

✓ R0175

**ADDITIONAL SITE INVESTIGATION**  
at  
**SEKHON GAS STATION**  
6600 Foothill Boulevard  
Oakland, California

Alameda County  
SEP 11 2002  
Environmental Health

Prepared for:

Mr. Ravi S. Sekhon  
6600 Foothill Boulevard  
Oakland, California

September 6, 2002

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**ADVANCED ASSESSMENT AND REMEDIATION SERVICES**



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## ADVANCED ASSESSMENT AND REMEDIAL SERVICES (AARS)

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September 6, 2002

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

Subject: Submittal of Additional Site Investigation Report for  
Petroleum Hydrocarbon Contaminated Soil and Groundwater Site  
Sekhon Gas Station, 6600 Foothill Blvd., Oakland, California

Dear Mr. Gholami:

Advanced Assessment and Remediation Services (AARS), is pleased to present this additional site investigation report for the above referenced site.

This report has been prepared in general accordance with the Tri-Regional Board Staff Recommendation for Preliminary Investigation and Evaluation of Underground Tank Sites, Addendum to Appendix A, dated August 30, 1991, and the guidelines of Alameda County Environmental Health Department. Please contact Tridib Guha at (925) 363-1999 if you have any questions regarding this report.

Sincerely,

Advanced Assessment and Remediation Services

Tridib K. Guha, R.G., R.E.A.  
Principal

Enclosure

cc: Mr. Ravi S. Sekhon, Oakland, California  
Mr. Joseph Le Blanc, Oakland, California

TG/SEKHONASLRPT

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## **ADDITIONAL SITE INVESTIGATION**

at

### **SEKHON GAS STATION**

**6600 Foothill Boulevard**

**Oakland, California**

## **1.0 INTRODUCTION**

This report presents the results and findings of the additional site investigation 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 soil and groundwater sampling of the preliminary site investigation conducted in June 2001 and quarterly monitoring and sampling conducted in March 2002. The samples collected and analyzed from the former underground storage tank area in the southeastern corner of the property, identified elevated petroleum hydrocarbon constituents in soil and groundwater. This work was performed pursuant to the requirements of Alameda County Department of Environmental Health (ACDEH), as described in the Work Plan for Additional Site Investigation by AARS dated January 18, 2002.

## **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, Camden Street 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 samples collected from beneath the dispenser islands and from the UST pit sidewalls were forwarded to ACDEH 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 ACDEH.

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. The ACEHD required additional investigations to delineate the 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 interfingered 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. However, groundwater level may vary with seasonal variations. The general groundwater flow direction is toward San Francisco Bay to the southeast.

### **3.0 SCOPE OF WORK**

This additional site investigation was conducted by AARS under the requirements of the ACDEH as described in the Work Plan dated January 18, 2002. 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. Conducted horizontal conduit investigation and well search;

Task 3. Installed five soil borings, converted three of them into three groundwater monitoring wells;

Task 4. Sampled temporary wells;

Task 5. Developed, sampled and surveyed monitoring wells;

Task 6. Analyzed soil samples for specified constituents;

Task 7. Analyzed groundwater samples;

Task 8. Evaluated soil and groundwater sampling and analytical results and other data;

Task 9. Prepared a report presenting the results and findings of the above activities and appropriate recommendations.

#### **4.0 HORIZONTAL CONDUIT INVESTIGATION**

Prior to commencement of field work, a conduit study was conducted to determine the affects of horizontal conduits on contamination migration and horizontal conduits acting as preferential pathways. The study involved a utility survey – researched records of the City of Oakland Public Works Department past utility work. Also, researched records of Pacific Gas and Electric Company and other local agencies using underground utilities.

#### **5.0 FIELD METHODS AND PROCEDURES**

To assess the nature and extent of contamination in groundwater, five soil borings were drilled off-site. Two soil borings were converted into temporary wells and three of them into monitoring wells. Soil samples were collected and classified during drilling, starting at one foot bgs, and selected samples were analyzed for petroleum hydrocarbon constituents specified in section 6.0. The monitoring wells were developed, sampled, and surveyed. The procedures and methods used during field activities were in accordance with the requirements and guidelines of the ACDEH and RWQCB.

##### **5.1 Soil Borings and Sampling**

Prior to commencement of drilling activities, permits for the proposed groundwater monitoring wells were obtained from the Alameda County Public Works Agency. The work plan prepared by AARS was approved by the ACDEH. An encroachment permit to drill on Foothill Boulevard was obtained from the City of Oakland, Community & Economic Development Agency. Underground Service Alert was informed prior to drilling. Copies of the permits are presented in Appendix A.

On June 26 and 27, 2002, AARS supervised the drilling of five soil borings. The drilling activities were performed by Exploration Geoservices of San Jose, California, using a truck-mounted B-53 drill rig. All five soil borings MW-4, MW-5 and MW-6 and SB-1 and SB-2 were drilled with an 8-inch diameter hollow-stem augers. Each of the soil borings were drilled to a total depth of 20 feet bgs.

During drilling, soil samples were collected at five foot intervals starting from five feet bgs. Soil samples were collected using a modified California split-spoon sampler lined with clean brass tubes. One soil sample was collected from each borehole for laboratory analyses (in MW-4 at 10 feet bgs; MW-5 at 10 feet bgs; MW-6 at 10 feet bgs; SB-1 at 10 feet bgs and SB-2 at 10 feet bgs). Selection of the samples for laboratory analyses were based on the depth of groundwater encountered as well as the Photo Ionization Detector (PID) reading and petroleum hydrocarbon odor. The soil sample tubes were securely sealed with a teflon sheet, polyurethane caps and plastic tape. The soil samples were labeled and placed immediately in an iced cooler for shipment to the analytical laboratory. The soil borings were lithologically logged in the field using the Unified Soil Classification System. Soil samples were screened in the field using a portable PID. Details of the sampling depths are presented in boring logs in Appendix B.

## **5.2 Groundwater Sampling in Temporary Wells**

Two soil borings SB-1 and SB-2 were converted into temporary wells. During drilling, groundwater was encountered at approximately 15 feet bgs. Soil borings were advanced 5 feet below the top of the saturated zone. The temporary wells were constructed using a ten-foot long, 2 inch diameter 0.010-inch slotted screen (Schedule 40 PVC), and a ten-foot long blank casing (flush-threaded) was installed in each borehole. The water was allowed to stabilize and a small volume of water was purged. Following purging, a water sample was collected from each of these temporary wells into two 40-milliliter volatile organic analysis vials with teflon-lined septa (VOA), preserved using hydrochloric acid to a pH of 2.0. The casings were 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 North State Environmental Laboratory, under chain-of-custody documents.

## **5.3 Groundwater Monitoring Well Construction**

Soil borings MW-4, MW-5 and MW-6 were converted into groundwater monitoring wells and completed to a total depth of 20 feet bgs. Each monitoring well was constructed with one 7 1/2-foot section flush-threaded, Schedule 40, PVC blank casing and one 10-foot and one 2 1/2-foot section of two-inch diameter 0.010-inch, slotted PVC casing, which extended to a depth of at least 10 feet beneath the water table. The annular space surrounding the screened portion was backfilled with #2 Lonestar sand to 1 1/2 feet above the top of the screened section. A 1-foot thick bentonite annular seal was placed above the filter pack. The remaining annulus was grouted with neat cement to the surface. A well box was installed slightly above grade with a locking watertight well cap to ensure the integrity of the well. Monitoring well construction details are included in Appendix B.

## **5.4 Monitoring Well Development and Sampling**

Well development and sampling procedures were conducted in accordance with RWQCB guidelines and ACEHD requirements.

Monitoring wells MW-4, MW-5 and MW-6 were developed on June 28, 2002, by removing a minimum of 10 casing volumes of water from the wells with a two-inch-diameter PVC bailer. All six monitoring wells, MW-1 through MW-6 were sampled on July 9, 2002.

Prior to sampling of wells a groundwater sample was collected from each for inspection. Groundwater samples from each well were inspected for floating product, sheen and odor. Groundwater samples from all six monitoring wells were clear initially, without floating product or sheen. Petroleum hydrocarbon odor



was noted from MW-2, MW-4, MW-5 and MW-6 samples. MW-1 and MW-3 water samples were free from odor. During purging of the wells, pH, specific conductivity, and temperature measurements of purged water were recorded and observed to stabilize, indicating that formation water had entered the well. A groundwater sample was then collected from each well. Field parameters of groundwater sampling are presented in Table 4.

The groundwater samples were collected in clean containers and transported in an iced cooler to the laboratory for analysis following standard chain of custody procedures.

### **5.5 Groundwater Level Monitoring and Surveying**

Top-of-well-casing elevations for MW-1 through MW-3 were surveyed on June 13, 2001. A bench mark was established forty feet south of the southeast corner of the store building. The top of well casing elevations were surveyed in reference to MW-1 as the common datum with an assumed elevation of 100.00 feet above mean sea level (MSL) All elevations are relative to this. The elevations at each well were taken on the top of the well casing. On July 9, 2002, the top of the well casing elevations for MW-3, 4 and 5, were surveyed in reference to MW-1.

Groundwater levels in each well were measured to the nearest 0.01 foot on July 9, 2002, from the top of the PVC casing using an electric sounder. Groundwater surface elevation contours, based on interpretation of groundwater level and survey data, are presented in Figure 3. Survey data and water level measurements are presented in Table 1.

### **5.6 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 development and sampling, as well as decontamination rinseate, 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 North State Environmental Laboratory of South San Francisco, California, a California-certified Laboratory. 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 five soil samples were collected for chemical analysis: one sample from each soil boring at depths of 10 feet bgs. Soil samples were analyzed for total petroleum hydrocarbon as gasoline (TPHg) using EPA Methods 8015M, benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8020, methyl tertiary butyl ether (MTBE) using EPA Method 8020. 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 were analyzed for TPHg using EPA Method 8015 modified, BTEX/MTBE using

EPA Method 8020. Results of groundwater analyses are summarized in Table 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 five 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 20 feet bgs. Geologic cross-sections A-A' (Figure 6), B-B' (Figure 7) show a similar pattern of deposits. Most of the clays and silty clays are very stiff with high plasticity.

### 7.2 Site Hydrogeology

Groundwater was encountered at approximately 15 feet bgs during drilling and stabilized at 7 1/2 to 9 1/2 feet bgs on July 9, 2002. The groundwater elevations from monitoring wells MW-1 through MW-6, as measured on July 9, 2002, were used to develop the groundwater elevation contour map shown in Figure 3. The groundwater flow direction has been calculated to be to the southeast, with an average gradient of approximately 0.014-foot per foot. The average depth to stabilized groundwater in these wells was approximately 8 1/2 feet bgs on July 9, 2002, which may vary with seasonal conditions.

### 7.3 Soil analysis

Analytical results of three soil samples, MW-5-S@10', MW-6-S@10' and SB-2-S@10', detected TPHg concentration at 533, 16300 and 1100 parts per million (ppm) respectively, and Benzene were detected only in MW-6-S@10' and SB-2-S@10' at 138 and 140 ppm respectively. The soil sample, MW-6-S@10' was found to contain toluene at 37 ppm, ethylbenzene at 318 ppm and xylenes at 456 ppm. Also the soil sample, SB-2-S@10' was found to contain ethylbenzene at 67 ppm and xylenes at 207 ppm. MTBE was detected in all five soil samples at concentrations ranging from 105 to 4290 ppm. 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 two temporary wells (MW-1/GW through MW-6/GW and SB-1/GW and SB-2/GW) are presented in Table 3. The concentrations of TPHg and MTBE measured during June 27 and July 9, 2002, are presented in Figure 4 and 5 respectively. Groundwater samples from monitoring well MW-2, MW-4 through MW-6, SB-1 and SB-2 found to contain TPHg ranging from 275 to 12000 parts per billion (ppb); benzene concentrations ranging from 1 through 432 ppb; toluene concentrations ranging from 0.8 to 22 ppb; ethylbenzene concentrations ranging from non-detect to 637 ppb; xylenes concentrations ranging from 1.6 to 1990 ppb. MTBE was detected in all groundwater samples from monitoring wells and temporary wells, concentrations ranging from 40.8 to 37600 ppb.

