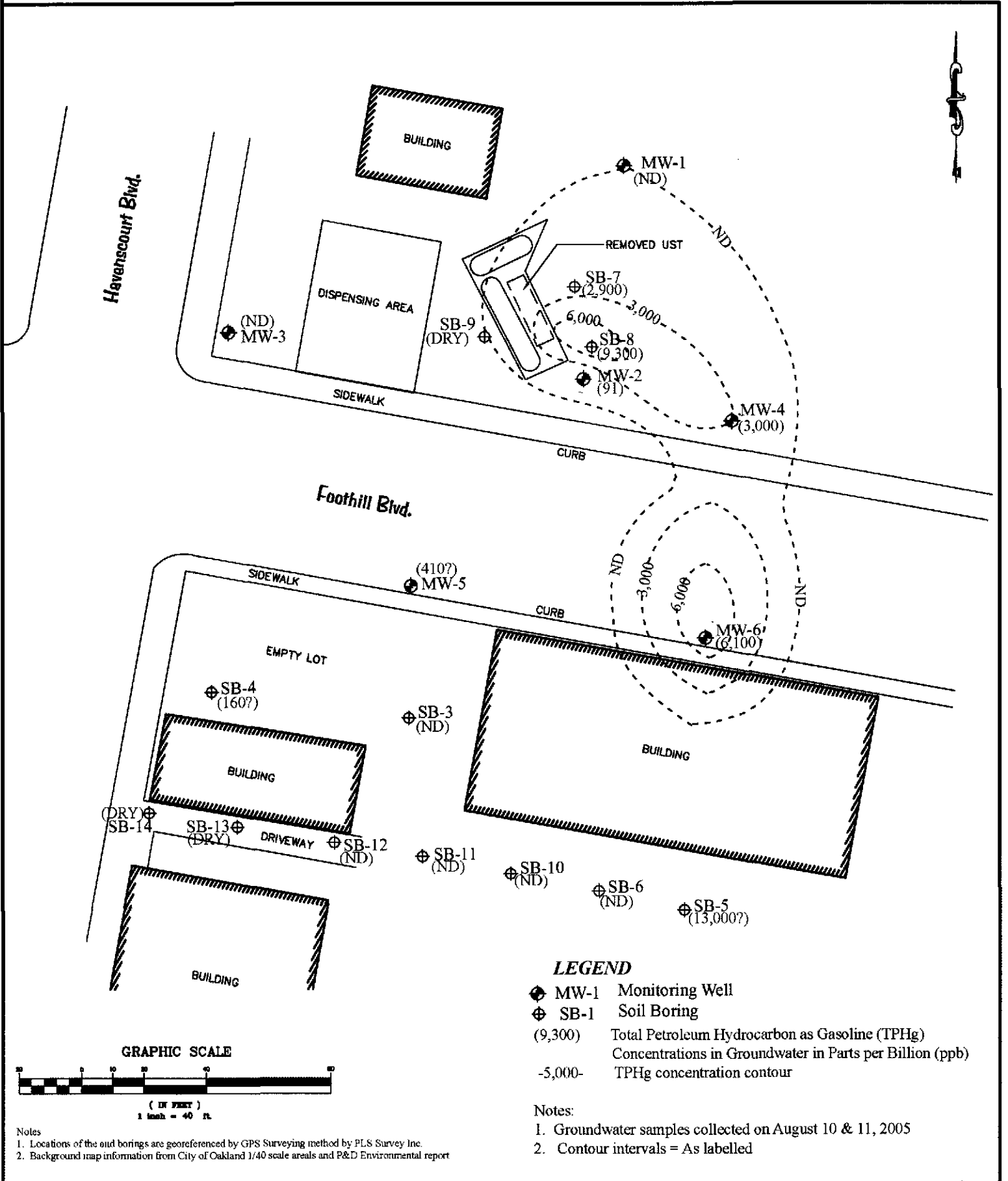


FIGURE 4: TPHg CONCENTRATIONS IN GROUNDWATER
FORMER SEKHON GAS STATION
 6600 Foothill Boulevard
 Oakland, CA 94544

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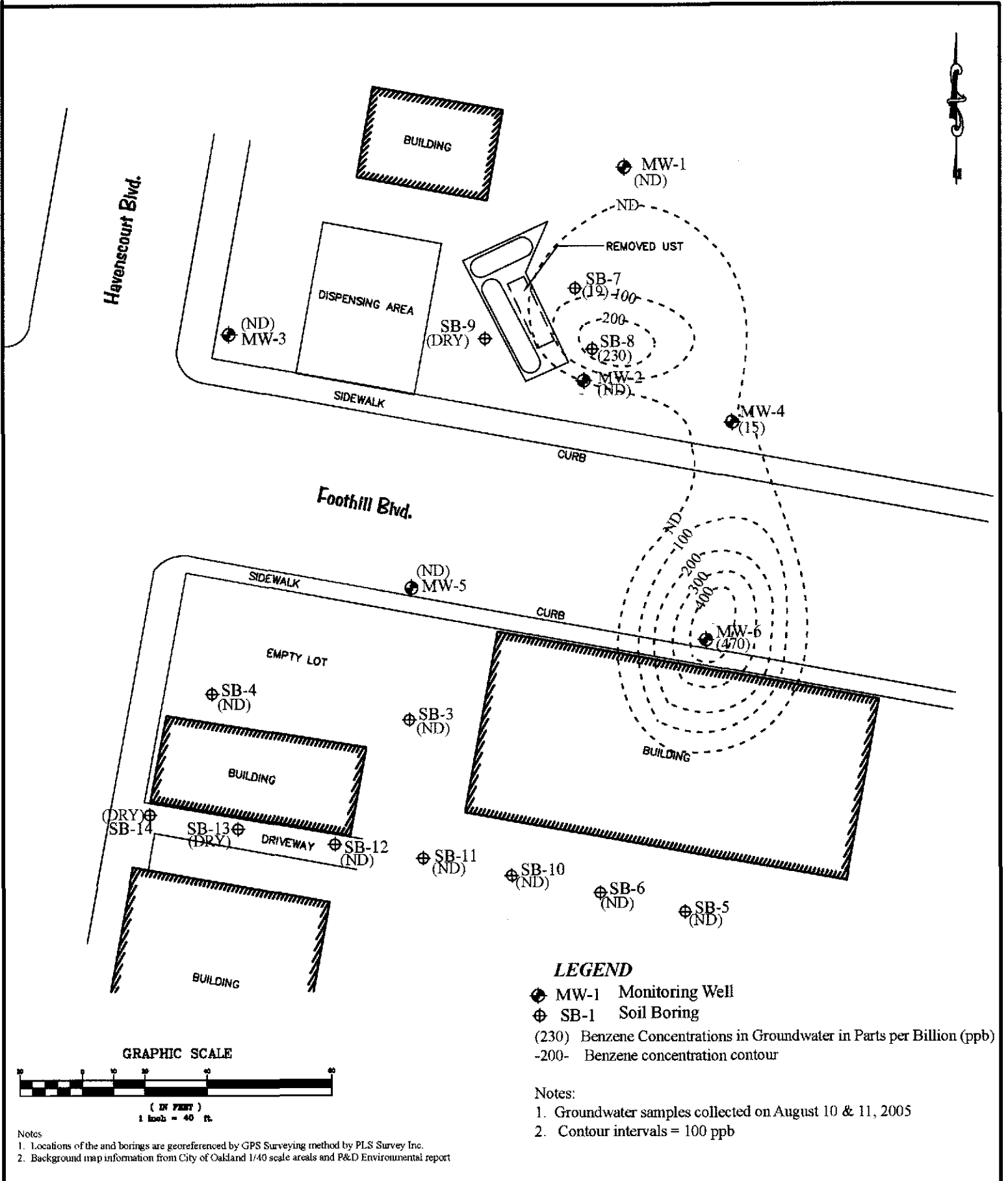