## 8.0 WELL SEARCH

A two thousand-foot (2,000) radius well search was performed to ascertain whether any active drinking water production wells were located in the area. The search consisted of a review of the Alameda County Public Works Agency Water Resource Section records. The well survey report for the site is presented in Table 5.

## 9.0 CONCLUSIONS AND RECOMMENDATIONS

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

1. The highest petroleum hydrocarbon constituents were detected in MW-2, former UST area, located at the southeastern corner of the property boundary and farthest downgradient monitoring well MW-6.
2. MTBE concentrations in MW-2, MW-4, MW-5 and MW-6 are high at 37,600, 28,300, 18,600 and 11,300 ppb respectively.
3. The groundwater flow direction has been calculated to be to the southeast, with an average gradient of approximately 0.014-foot per foot. The average depth to stabilized groundwater in these wells was approximately 8 feet bgs on July 9, 2002.
4. 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 has migrated to the southeast in the direction of groundwater flow. The nature and extent of groundwater contaminant plume has been defined except beyond MW-6. The extent of contamination in shallow groundwater off-site beyond MW-6 is unknown at this time and difficult to access.

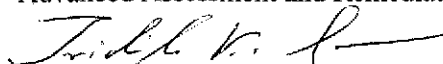
Recommendations are as follows:

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

## 10.0 CERTIFICATION

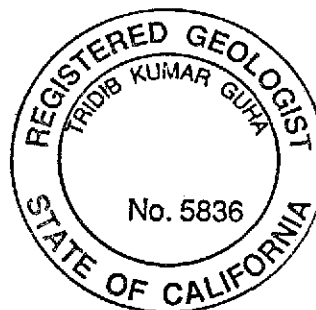
The information provided in this report is based on the recent groundwater and soil sampling activities conducted at the site. All data presented in this report is believed to be accurate. All conclusions or recommendations provided herein are based on our expertise and experience conducting work of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

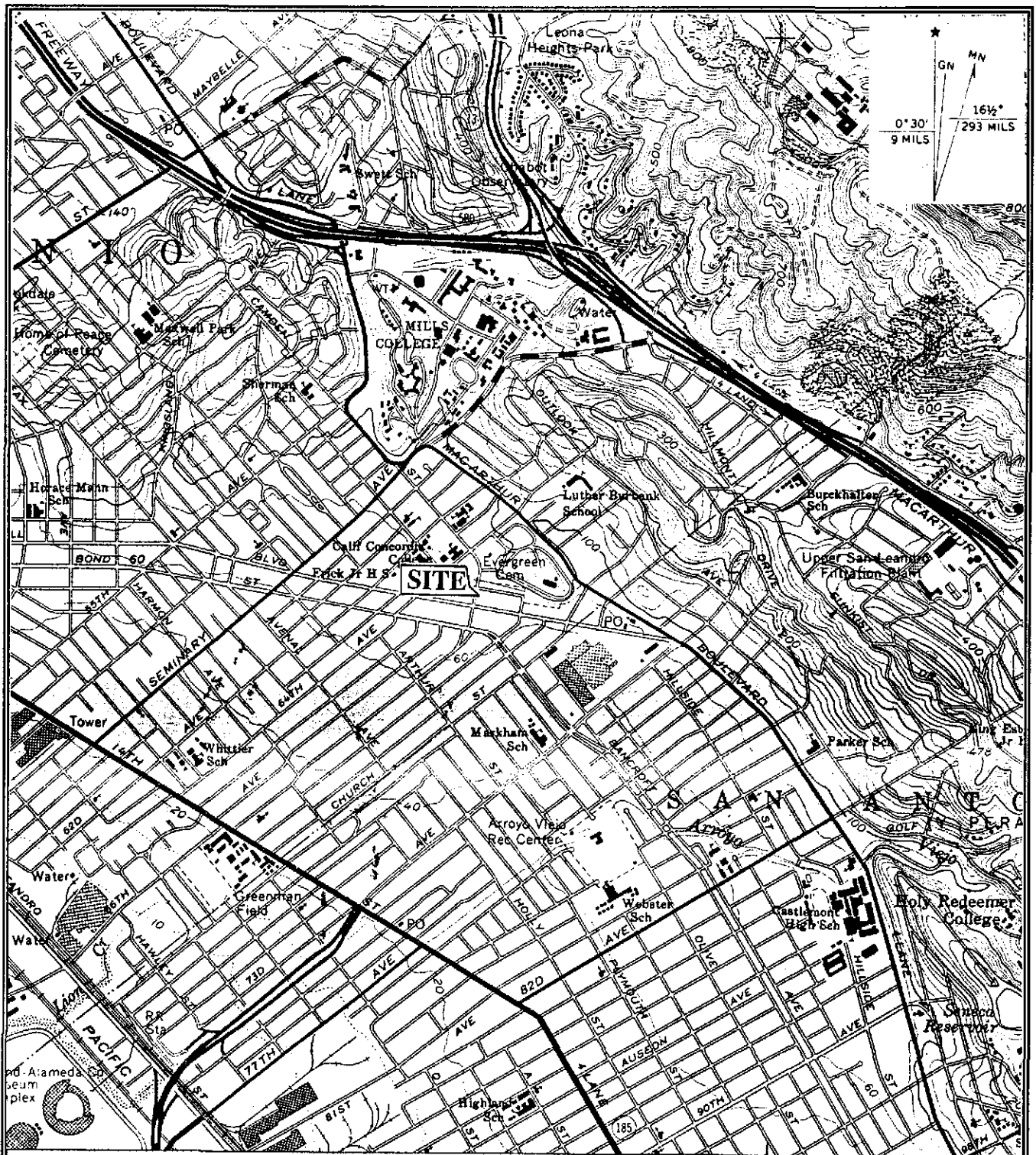
Advanced Assessment and Remediation Services



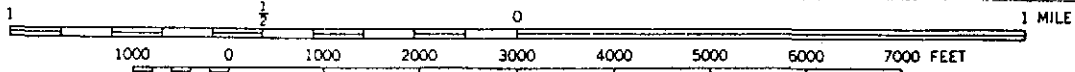
Tridib K. Guha

Registered Geologist Number 5836





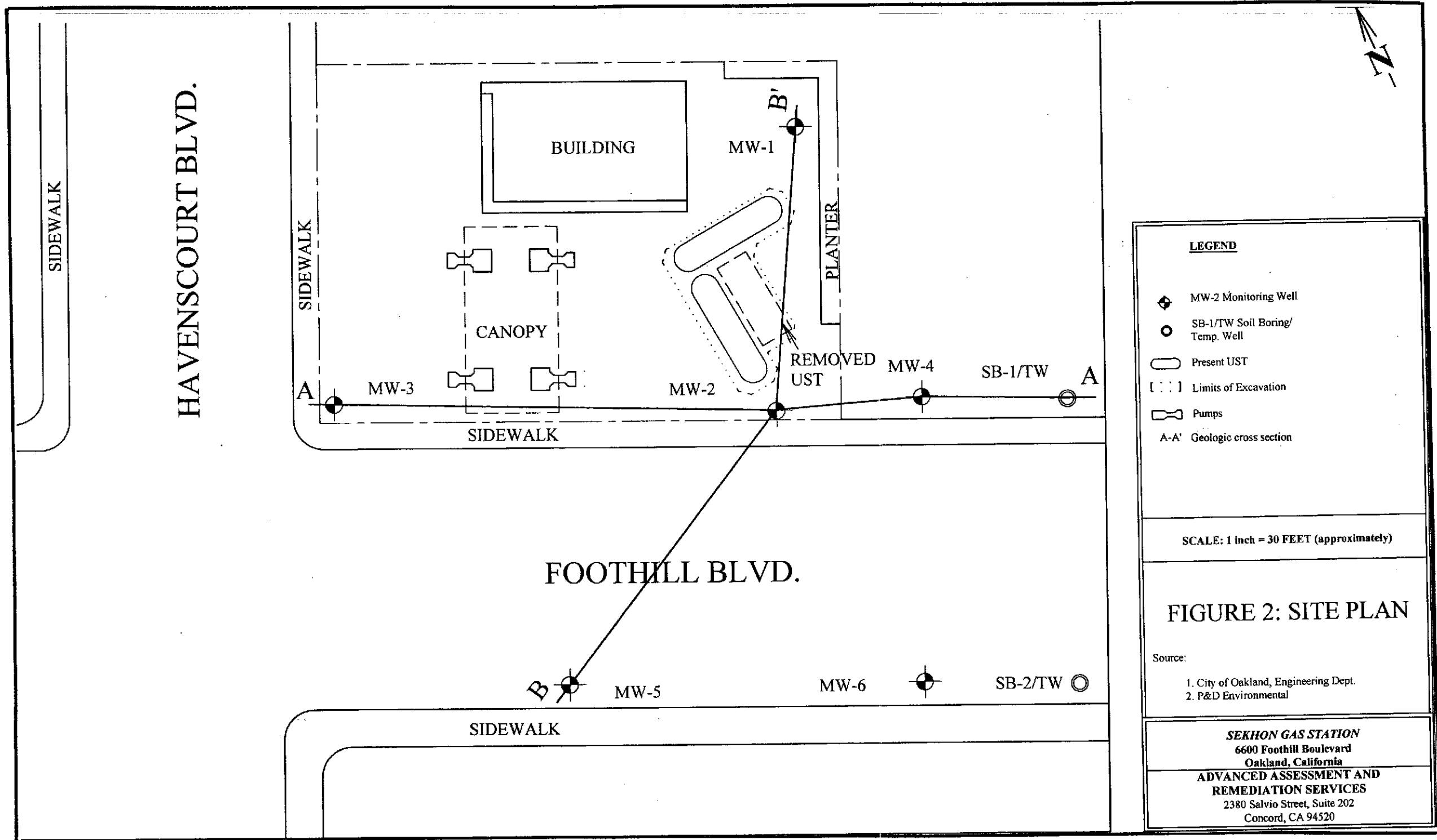
SCALE 1:24 000

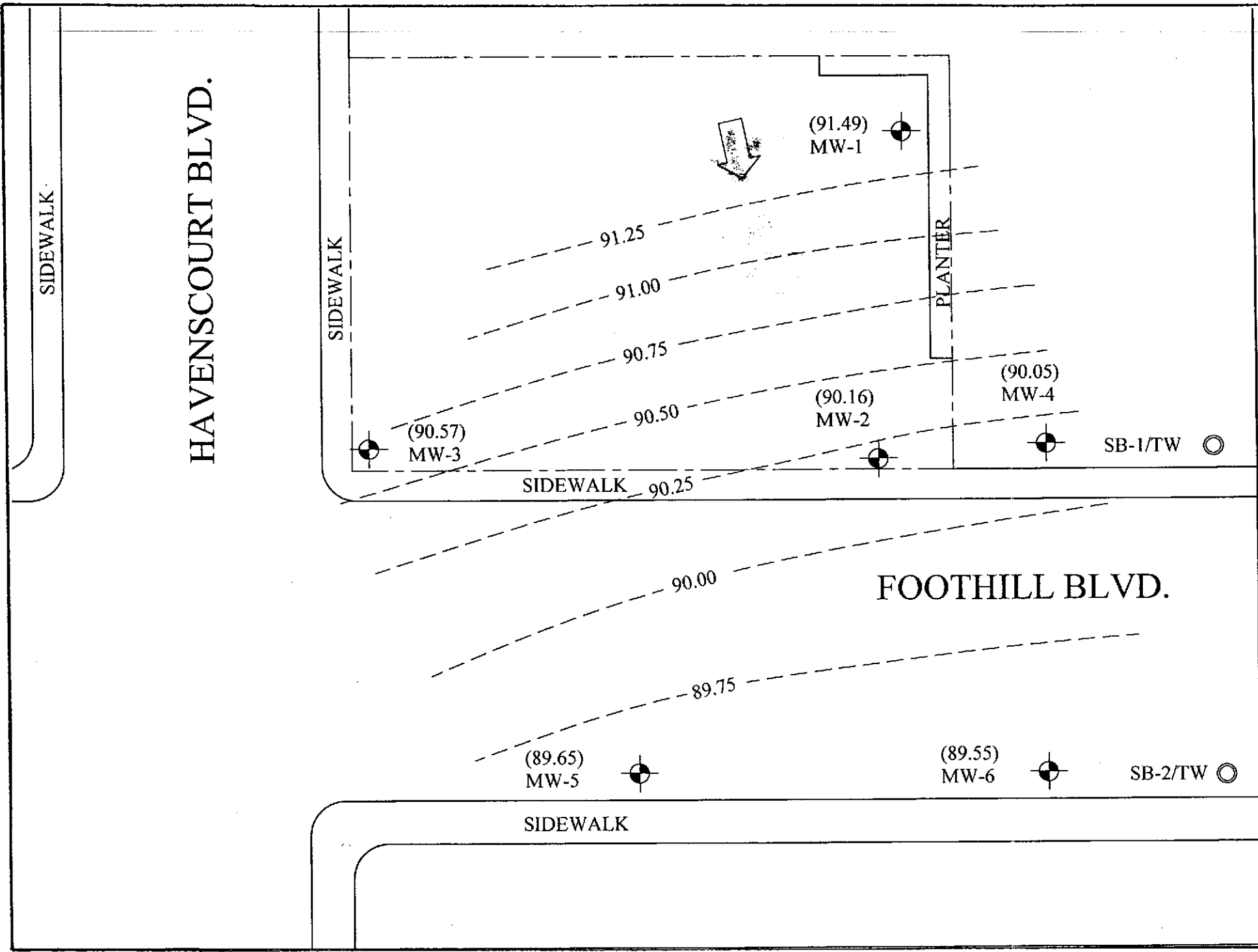


Source: U.S.G.S. Maps; 7.5 Minute Series (Topographic)  
 Oakland East Quadrangle, CA  
 Aerial Photograph taken 1959 Photorevised 1980

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

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 Concord, California





**LEGEND**

- MW-2 Monitoring Well
- SB-1/TW Soil Boring/  
Temp. Well
- (90.16) Relative Groundwater Elevations
- 90.00- Groundwater Elevation Contour
- General Direction of Groundwater flow

Note:

1. Water Levels in Monitoring Wells measured on July 9, 2002
2. Contour Intereval - 0.25
3. Hydraulic Gradient - 0.014 foot/foot

**FIGURE 3:  
GROUNDWATER  
SURFACE ELEVATION  
(07/09/02)**

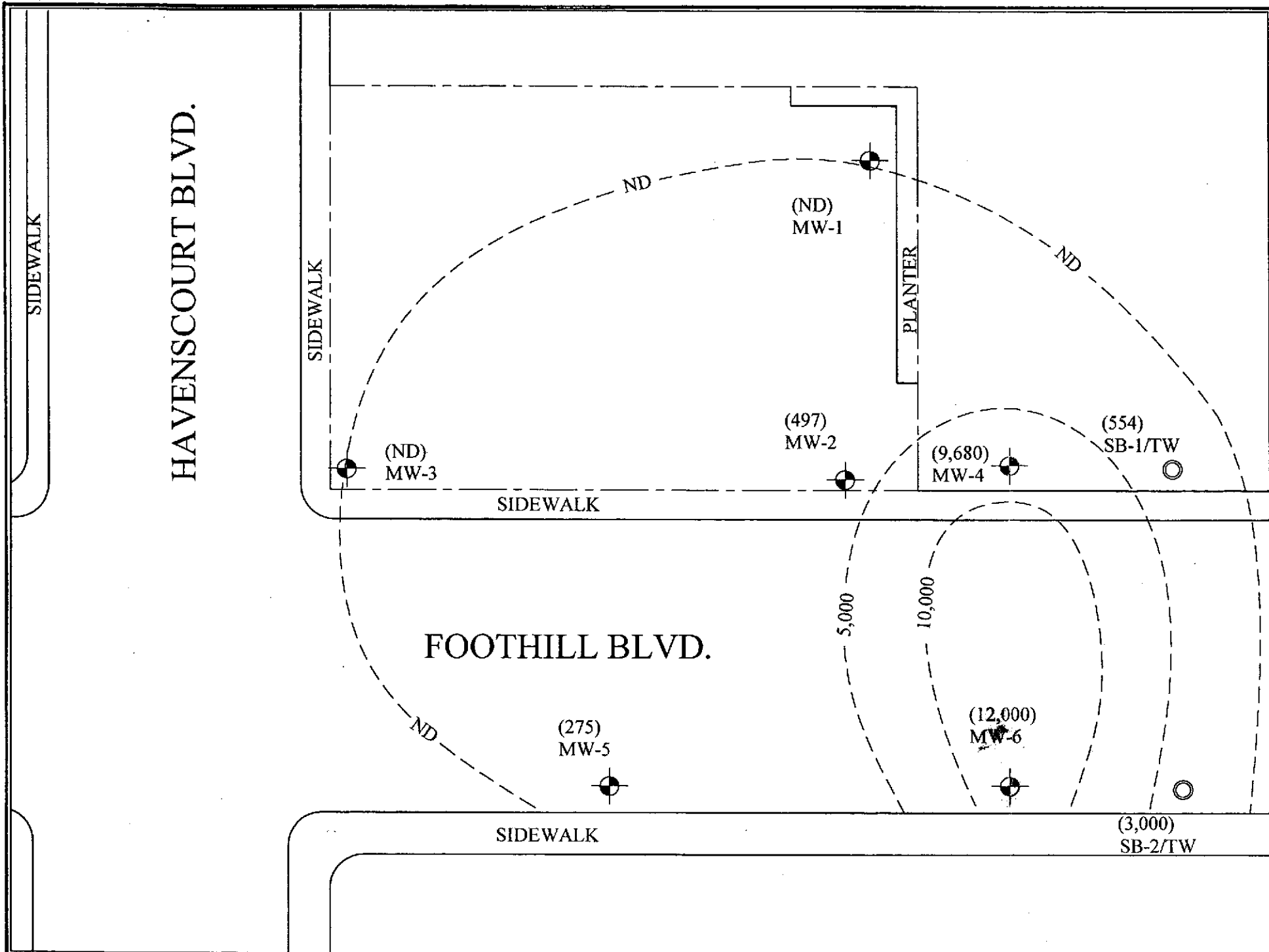
**SCALE: 1 inch = 30 FEET (approximately)**

Source:

1. City of Oakland, Engineering Dept.
2. P&D Environmental

**SEKHON GAS STATION**  
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Oakland, California

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**LEGEND**

- ◆ MW-2 Monitoring Well
- SB-1/TW Soil Boring/Temp. Well
- (12,000) Total Petroleum Hydrocarbon as Gasoline (TPHg) Concentration in Groundwater in Parts Per Billion (ppb)
- 10,000- TPHg Concentration Contour
- ND Not Detected above Reported Detection Limit

Note:  
 1. Groundwater samples collected on July 9, 2002  
 2. Contour Interval - As labeled

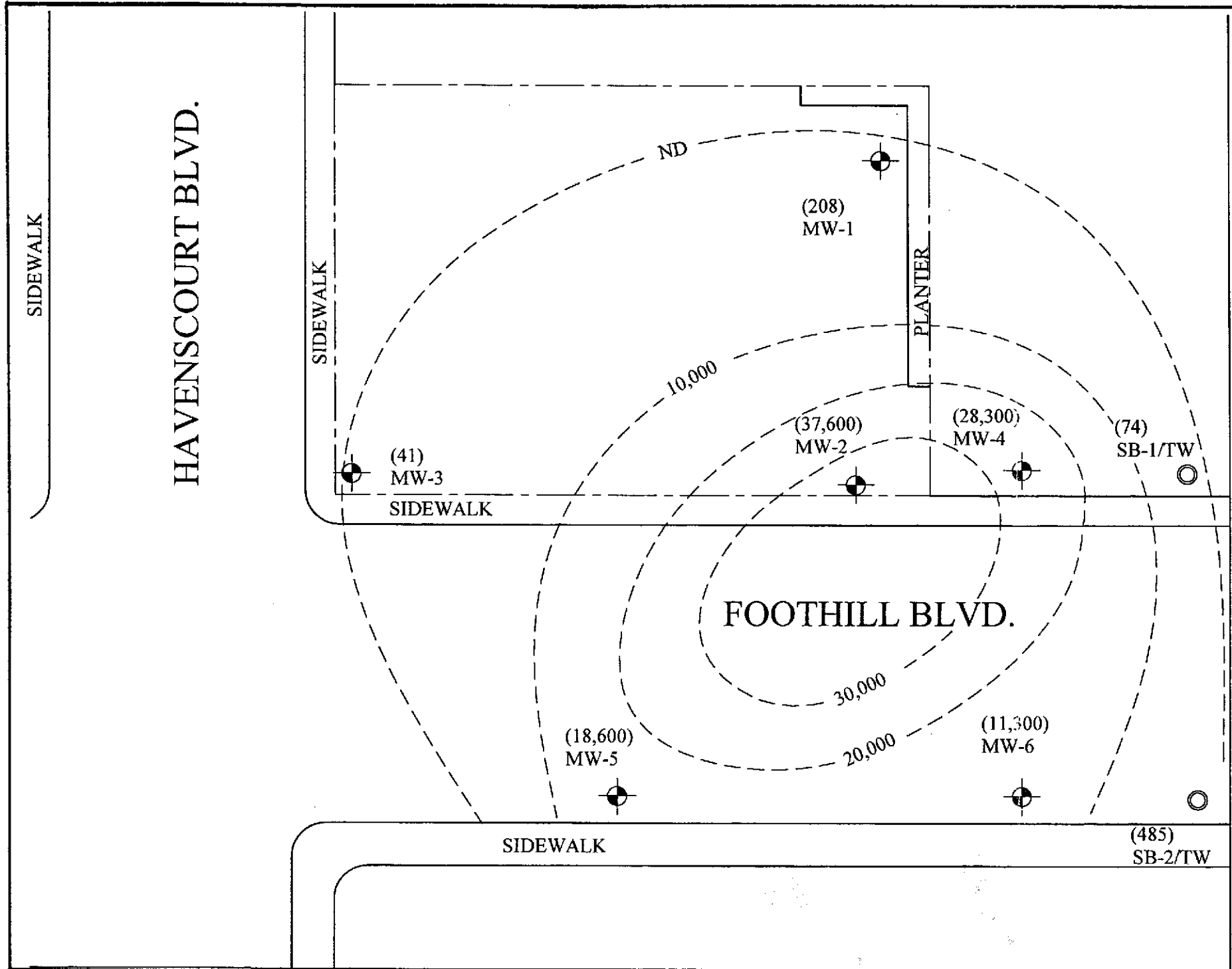
**FIGURE 4: TPHg CONCENTRATIONS IN GROUNDWATER**

SCALE: 1 inch = 30 FEET (approximately)

Source:  
 1. City of Oakland, Engineering Dept.  
 2. P&D Environmental

**SEKHON GAS STATION**  
 6600 Foothill Boulevard  
 Oakland, California

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**LEGEND**

- ◆ MW-2 Monitoring Well
- SB-1/TW Soil Boring/Temp. Well
- (37,600) Methyl Tertiary Butyl Ether (MTBE) Concentration in Groundwater in Parts Per Billion (ppb)
- 20,000- MTBE Concentration Contour
- ND Not Detected above Reported Detection Limit

Note:

- Groundwater samples collected on July 9, 2002
- Contour Interval - 10,000 ppb

**FIGURE 5: MTBE CONCENTRATIONS IN GROUNDWATER**

SCALE: 1 inch = 30 FEET (approximately)