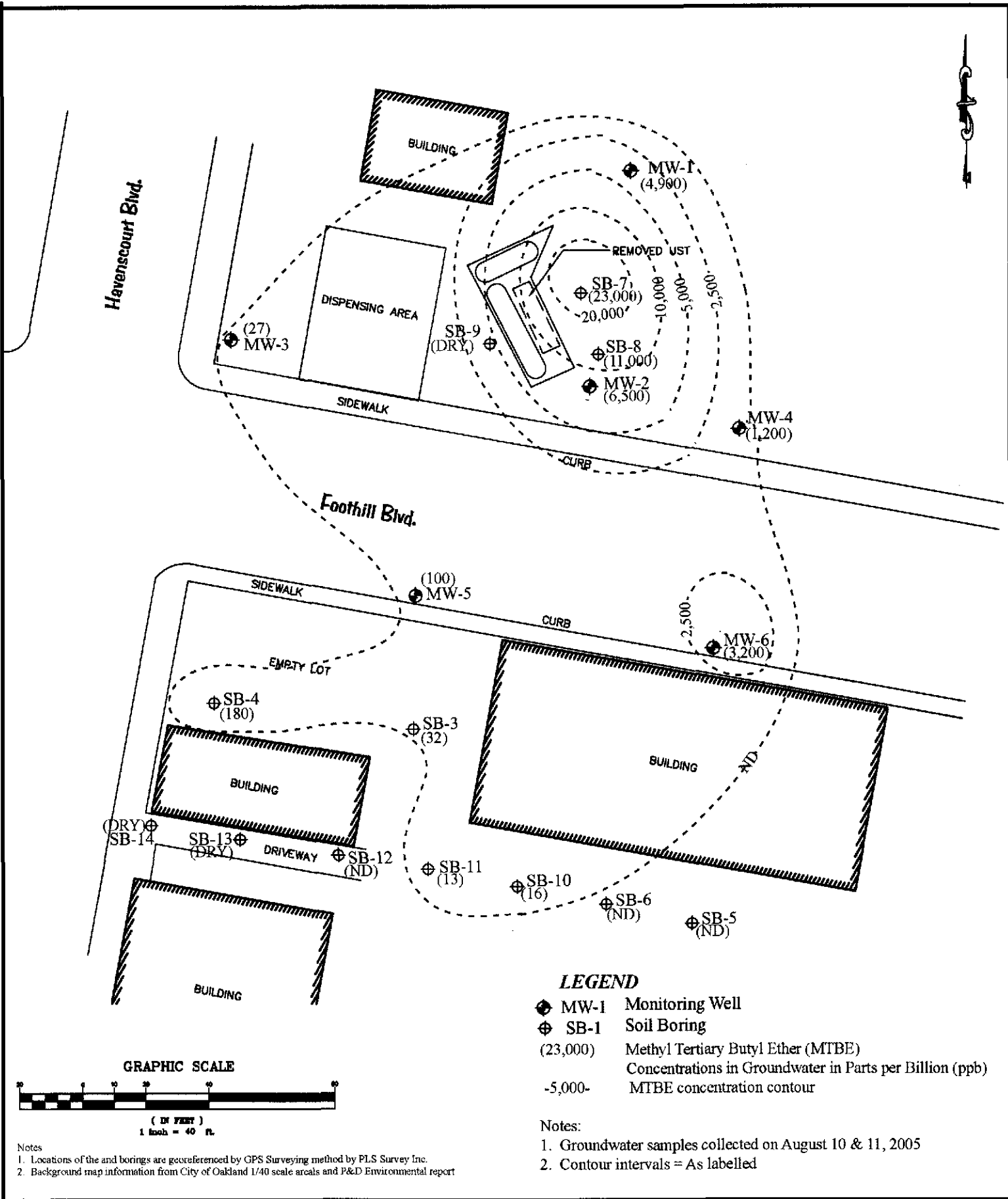
FIGURE 5: BENZENE CONCENTRATIONS IN GROUNDWATER
FORMER SEKHON GAS STATION
 6600 Foothill Boulevard
 Oakland, CA 94544

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 Concord, CA 94520

Notes:
 1. Locations of the and borings are georeferenced by GPS Surveying method by PLS Survey Inc.
 2. Background map information from City of Oakland 1/40 scale areals and P&D Environmental report

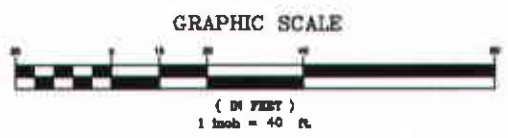
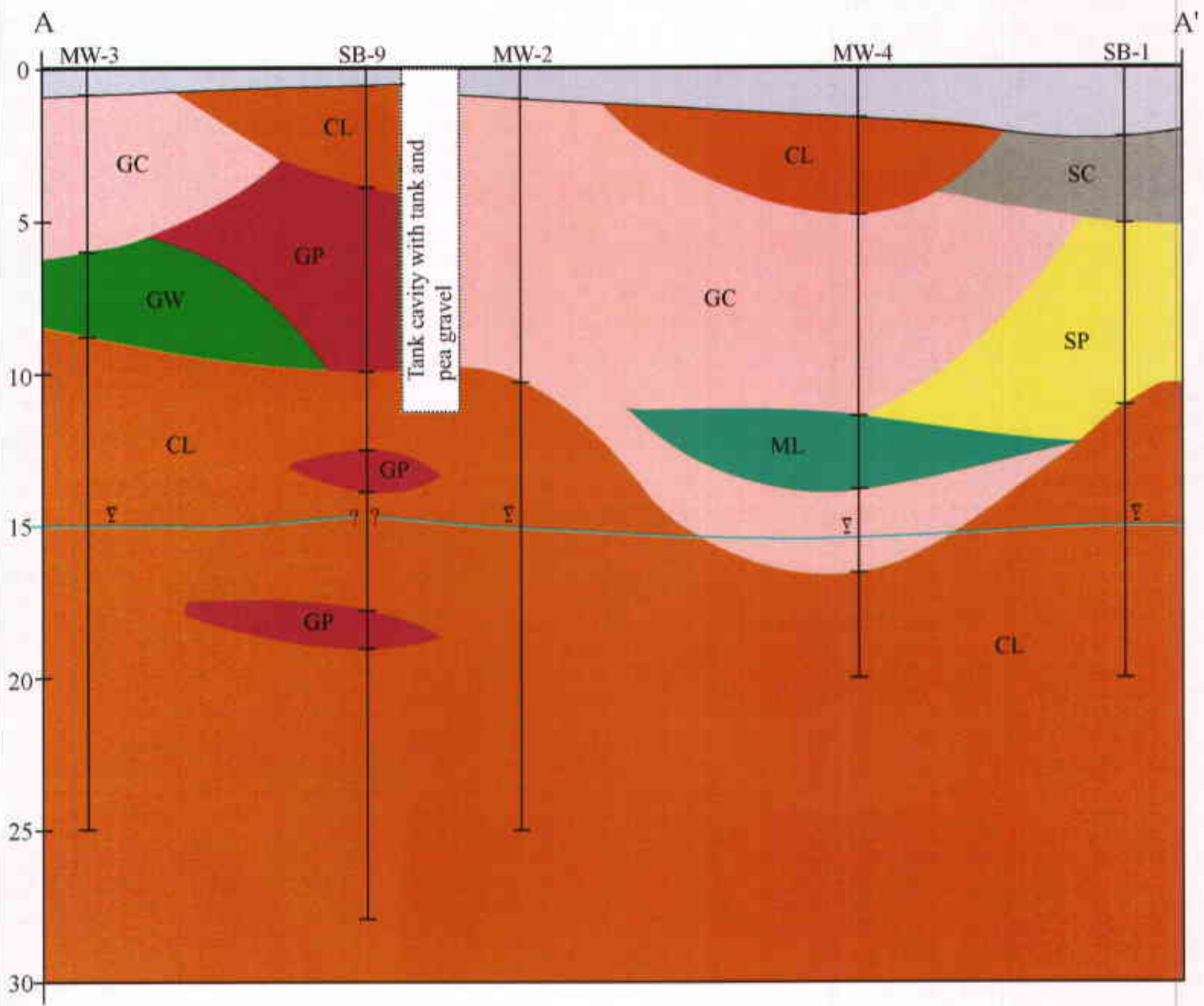
LEGEND
 ● MW-1 Monitoring Well
 ⊕ SB-1 Soil Boring
 (230) Benzene Concentrations in Groundwater in Parts per Billion (ppb)
 -200- Benzene concentration contour

Notes:
 1. Groundwater samples collected on August 10 & 11, 2005
 2. Contour intervals = 100 ppb