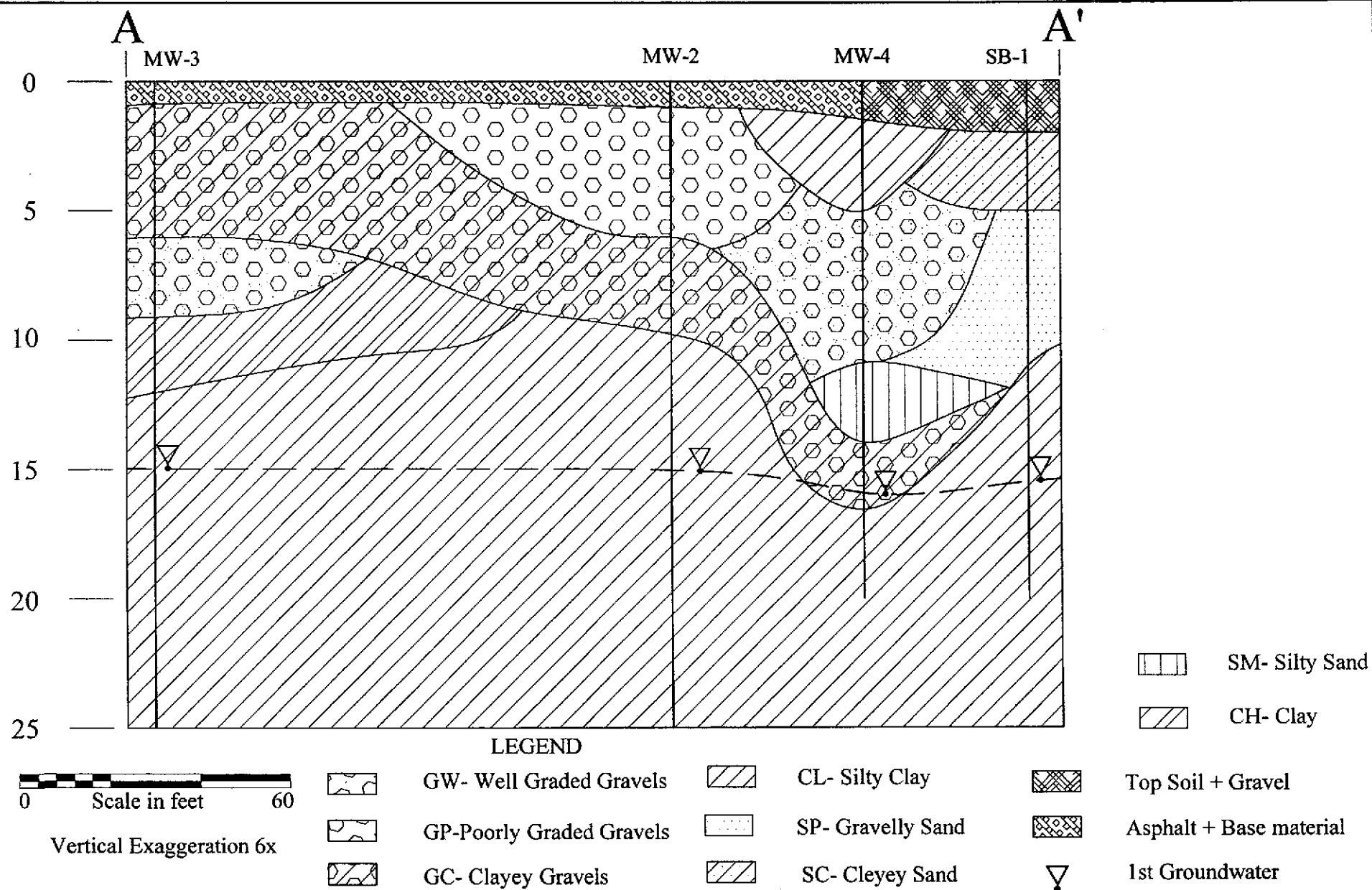
Source:

- City of Oakland, Engineering Dept.
- P&D Environmental

**SEKHON GAS STATION**  
 6600 Foothill Boulevard  
 Oakland, California

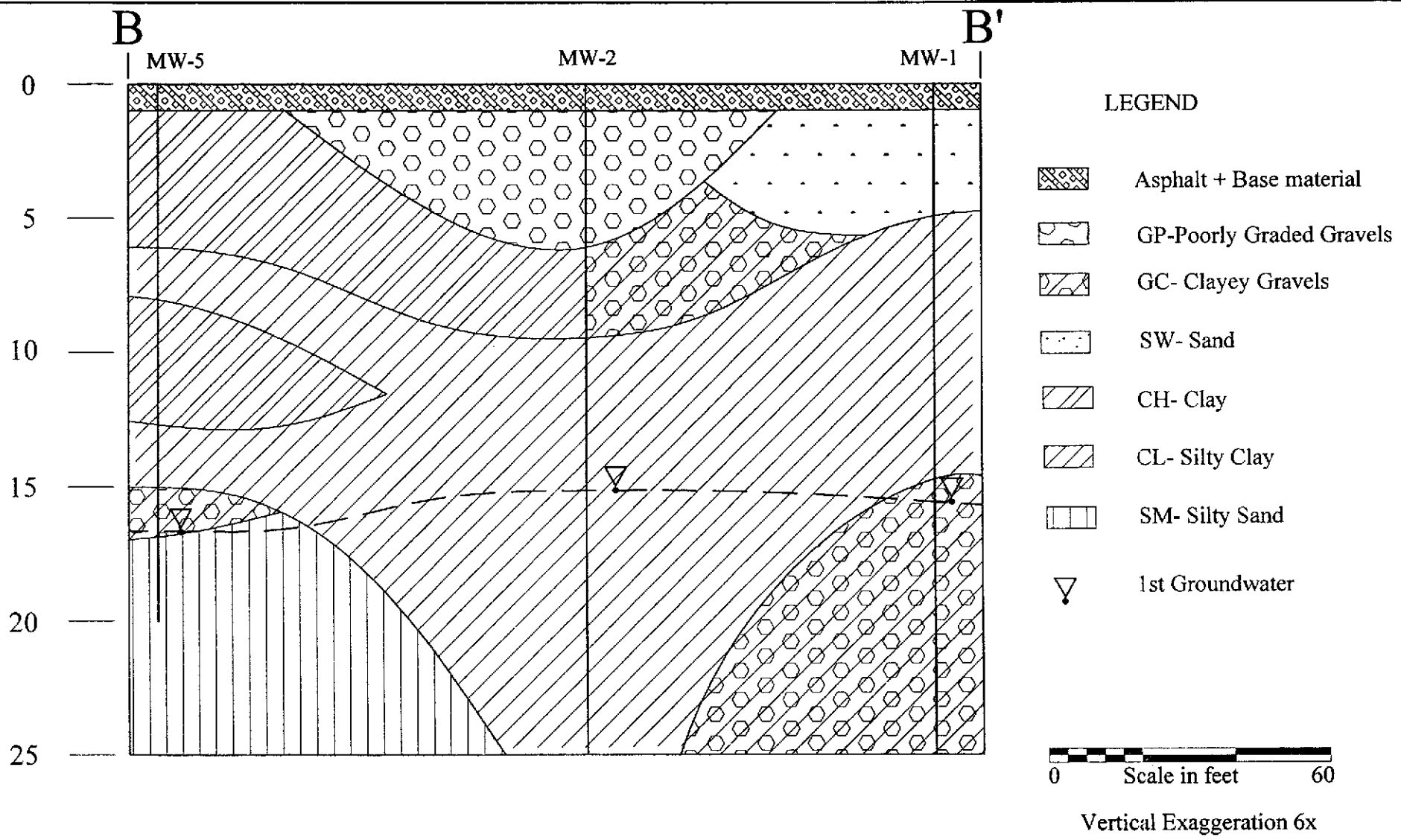
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**FIGURE 6: GEOLOGIC CROSS SECTION A-A'**  
 Sekhon Gas Station  
 6600 Foothill Blvd.  
 Oakland, California

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**FIGURE 7: GEOLOGIC CROSS SECTION B-B'**  
 Sekhon Gas Station  
 6600 Foothill Blvd.  
 Oakland, California

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**TABLE 1: SURVEY AND WATER LEVEL MONITORING DATA**  
**SEKHON GAS STATION**  
**6600 Foothill Blvd.**  
**Oakland, California**

Well No.	Date of Measurement	Casing Elevation (Feet - Relative)	Depth to Groundwater (Feet - Relative)	Product Thickness (Feet)	Groundwater Elevation (Feet - Relative)
MW-1	6/13/01	100	9.36	0	90.64
MW-1	3/21/02	100	7.96	0	92.04
MW-1	7/9/02	100	8.51	0	91.49
MW-2	6/13/01	98.71	10.44	0	88.57
MW-2	3/21/02	98.71	8.18	0	90.53
MW-2	7/9/02	98.71	8.35	0	90.16
MW-3	6/13/01	99.9	9.69	0	90.21
MW-3	3/21/02	99.9	8.8	0	91.1
MW-3	7/9/02	99.9	9.33	0	90.57
MW-4	7/9/02	98.19	8.14	0	90.05
MW-5	7/9/02	97.81	8.16	0	89.65
MW-6	7/9/02	97	7.45	0	89.55

Note: A bench mark was established at forty feet south of the southeast corner of the Store Building. The top of the casing elevations (MW-1, 2 and 3) were surveyed on June 13, 2001, in reference to MW-1 as the common datum with an assumed elevation of 100.00 feet above mean sea level (MSL). All elevations are relative to this. On July 9, 2002, the top of the well casing elevations for MW-3, 4 and 5, were surveyed in reference to MW-1.

**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)
MW-1-S@15'	6/4/01	2.3**	0.009	ND	ND	ND	ND
MW-2-S@8'	6/4/01	870	0.29*	4.3	3.8	12	69
MW-3-S@10'	6/4/01	1.1**	0.016	ND	ND	ND	ND
MW-4-S@10'	6/26/02	ND	593	ND	ND	6	15
MW-5-S@10'	6/26/02	533	4290*	ND	ND	ND	24
MW-6-S@10'	6/26/02	16300	1160	138	37	318	456
SB-1-S@10'	6/27/02	ND	105	ND	ND	ND	ND
SB-2-S@10'	6/27/02	1100	502*	140	ND	67	207
RL	6/14/01	0.5	0.005	0.005	0.005	0.005	0.01

## 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 8015)

MTBE- Methyl Tertiary Butyl Ether (EPA method 8020)

Benzene, toluene, ethlybenzene, and total xylenes(EPA method 8020)

\* Confirmed by CG/MS method 8260

\*\* Laboratory reported does not match gasoline 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
MW-1 GW	6/13/01	ND	130	ND	ND	ND	ND
	3/21/02	95	72.5	ND	ND	ND	ND
	7/9/02	ND	208	ND	ND	ND	ND
MW-2 GW	6/13/01	5800	94000*	160	210	290	980
	3/21/02	452	79100*	3.4	ND	1.6	2.1
	7/9/02	497	37600*	61.6	ND	ND	1.6
MW-3 GW	6/13/01	300	450	1	ND	0.07	2
	3/21/02	274	7520	1.1	ND	1	2.5
	7/9/02	ND	40.8	ND	ND	ND	ND
MW-4 GW	7/9/02	9680	28300	43	17	369	1990
MW-5 GW	7/9/02	275	18600	30.2	ND	ND	3
MW-6 GW	7/9/02	12000	11300	432	22	637	1740
SB-1 GW	6/27/02	554	74.1	1	0.8	11.6	76.2
SB-2 GW	6/27/02	3000	485*	95.6	10.2	394	831
RL		50	0.5	0.5	0.5	0.5	1

Notes:

ND- Not Detected      RL- Reporting Limit

ug/L-            Microgram per liter (parts per billion)

TPHg-            Total petroleum hydrocarbon as gasoline (EPA method modified 8015;

MTBE-            Methyl Tertiary Butyl Ether (EPA Method 8020;

BTEX-            Benzene, toluene, ethylbenzene, and xylene (EPA Method 8020;