**FIGURE 6: MTBE CONCENTRATIONS IN GROUNDWATER
 FORMER SEKHON GAS STATION
 6600 Foothill Boulevard
 Oakland, CA 94544**

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 Concord, CA 94520**

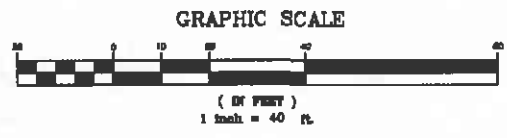
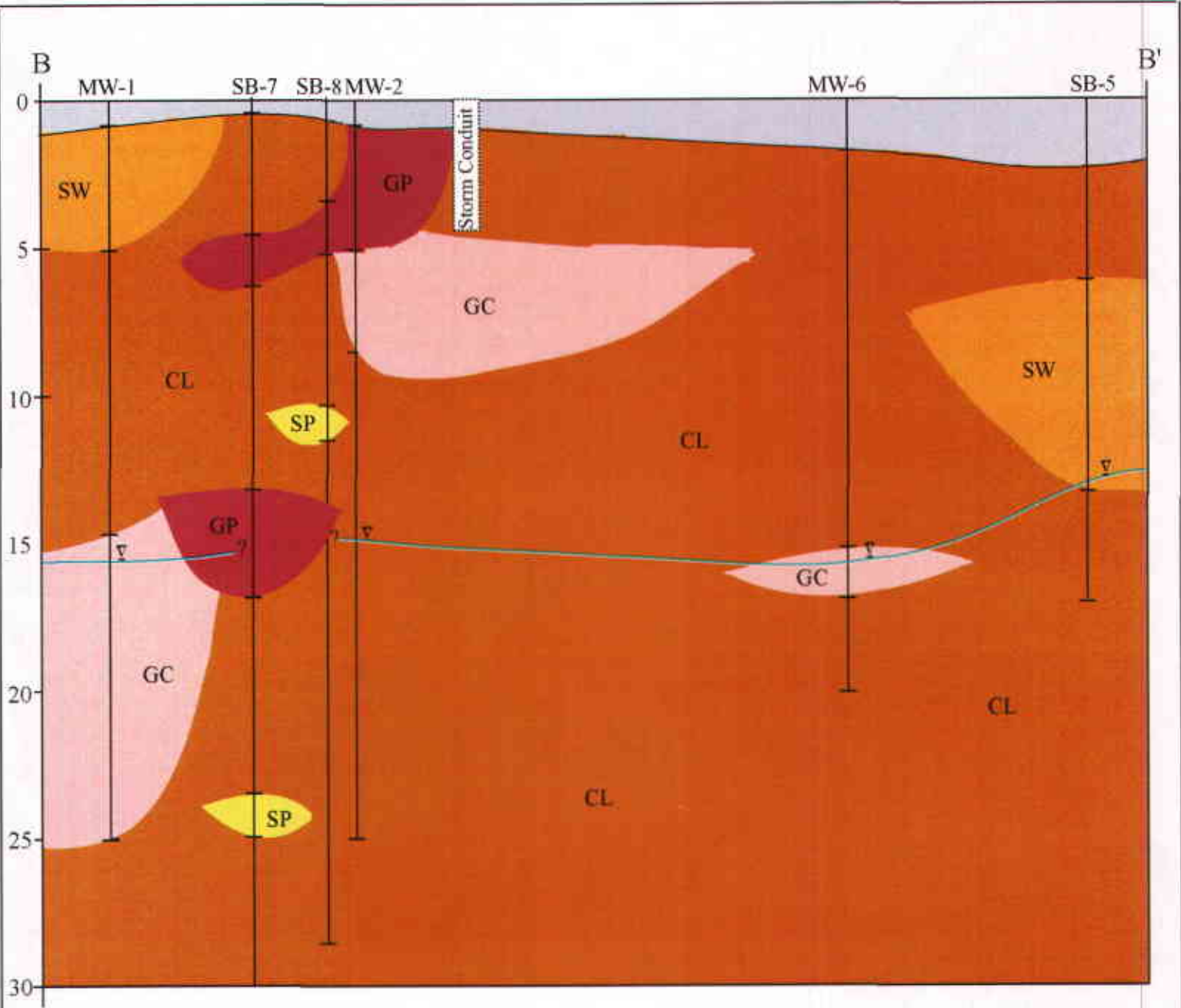


Vertical Exaggeration 8X

LEGEND	
	Asphalt & base material
	CL - Inorganic Clay
	GC - Clayey Gravels
	GP - Gravel-Sand mix.
	SC - Clayey Sand
	SP - Gravelly Sand
	ML - Silt
	GW - Sandy Gravels
	1st Groundwater

FIGURE 7: GEOLOGIC CROSS SECTION A-A'
FORMER SEKHON GAS STATION
 6600 Foothill Boulevard
 Oakland, CA

**ADVANCED ASSESSMENT AND
 REMEDIATION SERVICES**
 2380 Salvio Street, Suite 202
 Concord, CA 94520



Vertical Exaggeration 8X








LEGEND	
	Asphalt & Base Material
	SW - Gravelly Sands
	CL - Inorganic Clay
	GC - Clayey Gravels
	GP - Gravel-Sand mix
	SP - Gravelly Sand
	1st Groundwater

FIGURE 8: GEOLOGIC CROSS SECTION B-B'
FORMER SEKHON GAS STATION
 6600 Foothill Boulevard
 Oakland, CA

**ADVANCED ASSESSMENT AND
 REMEDIATION SERVICES**
 2380 Salvio Street, Suite 202
 Concord, CA 94520

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: 07/18/2005 By Jamesy
Permits Issued: W2005-0711

Receipt Number: WR2005-2008
Permits Valid from 08/10/2005 to 08/11/2005

Application Id: 1121469341968
Site Location: 6600 Foothill Boulevard, Oakland, CA
(Formerly Sekhon Gas Station)

City of Project Site:Oakland

Project Start Date: 08/10/2005

Completion Date:08/11/2005

Applicant: Advance Assessment & Remediation Services -

Phone: 925-363-1999

Tridib K Guha
2380 Salvio St #202, Concord, CA 94520
Ravi S Sekhon
21696 Knuppe Pl, Castro Valley, CA 94522

Property Owner:

Phone: 510-861-4173

Client:

** same as Property Owner **

Total Due: \$200.00
Total Amount Paid: \$200.00
Paid By: CHECK PAID IN FULL

Works Requesting Permits:

Borehole(s) for Investigation-Contamination Study - 12 Boreholes
Driller: Gregg Drilling & Testing - Lic #: 48165 - Method: other

Work Total: \$200.00

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2005-0711	07/18/2005	11/08/2005	12	1.50 in.	30.00 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.
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. 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.
4. Applicant shall contact Johnson Tang for a inspection time at 510-670-6450 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.

8/3 USA - CLEARANCE GOOD Till 8/31
ALLISON 800227 2600
REF. # 292528
INFORMED JOHNSON TANG
E-MAIL PERMIT & SITE MAP ON 8/4



ADVANCED ASSESSMENT AND REMEDIAL SERVICES (AARS)

2380 SALVIO STREET, SUITE 202
CONCORD, CALIFORNIA 94520-2137
TEL: (925) 363-1999 FAX: (925) 363-1998
e-mail: aars@earthlink.net
www.aars.com

Via FAX 925-228-3644

August 4, 2005

Mr. Dylan Radke, Attorney-at-Law
Gordon Law Firm
611 Los Juntas
Martinez, California 94553

**Subject: Permission to Collect Groundwater Samples on your Mr. Joseph Le Blanc, Sr. Property
at 6620 Foothill Boulevard, Oakland, California**

Dear Mr. Radke:

Thank you for returning my call to your client, Mr. Joseph Le Blanc, Sr. Advanced Assessment and Remediation Services (AARS) seeks permission from your client, Mr. Joseph Le Blanc to collect groundwater samples from monitoring well no. MW-4, on his property at 6620 Foothill Boulevard, Oakland, California. This work is conducted under the direction of Alameda County Health Care Services Agency, Department of Environmental Health (ACHSADEH) to monitor/ongoing investigation of hydrocarbon contamination released from former Sekhon Gas Station at 6600 Foothill Boulevard, Oakland, California. Enclosed is the Work Plan approval letter from ACHSADEH dated June 11, 2004. We need to access your client's property for groundwater sampling. All work will be coordinated with you and copies of reports will be submitted. Please sign this letter with your permission and return by fax no. 925-363-4070 (please call before faxing). If you have any question please call me at 925-363-1999. Thank you for your kind permission and cooperation.

Sincerely,

Advanced Assessment and Remediation Services

Tridib K. Guha, P.G.
Principal

Permitted
Signature: _____

Cc: Mr. Don Hwang, ACHSADEH, Alameda
Mr. Ravi Sekhon, Castro Valley

TQ/Sekhonperm04

HYDROBIOLOGY • GEOTECHNICAL ENGINEERING • REMEDIAL ENGINEERING • BIODEGRADATION • COMPLIANCE • CONSULTING

SINCE 1991



ADVANCED ASSESSMENT AND REMEDiation SERVICES (AARS)

2380 SALVIO STREET, SUITE 202
CONCORD, CALIFORNIA 94520-2137
TEL: (925) 363-1999 FAX: (925) 363-1998
e-mail: aars@earthlink.net
www.aars.com

CERTIFIED MAIL WITH RETURN RECEIPT

May 17, 2005

Mr. Billy Jue
MEI LAN AQUARIUMS
6625 Foothill Boulevard
Oakland, California 94605

**Subject: Permission to Drill Soil Borings, Collect Soil and Groundwater Samples on your Property
at 6625 Foothill Boulevard, Oakland, California**

Dear Mr. Jue:

Advanced Assessment and Remediation Services (AARS) seeks your permission to drill seven soil borings, collect soil and groundwater samples on your property at 6625 Foothill Boulevard and driveway, Oakland, California. This work is conducted under the direction of Alameda County Health Care Services Agency, Department of Environmental Health (ACHCSADEH) to define the extent of hydrocarbon contamination released from former Sekhon Gas Station at 6600 Foothill Boulevard, Oakland, California. Enclosed is the Work Plan approval letter from ACHCADEH dated June 11, 2004. We need to access your property for site marking prior to drilling to obtain clearance from Underground Service Alert. Also we need to access your property for drilling and collection of soil and groundwater samples. All work will be coordinated with you. Please sign this letter with your permission and return in the stamped envelop. If you have any question please call me at 925-363-1999. Thank you for your kind permission and cooperation.

Sincerely,

Advanced Assessment and Remediation Services

Tridib K. Guha, P.G.
Principal

Permitted
Signature: _____

May 19th - 2005

Cc: Mr. Don Hwang, ACHSADEH, Alameda
Mr. Ravi Sekhon, Castro Valley

TG/Sekhonpermission2



ADVANCED ASSESSMENT AND REMEDiation SERVICES (AARS)

2380 SALVIO STREET, SUITE 202
CONCORD, CALIFORNIA 94520-2137
TEL: (925) 363-1999 FAX: (925) 363-1998
e-mail: aars@earthlink.net
www.aaars.com

CERTIFIED MAIL WITH RETURN RECEIPT

June 11, 2005

Mr. Harrison Huynh and Mrs. Kim Jeanette Huynh
1692 Manzanita Avenue
San Leandro, California 94579-1328

**Subject: Permission to Drill Soil Borings, Collect Soil and Groundwater Samples on your Property
at 6601 Foothill Boulevard, Oakland, California**

Dear Mr. and Mrs. Huynh:

Advanced Assessment and Remediation Services (AARS) seeks your permission to drill two soil borings, collect soil and groundwater samples on your property at 6601 Foothill Boulevard, Oakland, California. This work is conducted under the direction of Alameda County Health Care Services Agency, Department of Environmental Health (ACHCSA DEH) to define the extent of hydrocarbon contamination released from former Sekhon Gas Station at 6600 Foothill Boulevard, Oakland, California. Enclosed is the Work Plan approval letter from ACHCADEH dated June 11, 2004. We need to access your property for site marking prior to drilling to obtain clearance from Underground Service Alert. Also we need to access your property for drilling and collection of soil and groundwater samples. All work will be coordinated with you. Please sign this letter with your permission and return in the stamped envelop. If you have any question please call me at 925-363-1999. Thank you for your kind permission and cooperation.

Sincerely,

Advanced Assessment and Remediation Services

Tridib K. Guha, P.G.
Principal

Permitted
Signature: _____

Cc: Mr. Don Hwang, ACHSADEH, Alameda
Mr. Ravi Sekhon, Castro Valley


TG/SekhonpermissionR

LOG OF EXPLORATORY BORING NO. SB-3

PROJECT: SEKHON GAS STATION
 DRILLING CO.: GREGG DRILLING & TSTG.
 DRILLER: VINCENT POKRYWKA
 DRILL METHOD: DIRECT PUSH

LOGGED BY: T. GUHA
 SAMPLER: MACROCORE
 HOLE DIAMETER: 2 INCH
 DRILL RIG: GEOPROBE M 5 T

START DATE: 8/10/05
 END DATE: 8/11/05
 INITIAL GW DEPTH : ? FEET

DESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH (Feet)	SAMPLE	BLOWS/FT	PID (ppm)	BORING CLOSURE
FILL: Gravel, sand and clay mix			0 1 2				 <p style="text-align: right; margin-right: 50px;">← Neat Cement</p>
SAND: gray, with some clay, moist, loose	SC		3 4 5 6			0	
GRAVELLY SAND: gray, dry, loose	SW	•••••	7 8 9 10 11			0	
CLAY: brown, very moist, very stiff	CL	/ / / / /	12 13			0	
GRAVELLY SAND: grayish brown, dry, loose	SW	•••••	14 15			0	
CLAY: brown, with some gravel & sand, moist, stiff	CL	/ / / / /	16 17			0	
CLAY: brown, very moist, very stiff	CL	/ / / / /	18 19			0	
Borehole terminated at 20 feet			20 21 22 23 24 25 26 27 28 29 30			0	

ADVANCED ASSESSMENT AND
 REMEDIATION SERVICES
 2380 Salvio Street, Suite 202
 Concord, CA 94520

Notes:
 During drilling did not encounter wet zone, bottom of the hole was very moist, left hole open for 24 hours, 2 feet of water in the hole, groundwater sample collected.




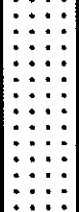



Project No.
**SEKHON
 GAS STATION**
 Page 1 of 1

LOG OF EXPLORATORY BORING NO. SB-4

PROJECT: SEKHON GAS STATION
 DRILLING CO.: GREGG DRILLING & TSTG.
 DRILLER: VINCENT POKRYWKA
 DRILL METHOD: DIRECT PUSH

LOGGED BY: T. GUHA
 SAMPLER: MACROCORE
 HOLE DIAMETER: 2 INCH
 DRILL RIG: GEOPROBE M 5 T

START DATE: 8/10/05
 END DATE: 8/11/05
 INITIAL GW DEPTH: ? FEET

DESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH (Feet)	SAMPLE	BLOWS?FT	PID (ppm)	BORING CLOSURE
FILL: Gravel, sand and clay mix			0 1 2				 <p style="text-align: right; margin-right: 50px;">← Neat Cement</p>
SAND: gray, with gravels and clay, moist, loose	SP		3				
CLAY: dark gray, minor sand, moist, very stiff	CL		4 5 6			0	
GRAVELLY SAND: yellowish brown, dry, loose	SW		7 8 9 10 11			0	
CLAY: greenish gray, very moist, very stiff	CL		12 13 14 15 16			0	
GRAVELLY SAND: brown, moist, loose	SW		17				
CLAY: greenish gray, very moist, very stiff	CL		18 19				
Borehole terminated at 20 feet			20 21 22 23 24 25 26 27 28 29 30			0	

ADVANCED ASSESSMENT AND
 REMEDIATION SERVICES
 2380 Salvio Street, Suite 202
 Concord, CA 94520

Notes:
 During drilling did not encounter wet zone, bottom of the hole was very moist, left hole open for 24 hours, 2 feet of water in the hole, groundwater sample collected on 8/11/05.

Project No.
SEKHON
GAS STATION
 Page 1 of 1

LOG OF EXPLORATORY BORING NO. SB-5

PROJECT: SEKHON GAS STATION
 DRILLING CO.: GREGG DRILLING & TSTG.
 DRILLER: VINCENT POKRYWKA
 DRILL METHOD: DIRECT PUSH

LOGGED BY: T. GUHA
 SAMPLER: MACROCORE
 HOLE DIAMETER: 2 INCH
 DRILL RIG: GEOPROBE M 5 T

START DATE: 8/10/05
 END DATE: 8/10/05
 INITIAL GW DEPTH : 12.5 FEET

DESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH (Feet)	SAMPLE	BLOWS?FT	PID (ppm)	BORING CLOSURE
ASPHALT 2 in. FILL: Gravel, sand and clay mix			0				
CLAY: dark gray, moist, very stiff	CL	[Hatched pattern]	1				
			2				
			3				
			4				
			5			0	
			6				
GRAVELLY SAND : yellowish brown, dry, loose	SW	[Dotted pattern]	7				
			8				
			9				
			10			720	
color changes to light green, moist, strong odor			11				
wet			12	■		950	
			13				
CLAY: dark gray, moist, very stiff	CL	[Hatched pattern]	14				
			15			0	
			16				
			17			0	
Borehole terminated at 17 feet			18				
			19				
			20				
			21				
			22				
			23				
			24				
			25				
			26				
			27				
			28				
			29				
			30				

ADVANCED ASSESSMENT AND
 REMEDIATION SERVICES
 2380 Salvio Street, Suite 202
 Concord, CA 94520

Notes:
 During drilling groundwater encounter at 12 1/2 feet. A grab
 groundwater sample was collected.

Project No.
**SEKHON
 GAS STATION**
 Page 1 of 1

LOG OF EXPLORATORY BORING NO. SB-6

PROJECT: SEKHON GAS STATION
 DRILLING CO.: GREGG DRILLING & TSTG.
 DRILLER: VINCENT POKRYWKA
 DRILL METHOD: DIRECT PUSH

LOGGED BY: T. GUHA
 SAMPLER: MACROCORE
 HOLE DIAMETER: 2 INCH
 DRILL RIG: GEOPROBE M 5 T

START DATE: 8/10/05
 END DATE: 8/10/05
 INITIAL GW DEPTH : 12 FEET









DESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH (Feet)	SAMPLE	BLOWS?FT	PID (ppm)	BORING CLOSURE
ASPHALT 4 in. FILL: Gravel, sand and clay mix			0				
CLAY: dark gray, moist, very stiff	CL	▨	1				
SAND: light gray, with gravels, damp, loose	SP	▩	2				
CLAY: dark gray, moist, very stiff	CL	▨	3				
GRAVELLY SAND : yellowish brown, dry, loose wet color changes to gray wet	SW	▩	4			0	
		▩	5			0	
		▩	6			0	
		▩	7			0	
		▩	8			0	
		▩	9			0	
		▩	10			0	
		▩	11			0	
		▩	12	■		0	
		▩	13			0	
		▩	14			0	
		▩	15			0	
		▩	16			0	
Borehole terminated at 17 feet			17			0	
			18				
			19				
			20				
			21				
			22				
			23				
			24				
			25				
			26				
			27				
			28				
			29				
			30				

LOG OF EXPLORATORY BORING NO. SB-7

PROJECT: SEKHON GAS STATION
 DRILLING CO.: GREGG DRILLING & TSTG.
 DRILLER: JESSE PATTISON
 DRILL METHOD: DIRECT PUSH

LOGGED BY: T. GUHA
 SAMPLER: MACROCORE
 HOLE DIAMETER: 2 INCH
 DRILL RIG: GEOPROBE M 57

START DATE: 8/11/05
 END DATE: 8/11/05
 INITIAL GW DEPTH: ? FEET

DESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH (Feet)	SAMPLE	BLOWS?FT	PID (ppm)	BORING CLOSURE
ASPHALT: (4 IN.)			0				
CLAY: dark gray, moist, very stiff	CL		1				
			2				
			3				
SANDY GRAVEL: yellowish brown, damp, loose	GP		4				
			5		5		
			6				
			7				
CLAY: greenish gray, moist, very stiff, strong odor	CL		8	■		150	
			9				
			10			250	
			11				
			12				
SANDY GRAVEL: brown, moist, loose, stng odor color changes to light brown, strong odor	GP		13	■		550	
			14				
			15			350	
			16				
			17	■		250	
CLAY: brown, moist, very stiff greenish color layer	CL		18				
			19				
			20			0	
			21				
			22				
			23				
SAND: brown, very little fines, moist, loose	SP		24	■		0	
CLAY: brown, moist, very stiff	CL		25				
			26				
			27				
			28				
			29	■		0	
Borehole terminated at 30 feet			30				