\*                    Confirmed by GC/MS method 8260

**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	7/9/02	75.2	6.7	663
MW-2	7/9/02	77.2	6.58	913
MW-3	7/9/02	75.4	6.75	174
MW-4	7/9/02	76.2	6.47	1074
MW-5	7/9/02	72.9	7.97	966
MW-6	7/9/02	73.9	6.7	1575

Note:

°F = degree Fahrenheit  
uS = microSiemens

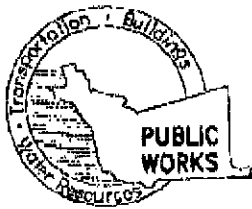
**TABLE 5: WELL SURVEY FOR 6600 FOOTHILL BOULEVARD, OAKLAND, CA**

Well I.D. No.	Address	Drill Date	Total Depth (ft)	Water Depth (ft)	Well Status	Distance from Site (ft)
T2S/R3W,10Q1	FOOTHILL & 69th	Mar-51	400	96	Abandoned	1888
T2S/R3W,10G1	64th & MCARTHUR	?	440	55	Irrigation	2211
T2S/R3W,10C1	5000 MCARTHUR	?	?	83	Abandoned	2902
T2S/R3W,9K1	2232 SEMINARY AVE	Oct-77	102	61	Irrigation	3245
T2S/R3W,15F1	1477 76th AVE	?	22	12	Abandoned	3880
T2S/R3W,3P1	BEHIND MILL POND	?	?	24	?	4254
T2S/R3W,11E1	3971 BURCKHALTER AVE	Jan-78	27	23	Irrigation	4837
Note:						
Source	Alameda County Public Works Agency, Water Resources Section					

## **APPENDIX A**

### **Permits**





# ALAMEDA COUNTY PUBLIC WORKS AGENCY

**WATER RESOURCES SECTION**  
 399 ELMHURST ST. HAYWARD CA, 94544-1395  
 PHONE (510) 670-6633 James Yoo  
 FAX (510) 782-1939

APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS  
 DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT: 6600 Foothill Blvd.  
 Oakland, CA 94605

CLIENT  
 Name: Ravi S. Sekhon Phone: 510-568-4664  
 Address: 6600 Foothill Blvd.  
 City: Oakland Zip: 94605

APPLICANT  
 Name: Advanced Assessment & Remediation Services  
 Address: 2380 Solvico Street, Suite 202 Phone: 925-363-1999  
 City: Concord Zip: 94520

TYPE OF PROJECT

Well Construction	<input type="checkbox"/>	Geotechnical Investigation	<input type="checkbox"/>
Cathodic Protection	<input type="checkbox"/>	General	<input checked="" type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input checked="" type="checkbox"/>
Monitoring	<input checked="" type="checkbox"/>	Well Destruction	<input type="checkbox"/>

PROPOSED WATER SUPPLY WELL USE

New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other	<input type="checkbox"/>

DRILLING METHOD:

Mud Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>	Auger	<input checked="" type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input type="checkbox"/>		

DRILLER'S NAME: Exploration Geoservices

DRILLER'S LICENSE NO: C57 484288

WELL PROJECTS

Drill Hole Diameter	8 in.	Maximum Depth	25 ft.
Casing Diameter	2 in.	Owner's Well Number	MW-4
Surface Seal Depth	8 ft.		

GEOTECHNICAL PROJECTS

Number of Borings		Maximum Depth	
Hole Diameter			

ESTIMATED STARTING DATE: June 11, 2002  
 ESTIMATED COMPLETION DATE: June 12, 2002

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE: Trijit K. Guha DATE: 5/6/02

PLEASE PRINT NAME: TRIJIT K. GUHA Rev. 5-13-00

FOR OFFICE USE

PERMIT NUMBER: W02-0537  
 WELL NUMBER: \_\_\_\_\_  
 APN: \_\_\_\_\_

PERMIT CONDITIONS

Circled Permit Requirements Apply

**A. GENERAL**

1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources-Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date.

**B. WATER SUPPLY WELLS**

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

**C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS**

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

**D. GEOTECHNICAL**

Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

**E. CATHODIC**

Fill hole anode zone with concrete placed by tremie.

**F. WELL DESTRUCTION**

Send a map of work site. A separate permit is required for wells deeper than 45 feet.

**G. SPECIAL CONDITIONS - SC #1 Attached**

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED: [Signature] DATE: 5-14-02



# ALAMEDA COUNTY PUBLIC WORKS AGENCY

**WATER RESOURCES SECTION**  
399 ELMHURST ST. HAYWARD CA. 94544-1395  
PHONE (510) 670-6633 James Yoo  
FAX (510)782-1939  
APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS  
DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 6600 Foothill Blvd.  
Oakland, CA 94605

CLIENT  
Name Ravi S. Sekhon Phone 510-568-4664  
Address 6600 Foothill Blvd.  
City Oakland Zip 94605

APPLICANT  
Name Advanced Assessment & Remediation Services  
Address 2380 Solvia Street, Suite 202 Phone 925-363-1998  
City Concord Zip 94520

TYPE OF PROJECT  
Well Construction  Geotechnical Investigation   
Cathodic Protection  General   
Water Supply  Contamination   
Monitoring  Well Destruction

PROPOSED WATER SUPPLY WELL USE  
New Domestic  Replacement Domestic   
Municipal  Irrigation   
Industrial  Other

DRILLING METHOD:  
Mud Rotary  Air Rotary  Auger   
Cable  Other

DRILLER'S NAME Exploration Geoservices  
DRILLER'S LICENSE NO. C57 484288

WELL PROJECTS  
Drill Hole Diameter 8 in. Maximum Depth 25 ft.  
Casing Diameter 2 in. Owner's Well Number MW-5  
Surface Seal Depth 8 ft.

GEOTECHNICAL PROJECTS  
Number of Borings \_\_\_\_\_ Maximum Depth \_\_\_\_\_ ft.  
Hole Diameter \_\_\_\_\_ in.

ESTIMATED STARTING DATE June 11, 2002  
ESTIMATED COMPLETION DATE June 12, 2002

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Trijeet K. Guha DATE 5/14/02

PLEASE PRINT NAME TRIJEEET K. GUHA Rev. 5-13-00

FOR OFFICE USE

PERMIT NUMBER W02-0536  
WELL NUMBER \_\_\_\_\_  
APN \_\_\_\_\_

### PERMIT CONDITIONS

Circled Permit Requirements Apply

#### A. GENERAL

1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources-Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date.

#### B. WATER SUPPLY WELLS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

#### C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

#### D. GEOTECHNICAL

Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

#### E. CATHODIC

Fill hole anode zone with concrete placed by tremie.

#### F. WELL DESTRUCTION

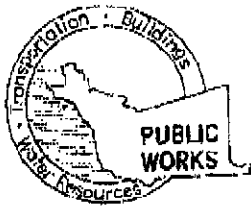
Send a map of work site. A separate permit is required for wells deeper than 45 feet.

#### G. SPECIAL CONDITIONS SC#1 Attached

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED

DATE 5/14/02



# ALAMEDA COUNTY PUBLIC WORKS AGENCY

**WATER RESOURCES SECTION**  
 399 ELMHURST ST. HAYWARD CA. 94544-1395  
 PHONE (510) 670-6633 James Yoo  
 FAX (510) 782-1939

APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS  
 DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 6600 Foothill Blvd.  
Oakland, CA 94605

CLIENT  
 Name Ravi S. Sekhon Phone 510-558-1664  
 Address 6600 Foothill Blvd.  
 City Oakland Zip 94605

APPLICANT  
 Name Advanced Assessment & Remediation Services  
 Address 2380 Salvio Street, Suite 202 Phone 925-363-1998  
 City Concord Zip 94520

TYPE OF PROJECT

Well Construction	<input type="checkbox"/>	Geotechnical Investigation	<input type="checkbox"/>
Cathodic Protection	<input type="checkbox"/>	General	<input type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input checked="" type="checkbox"/>
Monitoring	<input checked="" type="checkbox"/>	Well Destruction	<input type="checkbox"/>

PROPOSED WATER SUPPLY WELL USE

New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other	<input type="checkbox"/>

DRILLING METHOD:

Mud Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>	Auger	<input checked="" type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input type="checkbox"/>		

DRILLER'S NAME Exploration Geoservices  
 DRILLER'S LICENSE NO. C57 484288

WELL PROJECTS

Drill Hole Diameter	<u>8</u> in.	Maximum Depth	<u>25</u> ft.
Casing Diameter	<u>3</u> in.	Owner's Well Number	<u>MW-6</u>
Surface Seal Depth	<u>8</u> ft.		

GEOTECHNICAL PROJECTS

Number of Borings	<u>    </u>	Maximum Depth	<u>    </u> ft.
Hole Diameter	<u>    </u> in.		

ESTIMATED STARTING DATE June 11, 2002  
 ESTIMATED COMPLETION DATE June 12, 2002

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Tridib K. Guha DATE 5/15/02

PLEASE PRINT NAME TRIDIB K. GUHA Rev. 5-13-00

FOR OFFICE USE

PERMIT NUMBER W02-0535  
 WELL NUMBER \_\_\_\_\_  
 APN \_\_\_\_\_

PERMIT CONDITIONS

Circled Permit Requirements Apply

**A. GENERAL**

1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources-Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date.

**B. WATER SUPPLY WELLS**

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

**C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS**

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

**D. GEOTECHNICAL**

Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replace in kind or with compacted cuttings.

**E. CATHODIC**

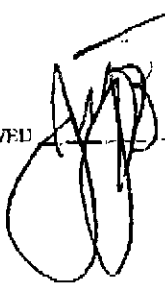
Fill hole anode zone with concrete placed by tremie.

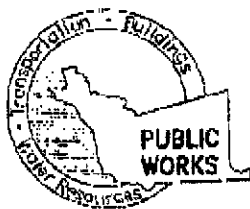
**F. WELL DESTRUCTION**

Send a map of work site. A separate permit is required for wells deeper than 45 feet.

**G. SPECIAL CONDITIONS - SC #1 Attached.**

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED  DATE 5-14-02



# ALAMEDA COUNTY PUBLIC WORKS AGENCY

**WATER RESOURCES SECTION**  
 399 ELMHURST ST. HAYWARD CA. 94544-1395  
 PHONE (510) 670-6633 James Yoo  
 FAX (510)782-1939

APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS  
 DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

## DRILLING PERMIT APPLICATION

**FOR APPLICANT TO COMPLETE**

LOCATION OF PROJECT 6600 Foothill Blvd.  
Oakland, CA 94605

CLIENT  
 Name Ravi S. Sekhon  
 Address 6600 Foothill Blvd. Phone 510-568-4664  
 City Oakland Zip 94605

APPLICANT  
 Name Advanced Assessment & Remediation Services  
 Address 2180 Salvio Street, Suite 202 Fax 925-363-1998  
 City Concord Phone 925-363-1909 Zip 94520

**TYPE OF PROJECT**

Well Construction	<input type="checkbox"/>	Geotechnical Investigation	<input type="checkbox"/>
Cathodic Protection	<input type="checkbox"/>	General	<input type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input checked="" type="checkbox"/>
Monitoring	<input type="checkbox"/>	Well Destruction	<input type="checkbox"/>

**PROPOSED WATER SUPPLY WELL USE**

New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other	<input type="checkbox"/>

**DRILLING METHOD:**

Mod Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>	Auger	<input checked="" type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input type="checkbox"/>		

DRILLER'S NAME Exploration Geoservices  
 DRILLER'S LICENSE NO. C57 484288

**WELL PROJECTS** Soil Boring/Temporary Well (backfill with neat cement)  
 Drill Hole Diameter 8 in. Maximum  
 Casing Diameter \_\_\_\_\_ in. Depth 20 ft.  
 Surface Seal Depth \_\_\_\_\_ ft. Owner's Well Number SB-1/TW

**GEOTECHNICAL PROJECTS**  
 Number of Borings \_\_\_\_\_ Maximum  
 Hole Diameter \_\_\_\_\_ in. Depth \_\_\_\_\_ ft.

ESTIMATED STARTING DATE June 11, 2002  
 ESTIMATED COMPLETION DATE June 12, 2002

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE [Signature] DATE 5/6/02

PLEASE PRINT NAME TRISH K. GULLA Rev.5-13-00

**FOR OFFICE USE**

PERMIT NUMBER W02-0533  
 WELL NUMBER \_\_\_\_\_  
 APN \_\_\_\_\_

**PERMIT CONDITIONS**

Circled Permit Requirements Apply

**A. GENERAL**

1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources-Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date.

**B. WATER SUPPLY WELLS**

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

**C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS**

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

**D. GEOTECHNICAL**

Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

**E. CATHODIC**

Fill hole anode zone with concrete placed by tremie.

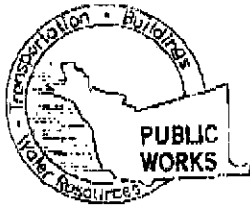
**F. WELL DESTRUCTION**

Send a map of work site. A separate permit is required for wells deeper than 45 feet.

**G. SPECIAL CONDITIONS**

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED [Signature] DATE 5/14/02



# ALAMEDA COUNTY PUBLIC WORKS AGENCY

**WATER RESOURCES SECTION**  
 399 ELMHURST ST. HAYWARD CA. 94544-1398  
 PHONE (510) 670-6633 James Yoo  
 FAX (510) 752-1939

APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS  
 DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

## DRILLING PERMIT APPLICATION

**FOR APPLICANT TO COMPLETE**

LOCATION OF PROJECT 6600 Pothill Blvd  
Oakland, CA 94605

**FOR OFFICE USE**  
 PERMIT NUMBER W02-0534  
 WELL NUMBER \_\_\_\_\_  
 APN \_\_\_\_\_

**PERMIT CONDITIONS**  
 Circled Permit Requirements Apply

**A. GENERAL**

1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources-Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date.

**B. WATER SUPPLY WELLS**

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

**C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS**

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

**D. GEOTECHNICAL**

Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

**E. CATHODIC**

Fill hole anode zone with concrete placed by tremie.

**F. WELL DESTRUCTION**

Send a map of work site. A separate permit is required for wells deeper than 45 feet.

**G. SPECIAL CONDITIONS**

set #1 Attached

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

**CLIENT**  
 Name Ravi S. Sekhon Phone 510-568-4664  
 Address 6600 Pothill Blvd  
 City Oakland Zip 94605

**APPLICANT**  
 Name Advanced Assessment & Remediation Services  
 Address 2180 Salvio Street, Suite 202 Fax 925-363-1998  
 City Concord Phone 925-363-1999 Zip 94520

**TYPE OF PROJECT**

Well Construction		Geotechnical Investigation	
Cathodic Protection	<input type="checkbox"/>	General	<input type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input checked="" type="checkbox"/>
Monitoring	<input type="checkbox"/>	Well Destruction	<input type="checkbox"/>

**PROPOSED WATER SUPPLY WELL USE**

New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other	<input type="checkbox"/>

**DRILLING METHOD:**

Mud Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>	Auger	<input checked="" type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input type="checkbox"/>		

DRILLER'S NAME Exploration Geoservices

DRILLER'S LICENSE NO. C57 484288

**WELL PROJECTS** Soil Boring/Temporary Well (backfill with neat cement)  
 Drill Hole Diameter 8 in. Maximum  
 Casing Diameter     in. Depth 20 ft.  
 Surface Seal Depth     ft. Owner's Well Number SB-271W

**GEOTECHNICAL PROJECTS**

Number of Borings     Maximum  
 Hole Diameter     in. Depth     ft.

ESTIMATED STARTING DATE June 11, 2002  
 ESTIMATED COMPLETION DATE June 12, 2002

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE [Signature] DATE 5/16/02

PLEASE PRINT NAME TRIDIB K. CHUIA Rev. 5-13-00

APPROVED [Signature] DATE 5-14-02

Recording Requested by:  
CITY OF OAKLAND

When Recorded Mail to:  
City of Oakland  
Community & Economic  
Development Agency  
Building Services Division,  
Engineering Information  
250 Frank H. Ogawa Plaza, 2nd Floor  
Oakland, CA 94612

TAX ROLL PARCEL NUMBER  
(ASSESSOR'S REFERENCE NUMBER)

039	3279	015	03
MAP	BLOCK	PARCEL	SUB

Address: 6600 FOOTHILL BOULEVARD *Space Above for Recorder's Use Only*

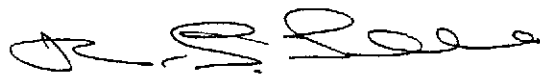
MINOR ENCROACHMENT PERMIT AND AGREEMENT

Ravitej S. Sekhon and Mandeep K. Sekhon, owners of that certain property described in the Deed recorded September 28, 1998, Series No. 98333851, in the Office of the Recorder, Alameda County, California and commonly known as 6600 Foothill Boulevard, is hereby granted a Conditional Revocable Permit to encroach into the public right-of-way area of Foothill Boulevard with three monitoring wells and one soil boring. The location of said encroachment shall be as delineated in Exhibit 'A' attached hereto and made a part hereof.

The permittee agrees to comply with and be bound by the conditions for granting an Encroachment Permit attached hereto and made a part hereof.

This agreement shall be binding upon the undersigned, the present owners of the property described above, and their successors in interest thereof.

In witness whereof, we have set our signatures this 18 day of June, 2002.



Ravitej S. Sekhon



Mandeep K. Sekhon

-----*Below for Official Use Only*-----

CITY OF OAKLAND

Dated: \_\_\_\_\_

By: \_\_\_\_\_

CALVIN N. WONG  
*Director of Building Services*

For:

WILLIAM E. CLAGGETT  
*Executive Director,*  
*Community & Economic Development Agency*

TO: Ravitej S. Sekhon and Mandeep K. Sekhon  
ADDRESS: 6600 Foothill Boulevard  
Oakland, CA 94605  
(APN: 039-3279-015-03)

RE: Minor Encroachment Permit for installation of three monitoring wells and one soil boring adjacent to 6600 Foothill Boulevard.

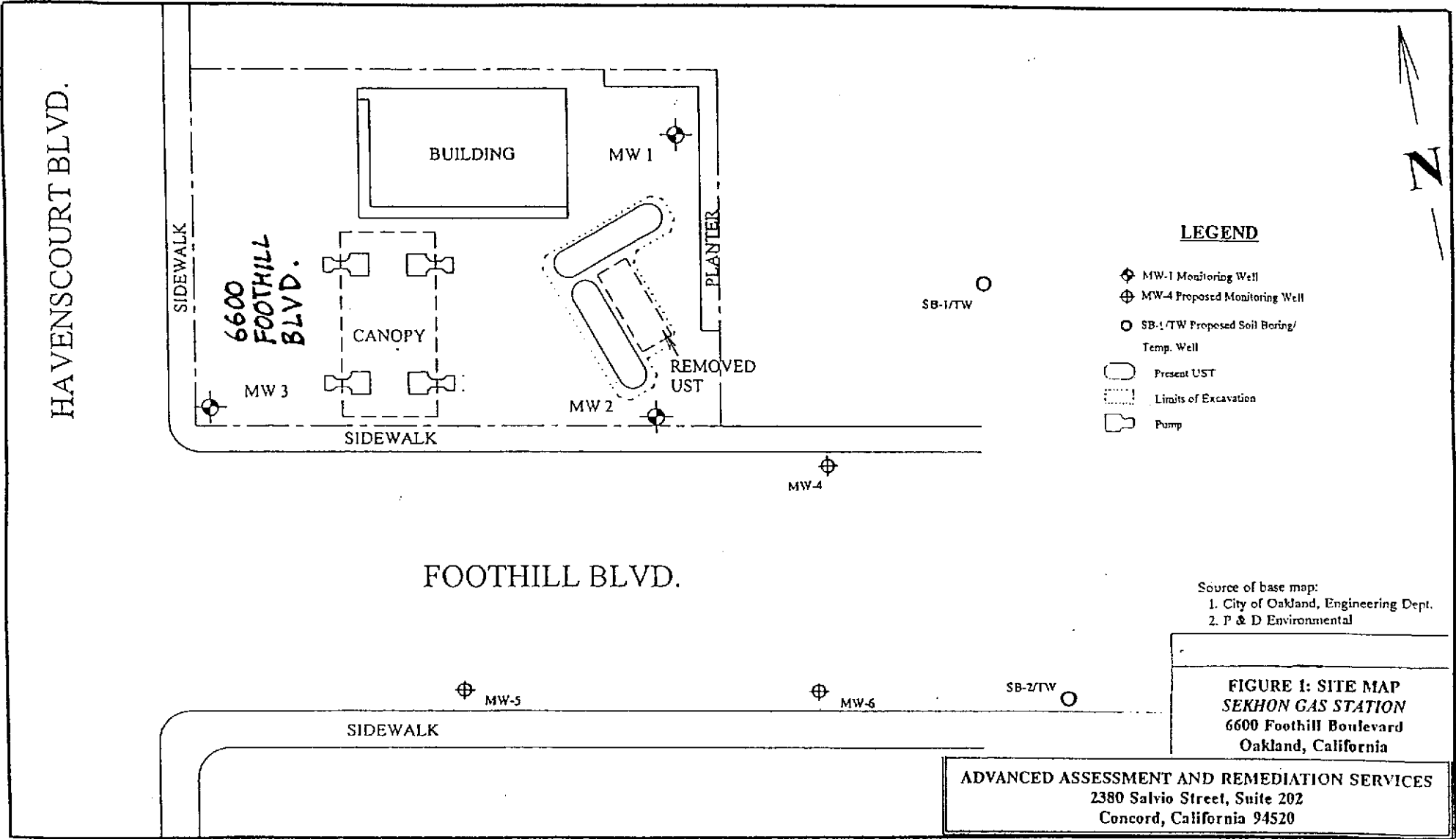
### CONDITIONS FOR GRANTING A MINOR ENCROACHMENT PERMIT

1. That this permit shall be revocable at the pleasure of the *Director of Building Services*.
2. That the permittee, by the acceptance, either expressed or implied, of the minor encroachment permit hereby disclaims any right, title, or interest in or to any portion of the public street area, and agrees that said temporary use of said area does not constitute an abandonment on the part of the City of Oakland of any of its rights for street purposes and otherwise.
3. The permittee shall maintain in force and effect at all times that said encroachment occupies said public area, good and sufficient public liability insurance in the amount of \$300,000 for each occurrence, and property damage insurance in the amount of \$50,000 for each occurrence, both including contractual liability, insuring the City of Oakland, its officers and employees against any and all claims arising out of the existence of said encroachment in said sidewalk area, as respects liabilities assumed under this permit, and that a certificate of such insurance and subsequent notices of the renewal thereof, shall be filed with the *Director of Building Services* of the City of Oakland, and that such certificate shall state that said insurance coverage shall not be canceled or be permitted to lapse without thirty (30) days written notice to said *Director of Building Services*. The permittee also agrees that the City may review the type and amount of insurance required of the permittee every five (5) years and may require the permittee to increase the amount of and/or change the type of insurance coverage required.
4. That the permittee, by the acceptance, either expressed or implied, of this revocable permit shall be solely and fully responsible for the repair or replacement of any portion or all of said improvements in the event that said improvements shall have failed or have been damaged to the extent of creating a menace or of becoming a hazard to the safety of the general public; and that the permittee shall be liable for the expenses connected therewith.
5. That the permittee is aware that the proposed work is out of the ordinary and does not comply with City standard installations. Permittee is also aware that the City has to conduct work in the public right-of-way which may include, but may not be limited to, excavation, trenching, and relocation of its facilities, all of which may damage encroachments. Permittee is further aware that the City takes no responsibility for repair or replacement of encroachments which are damaged by the City or its contractors. That the permittee, by the acceptance, either expressed or implied, of the encroachment permit hereby agrees that upon receipt of notification from the City, permittee shall immediately repair or replace within 30 days all damages to permittee's encroachments within the public right-of-way which are damaged by the City or its contractors in carrying out the City's work. Permittee agrees to employ interim measures required and approved by the City until repair or replacement work is completed.
6. That upon the termination of the permission herein granted, permittee shall immediately remove said encroachment from the street area, and any damage resulting therefrom shall be repaired to the satisfaction of the *Director of Building Services*.