ADVANCED ASSESSMENT AND
 REMEDIATION SERVICES
 2380 Salvio Street, Suite 202
 Concord, CA 94520

Notes: hit concrete at 2 1/2 feet, move one foot east, encounter
 pea gravel, move one foot east, hand auger to 4 feet, screen set at 13 feet for
 2 hours, no water, drilled to 30 feet; wet zone was not encountered; hole was
 left open for 5 hours; there was just enough water to fill 3 VOAs









Project No.
**SEKHON
 GAS STATION**
 Page 1 of 1

LOG OF EXPLORATORY BORING NO. SB-8

PROJECT: SEKHON GAS STATION
 DRILLING CO.: GREGG DRILLING & TSTG.
 DRILLER: JESSE PATTISON
 DRILL METHOD: DIRECT PUSH

LOGGED BY: T. GUHA
 SAMPLER: MACROCORE
 HOLE DIAMETER: 2 INCH
 DRILL RIG: GEOPROBE M 57

START DATE: 8/11/05
 END DATE: 8/11/05
 INITIAL GW DEPTH: ? FEET

DESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH (Feet)	SAMPLE	BLOWS?FT	PID (ppm)	BORING CLOSURE
ASPHALT: (4 IN.)			0				
CLAY: dark gray, moist, very stiff color changes to dark brown	CL		1 2 3				
SANDY GRAVEL: yellowish brown, dry, loose color changes to grayish green	GP		4 5				
CLAY: brown, moist, very stiff	CL		6 7 8 9	■		5	
SAND: brown, very little fines, moist, loose, odor	SP		10	■		650	
SILTY CLAY: brown, moist, stiff, odor	CL		11 12				
SANDY GRAVEL: brown, moist, loose, odor	GP		13 14 15 16	■		850	
CLAY: brown, moist, very stiff greenish color layer	CL		17 18 19 20 21 22 23 24 25 26 27	■		0	
Borehole terminated at 28 feet			28 29 30			0	

ADVANCED ASSESSMENT AND
 REMEDIATION SERVICES
 2380 Salvio Street, Suite 202
 Concord, CA 94520

Notes:
 Hit concrete at 2 1/2 feet move one foot east, hand auger
 to 4 feet; during drilling did not encounter wet zone, hole was
 open for 2 hours; there was just enough water for 3 VOAs.


Project No.
**SEKHON
 GAS STATION**
 Page 1 of 1

LOG OF EXPLORATORY BORING NO. SB-9

PROJECT: SEKHON GAS STATION
 DRILLING CO.: GREGG DRILLING & TSTG.
 DRILLER: JESSE PATTISON
 DRILL METHOD: DIRECT PUSH

LOGGED BY: T. GUHA
 SAMPLER: MACROCORE
 HOLE DIAMETER: 2 INCH
 DRILL RIG: GEOPROBE M 57

START DATE: 8/11/05
 END DATE: 8/11/05
 INITIAL GW DEPTH: ? FEET

DESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH (Feet)	SAMPLE	BLOWS?FT	PID (ppm)	BORING CLOSURE
ASPHALT: (4 IN.)			0				
CLAY: dark gray, moist, very stiff color changes to dark brown	CL	[Hatched pattern]	1 2 3				
SANDY GRAVEL: brown, dry, loose color changes to grayish green, strong gas odor	GP	[Stippled pattern]	4 5 6 7 8 9	■		450	
CLAY: brown, moist, very stiff	CL	[Hatched pattern]	10 11	■		5	
SANDY GRAVEL: brown, moist, loose, strong odor	GP	[Stippled pattern]	12 13	■		550	
CLAY: brown, moist, very stiff	CL	[Hatched pattern]	14 15 16				
SANDY GRAVEL: brown, moist, loose, odor	GP	[Stippled pattern]	17	■		50	
CLAY: gray, moist, very stiff	CL	[Hatched pattern]	18 19 20				
a thin sand layer greenish color		[Hatched pattern]	21	■		50	
		[Hatched pattern]	22 23 24 25 26				
		[Hatched pattern]	27	■		0	
Borehole terminated at 28 feet			28 29 30				

ADVANCED ASSESSMENT AND
 REMEDIATION SERVICES
 2380 Salvio Street, Suite 202
 Concord, CA 94520

Notes:
 hand auger to 4 feet ; during drilling did not encounter
 wet zone, hole was open for 3 hours, the hole was dry, no
 groundwater sample.

Project No.
**SEKHON
 GAS STATION**
 Page 1 of 1

LOG OF EXPLORATORY BORING NO. SB-10

PROJECT: SEKHON GAS STATION
 DRILLING CO.: GREGG DRILLING & TSTG.
 DRILLER: VINCENT POKRYWKA
 DRILL METHOD: DIRECT PUSH

LOGGED BY: T. GUHA
 SAMPLER: MACROCORE
 HOLE DIAMETER: 2 INCH
 DRILL RIG: GEOPROBE M 5 T

START DATE: 8/10/05
 END DATE: 8/10/05
 INITIAL GW DEPTH : 11.5 FEET

DESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH (Feet)	SAMPLE	BLOWS?FT	PID (ppm)	BORING CLOSURE
ASPHALT 2 in. FILL: Gravel, sand and clay mix			0				
CLAY: dark gray, moist, very stiff	CL	[Diagonal Hatching]	1				
SAND: light gray, with gravels, dry, loose	SP	[Dotted Pattern]	2				
color changes light brown, moist, loose			3				
			4			0	
			5				
			6				
			7				
			8				
			9				
wet			10			0	
			11	■			
CLAY: brown, wet, very stiff	CL	[Diagonal Hatching]	12				
GRAVELLY SAND : brown, loose, wet	SW	[Dotted Pattern]	13				
CLAY: brown, very stiff, wet	CL	[Diagonal Hatching]	14				
			15			0	
			16				
			17			0	
Borehole terminated at 17 feet			18				
			19				
			20				
			21				
			22				
			23				
			24				
			25				
			26				
			27				
			28				
			29				
			30				

LOG OF EXPLORATORY BORING NO. SB-11

PROJECT: SEKHON GAS STATION
 DRILLING CO.: GREGG DRILLING & TSTG.
 DRILLER: VINCENT POKRYWKA
 DRILL METHOD: DIRECT PUSH

LOGGED BY: T. GUHA
 SAMPLER: MACROCORE
 HOLE DIAMETER: 2 INCH
 DRILL RIG: GEOPROBE M 5 T

START DATE: 8/10/05
 END DATE: 8/10/05
 INITIAL GW DEPTH: 11 FEET

DESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH (Feet)	SAMPLE	BLOWS?FT	PID (ppm)	BORING CLOSURE
ASPHALT 2 in. FILL: Gravel, sand and clay mix			0				
CLAY: dark gray, moist, very stiff	CL	[Diagonal Hatching]	1				
SAND: light gray, with gravels, dry, loose	SP	[Dotted Pattern]	2				
No recovery 5 to 8'			3			0	
CLAY: brown, very moist, very stiff	CL	[Diagonal Hatching]	4				
GRAVELLY SAND : brown, loose, wet	SW	[Dotted Pattern]	5	■		0	
CLAY: brown, very stiff, wet	CL	[Diagonal Hatching]	6				
Borehole terminated at 17 feet			7			0	
			8				
			9				
			10				
			11				
			12				
			13				
			14				
			15				
			16				
			17				
			18				
			19				
			20				
			21				
			22				
			23				
			24				
			25				
			26				
			27				
			28				
			29				
			30				

ADVANCED ASSESSMENT AND
 REMEDIATION SERVICES
 2380 Salvio Street, Suite 202
 Concord, CA 94520

Notes:
 During drilling groundwater encounter at 12 feet. A grab
 groundwater sample was collected.

Project No.
**SEKHON
 GAS STATION**
 Page 1 of 1

LOG OF EXPLORATORY BORING NO. SB-12

PROJECT: SEKHON GAS STATION
 DRILLING CO.: GREGG DRILLING & TSTG.
 DRILLER: VINCENT POKRYWKA
 DRILL METHOD: DIRECT PUSH

LOGGED BY: T. GUHA
 SAMPLER: MACROCORE
 HOLE DIAMETER: 2 INCH
 DRILL RIG: GEOPROBE M 5 T

START DATE: 8/10/05
 END DATE: 8/10/05
 INITIAL GW DEPTH : 11 FEET


DESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH (Feet)	SAMPLE	BLOWS?FT	PID (ppm)	BORING CLOSURE
ASPHALT 2 in. FILL: Gravel, sand and clay mix			0				
CLAY: dark gray, moist, very stiff	CL	1 2 3 4 5	1 2 3 4 5			0	
color changes to light gray			6				
SAND: light gray, with gravels, dry, loose	SP	7 8	7 8				
CLAY: yellowish brown, very moist, very stiff	CL	9 10	9 10			0	
GRAVELLY SAND : brown, loose, wet	SW	11 12 13	11 12 13	■			
CLAY: brown, very stiff, wet	CL	14 15 16	14 15 16			0	
Borehole terminated at 17 feet			17 18 19 20 21 22 23 24 25 26 27 28 29 30			0	

LOG OF EXPLORATORY BORING NO. SB-13

PROJECT: SEKHON GAS STATION
 DRILLING CO.: GREGG DRILLING & TSTG.
 DRILLER: VINCENT POKRYWKA
 DRILL METHOD: DIRECT PUSH

LOGGED BY: T. GUHA
 SAMPLER: MACROCORE
 HOLE DIAMETER: 2 INCH
 DRILL RIG: GEOPROBE M 5 T

START DATE: 8/10/05
 END DATE: 8/11/05
 INITIAL GW DEPTH: ? FEET

DESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH (Feet)	SAMPLE	BLOWS?FT	PID (ppm)	BORING CLOSURE
ASPHALT 2 in. FILL: Gravel, sand and clay mix			0				 <p style="text-align: right;">← Neat Cement</p>
CLAY: dark gray, moist, very stiff	CL	[diagonal lines]	1				
			2				
SAND: light gray, with gravels, dry, loose	SP	[dots]	3				
			4			0	
			5				
CLAY: brown, with gravel and sand very moist, stiff	CL	[diagonal lines]	6				
			7				
			8				
			9				
			10			0	
GRAVELLY SAND : brown, dry, loose	SW	[dots]	11	■			
CLAY: brown, very moist, very stiff	CL	[diagonal lines]	12				
			13				
			14				
			15			0	
			16				
Borehole terminated at 17 feet			17			0	
			18				
			19				
			20				
			21				
			22				
			23				
			24				
			25				
			26				
			27				
			28				
			29				
			30				

ADVANCED ASSESSMENT AND
 REMEDIATION SERVICES
 2380 Salvio Street, Suite 202
 Concord, CA 94520

Notes:
 During drilling did not encounter wet zone; at 12 feet soil very moist, left hole open for 24 hours; hole was dry


Project No.
SEKHON
GAS STATION
 Page 1 of 1

LOG OF EXPLORATORY BORING NO. SB-14
















PROJECT: SEKHON GAS STATION
 DRILLING CO.: GREGG DRILLING & TSTG.
 DRILLER: VINCENT POKRYWKA
 DRILL METHOD: DIRECT PUSH

LOGGED BY: T. GUHA
 SAMPLER: MACROCORE
 HOLE DIAMETER: 2 INCH
 DRILL RIG: GEOPROBE M 5 T

START DATE: 8/10/05
 END DATE: 8/11/05
 INITIAL GW DEPTH: ? FEET







DESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH (Feet)	SAMPLE	BLOWS?FT	PID (ppm)	BORING CLOSURE
ASPHALT 2 in. FILL: Gravel, sand and clay mix			0				 <p style="text-align: right; margin-right: 50px;">← Neat Cement</p>
CLAY: dark gray, minor sand, moist, stiff	CL	[Hatched pattern]	1				
			2				
			3				
SAND: gray, with gravels and clay, dry, loose	SP	[Dotted pattern]	4				
			5		0		
			6				
color changes to brown			7				
			8				
			9				
			10		0		
very moist			11	■			
			12				
CLAY: greenish gray, very moist, very stiff	CL	[Hatched pattern]	13				
			14				
			15		0		
			16				
			17		0		
Borehole terminated at 17 feet			18				
			19				
			20				
			21				
			22				
			23				
			24				
			25				
			26				
			27				
			28				
			29				
			30				

UNIFIED SOIL CLASSIFICATION SYSTEM ASTM D2488-84

MAJOR DIVISIONS		SYMBOLS	TYPICAL NAMES	
COARSE GRAINED SOILS OVER 50% >No.200 SIEVE SIZE	GRAVELS MORE THAN 1/2 OF COARSE FRACTION> No.4 SIEVE SIZE	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW 	Well graded gravels or gravel-sand mixtures, little or no fines.
			GP 	Poorly graded gravels or gravel-sand mixtures, little or no fines.
		GRAVELS WITH OVER 12% FINES	GM 	Silty gravels, gravel-sand mixtures.
			GC 	Clayey gravels, gravel-sand-clay mixtures.
	SANDS MORE THAN 1/2 OF COARSE FRACTION< No.4 SIEVE SIZE	CLEAN SANDS WITH LITTLE OR NO FINES	SW 	Well graded sands or gravelly sands, little or no fines.
			SP 	Poorly graded sands or gravelly sands, little or no fines.
		SANDS WITH OVER 12% FINES	SM 	Silty sands, sand-silt mixtures.
			SC 	Clayey sands, sand-clay mixtures.
FINE GRAINED SOILS OVER 50% <No.200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT 50% OR LESS	ML 	Inorganic silty and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.	
		CL 	Inorganic clays of low to medium plasticity gravelly clays, sandy clays, silty clays, lean clays.	
		OL 	Organic silts and organic silty clays of low plasticity.	
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50%	MH 	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.	
		CH 	Inorganic clays of high plasticity, fat clays.	
		OH 	Organic clays of medium to high plasticity, organic silty clays, organic silts.	
HIGHLY ORGANIC SOILS		Pt 	Peat and other highly organic soils.	

SYMBOLS KEY

GRAIN SIZE CHART

 Driven Interval  Bulk or Classification Sample  Laboratory Sample  Undisturbed Samp. for Classification  First encountered groundwater level  Static groundwater level (10YR 4/4) Munsell soil color 1990 edition	CLASSIFICATION	RANGE OF GRAIN SIZES	
		U.S. Standard Sieve Size	Grain Size in Millimeters
	BOULDERS	Above 12'	Above 305
	COBBLES	12' to 3'	305 to 76.2
	GRAVEL coarse fine	3" to No.4 3" to 3/4" 3/4" to No.4	76.2 to 4.76 76.2 to 19.1 19.1 to 4.76
	SAND coarse medium fine	No.4 to No.200 No. 4 to No. 10 No.10 to No.40 No.40 to No.200	4.76 to 0.074 4.76 to 2.00 2.00 to 0.420 0.420 to 0.074
	SILT & CLAY	Below No.200	Below No.0.074

**ADVANCED ASSESSMENT &
 REMEDIATION SERVICES**
 2380 Salvio Street, Suite 202
 Concord, CA 94520

SOIL CLASSIFICATION CHART AND KEY TO BORING LOG

APPENDIX C

CERTIFIED LABORATORY REPORTS AND CHAIN OF CUSTODY DOCUMENTS



McC Campbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

Advanced Assessment and Remediation 2380 Salvio Street, Suite 202 Concord, CA 94520	Client Project ID: Sekhon Gas Station	Date Sampled: 08/10/05
		Date Received: 08/12/05
	Client Contact: Tridib Guha	Date Reported: 08/18/05
	Client P.O.:	Date Completed: 08/18/05

WorkOrder: 0508229

August 18, 2005

Dear Tridib:

Enclosed are:

- 1). the results of **40** analyzed samples from your **Sekhon Gas Station** project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions please contact me. McC Campbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager



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Advanced Assessment and Remed 2380 Salvio Street, Suite 202 Concord, CA 94520	Client Project ID: Sekhon Gas Station	Date Sampled: 08/10/05-08/11/05
		Date Received: 08/12/05
	Client Contact: Tridib Guha	Date Extracted: 08/12/05-08/17/05
	Client P.O.:	Date Analyzed: 08/12/05-08/17/05

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B

Analytical methods: SW8021B/8015Cm

Work Order: 0508229

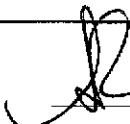
Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	SB-3/S-11'	S	ND	ND	ND	ND	ND	ND	1	96
002A	SB-4/S-11'	S	4.7,g,m	ND	ND	ND	ND	ND	1	92
003A	SB-5/S-12'	S	ND	ND	ND	ND	ND	ND	1	98
004A	SB-6/S-11 1/2'	S	ND	ND	ND	ND	ND	ND	1	101
005A	SB-10/S-11'	S	ND	ND	ND	ND	ND	ND	1	92
006A	SB-11/S-11'	S	ND	ND	ND	ND	ND	ND	1	98
007A	SB-12/S-11'	S	ND	ND	ND	ND	ND	ND	1	94
008A	SB-13/S-12'	S	ND	ND	ND	ND	ND	ND	1	100
009A	SB-14/S-11'	S	ND	ND	ND	ND	ND	ND	1	98
010A	SB-5/GW	W	13,000,m,i	ND<50	ND<5.0	260	ND<5.0	ND<5.0	10	93
011A	SB-6/GW	W	ND,j	ND	ND	ND	ND	ND	1	104
012A	SB-10/GW	W	ND,i	16	ND	ND	ND	ND	1	99
013A	SB-11/GW	W	ND,i	13	ND	ND	ND	ND	1	101
014A	SB-12/GW	W	ND,i	ND	ND	ND	ND	ND	1	99
015A	SB-7/S-7 1/2'	S	1.7,b	ND	ND	0.0087	0.037	0.047	1	92
016A	SB-7/S-13'	S	1.3,a	0.50	0.0063	0.0067	0.047	0.077	1	97

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	0.5	1	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	0.005	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request.