7. That the permittee shall file with the City of Oakland for recordation a Minor Encroachment Permit and Agreement, and shall be bound by and comply with all the terms and conditions of said permit.
8. That said permittee shall obtain an excavation permit prior to construction and a separate excavation permit prior to the removal of the monitoring well.
9. That said permittee shall provide to the City of Oakland an AS BUILT plan showing the actual location of the monitoring well. And the results of all data collected from the monitoring well.
10. That said permittee shall remove the monitoring well and repair any damage to the street area in accordance with City standards two (2) years after construction or as soon as monitoring is complete.
11. That said permittee shall notify the *Community & Economic Development Agency, Building Services Division* after the monitoring well is removed and the street area restored to initiate the procedure to rescind the minor encroachment permit.
12. That the monitoring well cover installed within the sidewalk area shall have a skid-proof surface.
13. That the monitoring well casting and cover shall be iron and shall meet H-20 load rating. The cover shall be secured with a minimum of two stainless steel bolts. Bolts and cover shall be mounted flush with the surrounding surface. For sidewalk installations, a precast concrete utility box and non-skid cover may be needed in conjunction with the bolted cast iron cover with City approval.
14. That the permittee acknowledges that the City makes no representations or warranties as to the conditions beneath said encroachment. By accepting this revocable permit, permittee agrees that it will use the encroachment area at its own risk, is responsible for the proper coordination of its activities with all other permittees, underground utilities, contractors, or workmen operating, within the encroachment area and for the safety of itself and any of its personnel in connection with its entry under this revocable permit.
15. The permittee acknowledges that the City is unaware of the existence of any hazardous substances beneath the encroachment area, and permittee hereby waives and fully releases and forever discharges the City and its officers, directors, employees, agents, servants, representatives, assigns and successors from any and all claims, demands, liabilities, damages, actions, causes of action, penalties, fines, liens, judgements, costs, or expenses whatsoever (including, without limitation, attorneys' fees and costs), whether direct or indirect, known or unknown, foreseen or unforeseen, that may arise out of or in any way connected with the physical condition or required remediation of the excavation area of any law or regulation applicable thereto, including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (42 U.S.C. Sections 9601 et seq.), the Resource Conservation and Recovery Act of 1976 (42 U.S.C. Section 466 et seq.), the Safe Drinking Water Act (14 U.S.C. Sections 1401, 1450), the Hazardous Waste Control Law (California Health and Safety Code Sections 25100 et seq.), the Porter-Cologne Water Quality Control Act (California Health and Safety Code Section 13000 et seq.), the Hazardous Substance Account Act (California Health and Safety Code Sections 253000 et seq.), and the Safe Drinking Water and Toxic Enforcement Act (California Health and Safety Code Section 25249.5 et seq.).
16. Permittee further acknowledges that it understands and agrees that it hereby expressly waives all rights and benefits which it now has or in the future may have, under and by virtue of the terms of California Civil Code Section 1542, which reads as follows: "A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM MUST HAVE MATERIALLY AFFECTED HIS SETTLEMENT WITH THE DEBTOR."



17. Permittee recognizes that by waiving the provisions of this section, permittee will not be able to make any claims for damages that may exist, and to which, if known, would materially affect its decision to agree to these encroachment terms and conditions, regardless of whether permittee's lack of knowledge is the result of ignorance, oversight, error, negligence, or any other cause.
18.
  - (a) That the permittee, by the acceptance of this revocable permit, agrees and promises to indemnify, defend, and hold harmless the City of Oakland, its officers, agents, and employees, to the maximum extent permitted by law, from any and all claims, demands, liabilities damages, actions, causes of action, penalties, fines, liens, judgments, costs, or expenses whatsoever (including, without limitation, attorneys' fees and costs; collectively referred to as "claims", whether direct or indirect, known or unknown, foreseen or unforeseen, to the extent that such claims were either (1) caused by the permittee, its agents, employees, contractors or representatives, or, (2) in the case of environmental contamination, the claim is a result of environmental contamination that emanates or emanated from 6600 Foothill Boulevard, Oakland, California site, or was otherwise caused by the permittee, its agents, employees, contractors or representatives.
  - (b) That, if any contamination is discovered below or in the immediate vicinity of the encroachment, and the contaminants found are of the type used, housed, stored, processed or sold on or from 6600 Foothill Boulevard, Oakland, California site, such shall amount to a rebuttable presumption that the contamination below, or in the immediate vicinity of, the encroachment was caused by the permittee, its agents, employees, contractors or representatives.
  - (c) That the permittee shall comply with all applicable federal, state, county and local laws, rules, and regulations governing the installation, maintenance, operation and abatement of the encroachment.
19. That the permittee hereby does remise, release, and forever discharge, and agree to defend, indemnify, and save harmless, the City, its officers, agents and employees and each of them, from any and all actions, claims, and demands of whatsoever kind or nature, and any damage, loss or injury which may be sustained directly or by the undersigned and any other person or persons, and arising out of, or by reason of the occupation of said public property, and the future removal of the above-mentioned encroachment.
20. That the herein above conditions shall be binding upon the permittee and the successive owners and assigns thereof.
21. That said Minor Encroachment Permit and Agreement shall take effect when all the conditions hereinabove set forth shall have been complied with to the satisfaction of the *Director of Building Services*, and shall become null and void upon the failure of the permittee to comply with all conditions.



**LEGEND**

- ⊕ MW-1 Monitoring Well
- ⊕ MW-4 Proposed Monitoring Well
- SB-1/TW Proposed Soil Boring/Temp. Well
- Present UST
- Limits of Excavation
- Pump

Source of base map:  
 1. City of Oakland, Engineering Dept.  
 2. P & D Environmental

**FIGURE 1: SITE MAP**  
**SEKHON GAS STATION**  
 6600 Foothill Boulevard  
 Oakland, California

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

# CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

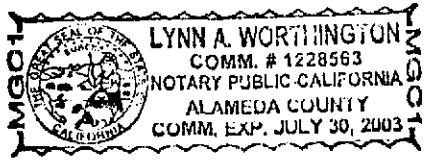
State of California

County of Alameda

On June 18, 2002 before me, Lynn A. Worthington  
Date Name and Title of Officer (e.g., "Jane Doe, Notary Public")

personally appeared MANDEEP K. SERKON  
Name(s) of Signer(s)

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



WITNESS my hand and official seal.  
Lynn A. Worthington  
Signature of Notary Public

## OPTIONAL

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

### Description of Attached Document

Title or Type of Document: MINOR ENCROACHMENT PERMIT

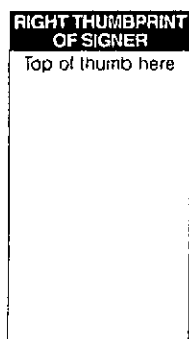
Document Date: \_\_\_\_\_ Number of Pages: \_\_\_\_\_

Signer(s) Other Than Named Above: \_\_\_\_\_

### Capacity(ies) Claimed by Signer(s)

Signer's Name: \_\_\_\_\_

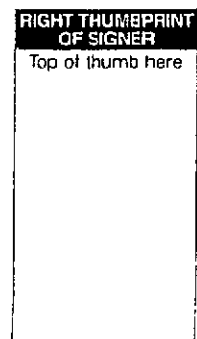
- Individual
- Corporate Officer  
Title(s): \_\_\_\_\_
- Partner —  Limited  General
- Attorney-in-Fact
- Trustee
- Guardian or Conservator
- Other: \_\_\_\_\_



Signer Is Representing:  
\_\_\_\_\_  
\_\_\_\_\_

Signer's Name: \_\_\_\_\_

- Individual
- Corporate Officer  
Title(s): \_\_\_\_\_
- Partner —  Limited  General
- Attorney-in-Fact
- Trustee
- Guardian or Conservator
- Other: \_\_\_\_\_



Signer Is Representing:  
\_\_\_\_\_  
\_\_\_\_\_

## **APPENDIX B**

### **Boring Logs and Monitoring Well Construction Details**

## LOG OF EXPLORATORY BORING NO. SB-1

Project: Sekhon Gas Station  
 Drilling Co.: Exploration Geoservices  
 Start Date: 6/27/02  
 End Date: 6/27/02

Drill Method: HSA  
 Driller: Loren  
 Drill Rig: B-53

Logged By: T. Guha  
 Sampler: Split Spoon  
 Hole Dia.: 8 inch

LITHOLOGIC DESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH	SAMPLE	DRIVEN in	RECOVERY-in	OVA (ppm)	WELL CONSTRUCTION DETAIL
Top soil gravel mixture 24"			0					<p style="text-align: center;">Neat cement</p>
CLAYEY SAND: drak gray, sand, silt & clay mixture, dry, loose	SC		-5-				10	
GRAVELLY SAND: brown, dry, loose Same with more silt and clay, slightly moist, loose	SP		-10-	■			150	
SILTY CLAY: brown, moist, stiff  very moist, stiff  wet	CL		-15-				0	
<i>BORE HOLE TERMINATED @ 20 feet</i>			-20-				0	
			-25-					
			-30-					

**ADVANCED ASSESSMENT & REMEDIATION SERVICES**  
 2380 Salvio Street, Suite202  
 Concord, CA 94520

Note: .

Project No.  
 00015  
 Page 1 of 1

## LOG OF EXPLORATORY BORING NO. SB-2

Project: Sekhon Gas Station  
 Drilling Co.: Exploration Geoservices  
 Start Date: 6/27/02  
 End Date: 6/27/02

Drill Method: HSA  
 Driller: Loren  
 Drill Rig: B-53

Logged By: T. Guha  
 Sampler: Split Spoon  
 Hole Dia.: 8 inch

LITHOLOGIC DESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH	SAMPLE	DRIVEN in	RECOVERY-in	OVA (ppm)	WELL CONSTRUCTION DETAIL	
3" ASPHALT & 21" BASE MATERIAL			0						
SILTY CLAY: drak gray, moist, soft color changes to brown, with some small gravels	CL	/ / / / /	-5-				10		
SILTY SAND: greenish gray, moist, soft	SM	. . . . .	-10-	■			550		
SILTY CLAY: greenish gray, moist, stiff color changes to yellowish brown, very moist, stiff wet	CL	/ / / / /	-15-				10		
SILTY SAND: yellowish brown, wet, soft	SM	. . . . .	-20-				0		
<i>BORE HOLE TERMINATED @ 20 feet</i>			-25-						
			-30-						
<b>ADVANCED ASSESSMENT &amp; REMEDIATION SERVICES</b> 2380 Salvio Street, Suite202 Concord, CA 94520				Note:				Project No. 00015 Page 1 of 1	

## LOG OF EXPLORATORY BORING NO. MW-4

Project: Sekhon Gas Station  
 Drilling Co.: Exploration Geoservices  
 Start Date: 6/26/02  
 End Date: 6/26/02