 Angela Rydelius, Lab Manager



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Advanced Assessment and Remed 2380 Salvio Street, Suite 202 Concord, CA 94520	Client Project ID: Sekhon Gas Station	Date Sampled: 08/10/05-08/11/05
	Client Contact: Tridib Guha	Date Received: 08/12/05
	Client P.O.:	Date Extracted: 08/12/05-08/17/05
		Date Analyzed: 08/12/05-08/17/05

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B

Analytical methods: SW8021B/8015Cm

Work Order: 0508229

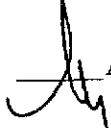
Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
017A	SB-7/S-17'	S	ND	3.2	ND	ND	ND	ND	1	100
018A	SB-7/S-24'	S	1.5,b	2.0	ND	0.0097	0.015	0.034	1	100
019A	SB-7/S-29'	S	ND	ND	ND	ND	ND	ND	1	99
020A	SB-8/S-6'	S	ND	1.9	ND	ND	ND	ND	1	94
021A	SB-8/S-10'	S	ND	3.2	0.0061	0.0060	0.0098	0.034	1	94
022A	SB-8/S-13 1/2'	S	8.4,m	0.65	0.014	0.044	0.042	0.14	1	91
023A	SB-8/S-19'	S	ND	3.4	ND	ND	0.011	0.036	1	89
024A	SB-8/S-27'	S	18,a	ND<1.0	0.014	0.14	0.089	0.32	1	86
025A	SB-9/S-6'	S	200,g,m	ND<0.50	ND<0.050	0.50	ND<0.050	0.20	10	98
026A	SB-9/S-10'	S	ND	4.9	ND	ND	ND	ND	1	90
027A	SB-9/S-12'	S	190,g,m	1.2	ND<0.10	1.3	ND<0.10	0.33	20	98
028A	SB-9/S-17'	S	12,b,m	0.97	ND	0.085	ND	0.033	1	106
029A	SB-9/S-21'	S	39,g,m	ND<1.0	0.012	0.18	ND	0.077	1	84
030A	SB-9/S-27 1/2'	S	5.6,m,i	0.59	ND	0.051	ND	0.0075	1	101
031A	SB-3/GW	W	ND,i	32	ND	ND	ND	ND	1	98
032A	SB-4/GW	W	160,m,i	180	ND	ND	ND	ND	1	111

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request.

 Angela Rydelius, Lab Manager



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Advanced Assessment and Remed 2380 Salvio Street, Suite 202 Concord, CA 94520	Client Project ID: Sekhon Gas Station	Date Sampled: 08/10/05-08/11/05
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Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B

Analytical methods: SW8021B/8015Cm

Work Order: 0508229


Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
033A	SB-7/GW	W	2900,a,i	23,000	19	ND<10	160	ND<10	20	104
034A	SB-8/GW	W	9300,a,i	11,000	230	10	460	1500	10	112
035A	MW-1/GW	W	ND	4900	ND	ND	ND	ND	1	98
036A	MW-2/GW	W	91,f	6500	ND	1.1	ND	ND	1	114
037A	MW-3/GW	W	ND	27	ND	ND	ND	ND	1	97
038A	MW-4/GW	W	3000,a	1200	15	24	87	190	1	97
039A	MW-5/GW	W	410,m	100	ND	3.3	ND	ND	1	114
040A	MW-6/GW	W	6100,a	3200	470	48	23	30	5	96

Reporting Limit for DF=1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

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 Angela Rydelius, Lab Manager



McC Campbell Analytical, Inc.

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Website: www.mcccampbell.com E-mail: main@mcccampbell.com

QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder: 0508229

EPA Method: SW8021B/8015Cm		Extraction: SW5030B			BatchID: 17554			Spiked Sample ID: 0508225-031A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex) ^E	ND	0.60	93.9	89.4	4.90	86.4	86.2	0.133	70 - 130	70 - 130
MTBE	ND	0.10	93.9	96.7	2.97	103	113	9.02	70 - 130	70 - 130
Benzene	ND	0.10	87.7	88.1	0.449	88.9	87	2.05	70 - 130	70 - 130
Toluene	ND	0.10	86.9	86.9	0	87.5	86	1.74	70 - 130	70 - 130
Ethylbenzene	ND	0.10	89.4	89.9	0.564	90.5	89.3	1.33	70 - 130	70 - 130
Xylenes	ND	0.30	90.3	90.3	0	90.3	90.3	0	70 - 130	70 - 130
%SS:	103	0.10	97	97	0	98	96	2.12	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 17554 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0508229-001A	8/10/05 9:30 AM	8/12/05	8/13/05 3:05 AM	0508229-002A	8/10/05 8:55 AM	8/12/05	8/13/05 4:34 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

^E TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder: 0508229

EPA Method: SW8021B/8015Cm		Extraction: SW5030B			BatchID: 17556			Spiked Sample ID: 0508229-005A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex) ^E	ND	0.60	84.9	88.5	4.24	89	88.5	0.636	70 - 130	70 - 130
MTBE	ND	0.10	94.7	91.9	2.95	100	97	3.13	70 - 130	70 - 130
Benzene	ND	0.10	87.5	88.2	0.807	87.9	87.8	0.143	70 - 130	70 - 130
Toluene	ND	0.10	85.8	87.3	1.70	87.1	86.7	0.403	70 - 130	70 - 130
Ethylbenzene	ND	0.10	87.9	89.4	1.68	90.1	90	0.0632	70 - 130	70 - 130
Xylenes	ND	0.30	86.7	90.3	4.14	90.3	90.3	0	70 - 130	70 - 130
%SS:	92	0.10	86	90	3.74	99	96	2.46	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 17556 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0508229-003A	8/10/05 12:25 PM	8/12/05	8/13/05 4:05 AM	0508229-004A	8/10/05 12:00 PM	8/12/05	8/13/05 3:35 AM
0508229-005A	8/10/05 11:40 AM	8/12/05	8/12/05 10:59 PM	0508229-006A	8/10/05 11:25 AM	8/12/05	8/13/05 10:01 AM
0508229-007A	8/10/05 11:05 AM	8/12/05	8/13/05 3:26 AM	0508229-008A	8/10/05 10:40 AM	8/12/05	8/13/05 2:27 AM
0508229-009A	8/10/05 10:05 AM	8/12/05	8/13/05 2:56 AM	0508229-015A	8/11/05 9:20 AM	8/12/05	8/13/05 5:04 AM
0508229-016A	8/11/05 10:15 AM	8/12/05	8/13/05 6:03 AM	0508229-017A	8/11/05 11:50 AM	8/12/05	8/13/05 10:31 AM
0508229-018A	8/11/05 12:10 PM	8/12/05	8/13/05 12:58 AM	0508229-019A	8/11/05 12:15 PM	8/12/05	8/15/05 11:21 AM
0508229-020A	8/11/05 12:40 PM	8/12/05	8/15/05 10:52 AM	0508229-021A	8/11/05 12:45 PM	8/12/05	8/13/05 7:03 AM
0508229-022A	8/11/05 12:50 PM	8/12/05	8/15/05 11:51 AM	0508229-023A	8/11/05 12:55 PM	8/12/05	8/15/05 10:22 AM
0508229-024A	8/11/05 1:05 PM	8/12/05	8/13/05 3:56 AM	0508229-025A	8/11/05 1:30 PM	8/12/05	8/15/05 4:08 PM
0508229-026A	8/11/05 1:35 PM	8/12/05	8/12/05 11:29 PM	0508229-027A	8/11/05 1:40 PM	8/12/05	8/13/05 2:35 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

^E TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder: 0508229

EPA Method: SW8021B/8015Cm		Extraction: SW5030B			BatchID: 17557			Spiked Sample ID: 0508234-002A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex) [£]	ND	0.60	87.7	89.6	2.09	90.1	90.3	0.285	70 - 130	70 - 130
MTBE	ND	0.10	93.3	89.7	3.95	98.2	94.5	3.83	70 - 130	70 - 130
Benzene	ND	0.10	87.1	85.6	1.73	90.2	87.4	3.20	70 - 130	70 - 130
Toluene	ND	0.10	86.4	84.7	1.97	89.2	85.9	3.68	70 - 130	70 - 130
Ethylbenzene	ND	0.10	89.7	87.7	2.26	91.8	89.6	2.38	70 - 130	70 - 130
Xylenes	ND	0.30	90.3	90	0.370	94.3	90.3	4.33	70 - 130	70 - 130
%SS:	85	0.10	94	97	3.66	101	100	1.40	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 17557 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0508229-028A	8/11/05 1:45 PM	8/12/05	8/13/05 6:33 AM	0508229-029A	8/11/05 1:50 PM	8/12/05	8/13/05 1:57 AM
0508229-030A	8/11/05 1:55 PM	8/12/05	8/13/05 1:27 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



McC Campbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0508229

EPA Method: SW8021B/8015Cm		Extraction: SW5030B			BatchID: 17516			Spiked Sample ID: 0508174-002A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex) [£]	ND	60	87.9	89.4	1.68	84.8	85.2	0.438	70 - 130	70 - 130
MTBE	ND	10	100	96.8	3.44	99.7	97.7	2.05	70 - 130	70 - 130
Benzene	ND	10	90.9	88.6	2.57	90.6	89.2	1.54	70 - 130	70 - 130
Toluene	ND	10	91.2	89.5	1.98	89.6	88.4	1.39	70 - 130	70 - 130
Ethylbenzene	ND	10	92	90.4	1.71	91.5	90.6	0.923	70 - 130	70 - 130
Xylenes	ND	30	94.7	90.7	4.32	94.3	90.7	3.96	70 - 130	70 - 130
%SS:	99	10	97	96	0.241	99	98	1.54	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 17516 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0508229-010A	8/10/05 2:25 PM	8/13/05	8/13/05 12:43 AM	0508229-011A	8/10/05 2:15 PM	8/13/05	8/13/05 1:15 AM
0508229-012A	8/10/05 2:05 PM	8/13/05	8/13/05 1:48 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not applicable or not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0508229

Table with columns: EPA Method: SW8021B/8015Cm, Extraction: SW5030B, BatchID: 17558, Spiked Sample ID: 0508229-014A. Rows include analytes like TPH(btex), MTBE, Benzene, Toluene, Ethylbenzene, Xylenes, and %SS with various metrics like Sample, Spiked, MS, MSD, MS-MSD, LCS, LCSD, LCS-LCSD, and Acceptance Criteria.

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 17558 SUMMARY

Summary table with columns: Sample ID, Date Sampled, Date Extracted, Date Analyzed. It lists multiple sample IDs and their corresponding dates and times for sampling, extraction, and analysis.

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS - Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not applicable or not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

SAR QA/QC Officer

aars 0508224

McCAMPBELL ANALYTICAL, INC.

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Website: www.mccampbell.com Email: main@mccampbell.com

Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH 24 HR 48 HR 72 HR 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: **Tridib Guha** Bill To: **Tridib Guha**
 Company: **Advanced Assessment & Remediation Services**
 2380 SalvioStreet, Suite 202, Concord, CA 94553
 E-Mail: aars@netscape.com
 Tele: (925) 363-1999 Fax: ()
 Project #: **SEKHON GAS STATION** Project Name: **SEKHON GAS STATION**
 Project Location: **6600 FOOTHILL BLVD., OAKLAND, CA**
 Sampler Signature: *Tridib Guha*

Analysis Request

Other Comments

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED				MTBE / BTEX & TPH as Gas (602 / 8021 + 8015) MTBE / BTEX ONLY (EPA 602 / 8021) TPH as Diesel / Motor Oil (8015) Total Petroleum Oil & Grease (1664 / 5520 E/R&F) Total Petroleum Hydrocarbons (418.1) EPA 502.2 / 601 / 8010 / 8021 (HVOCs) EPA 505 / 608 / 8081 (CI Pesticides) EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners EPA 507 / 8141 (NP Pesticides) EPA 515 / 8151 (Acidic CI Herbicides) EPA 524.2 / 624 / 8260 (VOCs) EPA 525.2 / 625 / 8270 (SVOCs) EPA 8270 SIM / 8310 (PAHs / PNAs) CAM 17 Metals (200.7 / 200.8 / 6010 / 6020) LUFT-5 Metals (200.7 / 200.8 / 6010 / 6020) Lead (200.7 / 200.8 / 6010 / 6020)	Filter Samples for Metals analysis: Yes / No * LAB REPORT IN PDF FORMAT		
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO ₃	Other			FIELD POINT ID	
SB-3/S-11'	OAKLAND	8-10-05	9:30	1	B25 76	X					X							SB-3
SB-4/S-11'			8:55	1							X							SB-4
SB-5/S-12'			12:25	1							X							SB-5
SB-6/S-11 1/2'			12:00	1							X							SB-6
SB-10/S-11'			11:40	1							X							SB-10
SB-11/S-11'			11:25	1							X							SB-11
SB-12/S-11'			11:05	1							X							SB-12
SB-13/S-12'			10:40	1							X							SB-13
SB-14/S-11'			10:05	1							X							SB-14
SB-5/GW			14:25	1		X						X						SB-6
SB-6/GW			14:15	1														SB-7
SB-10/GW			14:05	1														SB-10
SB-11/GW			14:00	1														SB-11
SB-12/GW			13:55	1														SB-12

20
10
F 3
F 1
F 50

Relinquished By: <i>Tridib Guha</i>	Date: 8-12-05	Time: 17:40	Received By: <i>[Signature]</i>
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE# /
 GOOD CONDITION /
 HEAD SPACE ABSENT /
 DECHLORINATED IN LAB /
 APPROPRIATE CONTAINERS /
 PRESERVED IN LAB /

COMMENTS:

VOAS O&G METALS OTHER
 PRESERVATION pH<2

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Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH 24 HR 48 HR 72 HR 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Tridib Guha Bill To: Tridib Guha
Company: Advanced Assessment & Remediation Services
2380 Salvio Street, Suite 202, Concord, CA 94553
E-Mail: aars@netscape.com
Tele: (925) 363-1999 Fax: ()
Project #: SEKHON GAS STATION Project Name: SEKHON GAS STATION
Project Location: 6600 FOOTHILL BLVD., OAKLAND, CA
Sampler Signature:

Analysis Request

Other Comments

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED				Other	Comments	
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO ₃	Other			
SB-7/S-7 1/2	OAKLAND	8-11-05	9:20	1	B2S 7B		X					X					SB-7
SB-7/S-13'			10:15	1								X					SB-7
SB-7/S-17'			11:50	1								X					SB-7
SB-7/S-24'			12:10	1								X					SB-7
SB-7/S-29'			12:15	1								X					SB-8
SB-8/S-6'			12:40	1								X					SB-8
SB-8/S-10'			12:45	1								X					SB-8
SB-8/S-13 1/2'			12:50	1								X					SB-8
SB-8/S-19'			12:55	1								X					SB-8
SB-8/S-27'			13:05	1								X					SB-9
SB-9/S-6'			13:30	1								X					SB-9
SB-9/S-10'			13:35	1								X					SB-9
SB-9/S-12'			13:40	1								X					SB-9
SB-9/S-17'			13:45	1								X					SB-9

MTBE / BTEX & TPH as Gas (602 / 8021 + 8015)
MTBE / BTEX ONLY (EPA 602 / 8021)
TPH as Diesel / Motor Oil (8015)
Total Petroleum Oil & Grease (1664 / 5520 E/B&F)
Total Petroleum Hydrocarbons (418.1)
EPA 502.2 / 601 / 8010 / 8021 (HVOCs)
EPA 505 / 608 / 8081 (CI Pesticides)
EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners
EPA 507 / 8141 (NP Pesticides)
EPA 515 / 8151 (Acidic CI Herbicides)
EPA 524.2 / 624 / 8260 (VOCs)
EPA 525.2 / 625 / 8270 (SVOCs)
EPA 8270 SIM / 8310 (PAHs / PNAS)
CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)
LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)
Lead (200.7 / 200.8 / 6010 / 6020)

Filter Samples for Metals analysis: Yes/No
* LAB REPORT IN PDF FORMAT
FIELD POINT ID

Relinquished By: <i>[Signature]</i>	Date: 8-12-05	Time: 17:40	Received By: <i>[Signature]</i>
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

COMMENTS:
ICE/✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB ✓
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB ✓
VOAS | O&G | METALS | OTHER
PRESERVATION | pH<2

McCAMPBELL ANALYTICAL, INC.

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CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH 24 HR 48 HR 72 HR 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Tridib Guha Bill To: Tridib Guha
Company: Advanced Assessment & Remediation Services
2380 Salvio Street, Suite 202, Concord, CA 94553
E-Mail: aars@netscape.com
Tele: (925) 363- 1999 Fax: ()
Project #: SEKHON GAS STATION Project Name: SEKHON GAS STATION
Project Location: 6600 FOOTHILL BLVD., OAKLAND, CA
Sampler Signature: _____

Analysis Request

Other Comments

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED				MTBE / BTEX & TPH as Gas (602 / 8021 + 8015)	MTBE / BTEX ONLY (EPA 602 / 8021)	TPH as Diesel / Motor Oil (8015)	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	EPA 505/ 608 / 8081 (CI Pesticides)	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic CI Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)	LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)	Lead (200.7 / 200.8 / 6010 / 6020)	Filter Samples for Metals analysis: Yes / No * LAB REPORT IN PDF FORMAT	FIELD POINT ID
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO ₃	Other																		
SB-9/5-21'	OAKLAND	8-11-05	13:50	1	Bags To	X	X				X																					SB-9
SB-9/8-27 1/2'			13:55	1	Bags To	X	X																									SB-9
SB-3/GW			9:40	3	Vials	X					X																					SB-3
SB-4/GW			9:50	3																												SB-4
SB-7/GW			14:45	3																												SB-7
SB-8/GW		8-11-05	14:55	3																												SB-8
MW-1/GW			11:30	3																												MW-1
MW-2/GW			12:00	3																												MW-2
MW-3/GW			12:30	3																												MW-3
MW-4/GW			13:00	3																												MW-4
MW-5/GW			13:30	3																												MW-5
MW-6/GW			16:00	3																												MW-6

Relinquished By: _____ Date: 8-12-05 Time: 17:40 Received By: [Signature]
Relinquished By: _____ Date: _____ Time: _____ Received By: _____
Relinquished By: _____ Date: _____ Time: _____ Received By: _____

ICE/IF: GOOD CONDITION
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS
PRESERVED IN LAB

COMMENTS:

VOAS | O&G | METALS | OTHER
PRESERVATION | pH<2

+35
+75
+30
+30
(+)
(+)
(+)
(+)
(+)