Drill Method: HSA  
 Driller: Loren  
 Drill Rig: B-53

Logged By: T. Guha  
 Sampler: Split Spoon  
 Hole Dia.: 8 inch

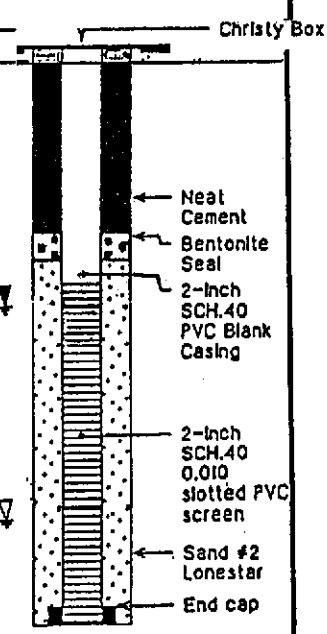
LITHOLOGIC DESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH	SAMPLE	DRIVEN in	RECOVERY-in	OVA (ppm)	WELL CONSTRUCTION DETAIL
Top soil & gravel mix 1 8"			0					<p style="text-align: right; margin-right: 20px;">Christy Box</p> <ul style="list-style-type: none"> <li>Neat Cement</li> <li>Bentonite Seal</li> <li>2-Inch SCH.40 PVC Blank Casing</li> <li>2-Inch SCH.40 0.010 slotted PVC screen</li> <li>Sand #2 Lonestar</li> <li>End cap</li> </ul>
SILTY CLAY: drak gray, moist, stiff	CL	[Hatched pattern]	-					
GRAVEL: brown, with some sands, slightly moist, loose	GW	[Gravel pattern]	-5-			20		
SILT: reddish brown, very moist, stiff	ML	[Vertical lines pattern]	-10-	■		650		
CLAYEYGRAVEL: brown, sand, gravel & clay mix, loose, wet	GC	[Dotted pattern]	-15-			10		
SILTY CLAY: yellowish brown, wet, stiff	CL	[Hatched pattern]	-20-			0		
<i>BORE HOLE TERMINATED @ 20 feet</i>			-25-					
			-30-					
<p><b>ADVANCED ASSESSMENT &amp; REMEDIATION SERVICES</b>                  2380 Salvio Street, Suite202                  Concord, CA 94520</p>								<p><i>Note:</i></p>
<p>Project No. 00015                  Page 1 of 1</p>								

## LOG OF EXPLORATORY BORING NO. MW-5

Project: Sekhon Gas Station  
 Drilling Co.: Exploration Geoservices  
 Start Date: 6/26/02  
 End Date: 6/26/02

Drill Method: HSA  
 Driller: Loren  
 Drill Rig: B-53

Logged By: T. Guha  
 Sampler: Split Spoon  
 Hole Dia.: 8 inch
















LITHOLOGIC DESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH	SAMPLE	DRIVEN in	RECOVERY-in	OVA (ppm)	WELL CONSTRUCTION DETAIL
3" ASPHALT & 8" BASE MATERIAL			0					 <p style="text-align: right; margin-right: 20px;">Christy Box</p> <p>Neat Cement                      Bentonite Seal                      2-Inch SCH.40 PVC Blank Casing                      2-Inch SCH.40 0.010 slotted PVC screen                      Sand #2 Lonestar                      End cap</p>
CLAY: drak gray, moist, stiff	CH	/ / / /	-5-				20	
CLAY: brown, with rounded gravels & sand, moist	CL	/ / / /	-10-	■			800	
CLAY: brown, moist, very stiff	CH	/ / / /	-15-				10	
SILTY CLAY: brown, very moist, stiff	CL	/ / / /	-20-					
CLAYEY GRAVEL: brown, sand, gravel & clay mixture, loose, wet	GC	/ / / /	-25-					
SILT: brown, wet, stiff	ML		-30-					
<i>BORE HOLE TERMINATED @ 20 feet</i>								
<b>ADVANCED ASSESSMENT &amp; REMEDIATION SERVICES</b>		<i>Note:</i>						Project No. 00015
2380 Salvio Street, Suite202 Concord, CA 94520								Page 1 of 1











# 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 & 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 & 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

	Driven Interval
	Bulk or Classification Sample
	Laboratory Sample
	Undisturbed Samp. for Classification
	First encountered groundwater level
	Static groundwater level
(IOYR 4/4) Munsell soil color 1990 edition	

### GRAIN SIZE CHART

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	76.2 to 4.76
	3' to 3/4" 3/4" to No. 4	76.2 to 19.1 19.1 to 4.76
SAND coarse medium fine	No. 4 to No. 200	4.76 to 0.074
	No. 4 to No. 10	4.76 to 2.00
	No. 10 to No. 40 No. 40 to No. 200	2.00 to 0.420 0.420 to 0.074
SILT & CLAY	Below No. 200	Below No. 0.074

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

## SOIL CLASSIFICATION CHART AND KEY TO BORING LOG

## **APPENDIX C**

### **Certified Analytical Reports and Chain-of-Custody Documents**



C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 02-0851  
Client: Advanced Assessment & Remd.  
Project: SEKHON GAS STATION/6600 FOOTHILL BLVD.

Date Reported: 07/05/2002

Gasoline, BTEX and MTBE by Methods SW8020F

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 02-0851-01 Client ID: MW-4-S@10'					
				06/26/2002	SO
Benzene	SW8020F	ND<5	UG/KG		07/01/2002
Ethylbenzene	SW8020F	6	UG/KG		07/01/2002
Gasoline Range Organics	SW8020F	ND<500	UG/KG		07/01/2002
Methyl-tert-butyl ether	SW8020F	593	UG/KG		07/01/2002
Toluene	SW8020F	ND<5	UG/KG		07/01/2002
Xylenes	SW8020F	15	UG/KG		07/01/2002
Sample: 02-0851-02 Client ID: MW-5-S@10'					
				06/26/2002	SO
Benzene	SW8020F	ND<5	UG/KG		07/01/2002
Ethylbenzene	SW8020F	ND<5	UG/KG		07/01/2002
Gasoline Range Organics	SW8020F	533	UG/KG		07/01/2002
Methyl-tert-butyl ether	SW8020F	*4290	UG/KG		07/01/2002
Toluene	SW8020F	ND<5	UG/KG		07/01/2002
Xylenes	SW8020F	24	UG/KG		07/01/2002
Sample: 02-0851-03 Client ID: MW-6-S@10'					
				06/26/2002	SO
Benzene	SW8020F	138	UG/KG		07/01/2002
Ethylbenzene	SW8020F	318	UG/KG		07/01/2002
Gasoline Range Organics	SW8020F	16300	UG/KG		07/01/2002
Methyl-tert-butyl ether	SW8020F	1160	UG/KG		07/01/2002
Toluene	SW8020F	37	UG/KG		07/01/2002
Xylenes	SW8020F	456	UG/KG		07/01/2002



C E R T I F I C A T E O F A N A L Y S I S

Quality Control/Quality Assurance

Lab Number: 02-0851
Client: Advanced Assessment & Remd.
Project: SEKHON GAS STATION/6600 FOOTHILL BLVD.

Date Reported: 07/05/2002
Gasoline, BTEX and MTBE by Methods SW8020F

Table with 7 columns: Analyte, Method, Reporting Limit, Unit, Blank, Avg MS/MSD Recovery, RPD. Rows include Gasoline Range, Benzene, Toluene, Ethylbenzene, Xylenes, and Methyl-tert-butyl.

ELAP Certificate NO:1753

Reviewed and Approved

Handwritten signature of John A. Murphy

John A. Murphy, Laboratory Director



C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 02-0860
Client: Advanced Assessment & Remd.
Project: SEKHON GAS

Date Reported: 07/08/2002

Gasoline, BTEX and MTBE by Methods SW8020F

Table with 5 columns: Analyte, Method, Result, Unit, Date Sampled, Date Analyzed. It contains three sections of data for different samples (01, 02, 03) and various analytes like Benzene, Ethylbenzene, Gasoline Range Organics, etc.

\*Confirmed by GC/MS method 8260B.



C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 02-0860  
Client: Advanced Assessment & Remd.  
Project: SEKHON GAS  
Date Reported: 07/08/2002

Gasoline, BTEX and MTBE by Methods SW8020F

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 02-0860-04 Client ID:	SB-2-S@10'			06/27/2002	SO
Benzene	SW8020F	140	UG/KG		07/02/2002
Ethylbenzene	SW8020F	67	UG/KG		07/02/2002
Gasoline Range Organics	SW8020F	1100	UG/KG		07/02/2002
Methyl-tert-butyl ether	SW8020F	*502	UG/KG		07/02/2002
Toluene	SW8020F	ND<5	UG/KG		07/02/2002
Xylenes	SW8020F	207	UG/KG		07/02/2002



C E R T I F I C A T E O F A N A L Y S I S

Quality Control/Quality Assurance

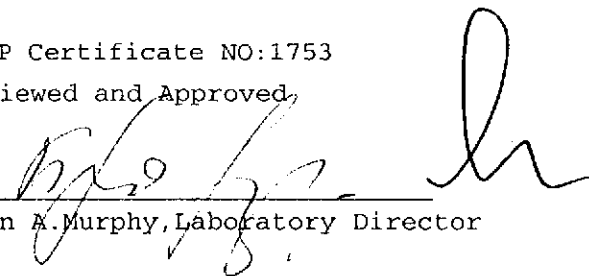
Lab Number: 02-0860  
Client: Advanced Assessment & Remd.  
Project: SEKHON GAS

Date Reported: 07/08/2002  
Gasoline, BTEX and MTBE by Methods SW8020F

Analyte	Method	Reporting Limit	Unit	Blank	Avg MS/MSD Recovery	RPD
Gasoline Range	SW8020F	500	UG/KG	ND	87/92	6
Benzene	SW8020F	5	UG/KG	ND	104/103	1
Toluene	SW8020F	5	UG/KG	ND	97/98	1
Ethylbenzene	SW8020F	5	UG/KG	ND	97/101	4
Xylenes	SW8020F	10	UG/KG	ND	93/96	3
Methyl-tert-butyl	SW8020F	5	UG/KG	ND	105/107	2
Gasoline Range	SW8020F	50	UG/L	ND	70/71	1
Benzene	SW8020F	0.5	UG/L	ND	85/85	0
Toluene	SW8020F	0.5	UG/L	ND	90/91	1
Ethylbenzene	SW8020F	0.5	UG/L	ND	92/92	0
Xylenes	SW8020F	1.0	UG/L	ND	92/93	1
Methyl-tert-butyl	SW8020F	0.5	UG/L	ND	82/84	2

ELAP Certificate NO:1753

Reviewed and Approved

  
John A. Murphy, Laboratory Director





C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 02-0907  
Client: Advanced Assessment & Remd.  
Project: SEKHON GAS STATION/6600 FOOTHILL BLVD.

Date Reported: 08/18/2002

Gasoline, BTEX and MTBE by Methods SW8020F

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 02-0907-01 Client ID: MW-1/GW 07/09/2002 W					
Benzene	SW8020F	ND<0.5	UG/L		07/16/2002
Ethylbenzene	SW8020F	ND<0.5	UG/L		07/16/2002
Gasoline Range Organics	SW8020F	ND<50	UG/L		07/16/2002
Methyl-tert-butyl ether	SW8020F	208	UG/L		07/16/2002
Toluene	SW8020F	ND<0.5	UG/L		07/16/2002
Xylenes	SW8020F	ND<1.0	UG/L		07/16/2002
Sample: 02-0907-02 Client ID: MW-2/GW 07/09/2002 W					
Benzene	SW8020F	61.6	UG/L		07/17/2002
Ethylbenzene	SW8020F	ND<0.5	UG/L		07/17/2002
Gasoline Range Organics	SW8020F	497	UG/L		07/17/2002
Methyl-tert-butyl ether	SW8020F	*37600	UG/L		07/17/2002
Toluene	SW8020F	ND<0.5	UG/L		07/17/2002
Xylenes	SW8020F	1.6	UG/L		07/17/2002
Sample: 02-0907-03 Client ID: MW-3/GW 07/09/2002 W					
Benzene	SW8020F	ND<0.5	UG/L		07/16/2002
Ethylbenzene	SW8020F	ND<0.5	UG/L		07/16/2002
Gasoline Range Organics	SW8020F	ND<50	UG/L		07/16/2002
Methyl-tert-butyl ether	SW8020F	40.8	UG/L		07/16/2002
Toluene	SW8020F	ND<0.5	UG/L		07/16/2002
Xylenes	SW8020F	ND<1.0	UG/L		07/16/2002



C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 02-0907
Client: Advanced Assessment & Remd.
Project: SEKHON GAS STATION/6600 FOOTHILL BLVD.

Date Reported: 08/18/2002

Gasoline, BTEX and MTBE by Methods SW8020F

Table with 6 columns: Analyte, Method, Result, Unit, Date Sampled, Date Analyzed. Contains three sections of data for samples 02-0907-04, 02-0907-05, and 02-0907-06.



C E R T I F I C A T E O F A N A L Y S I S

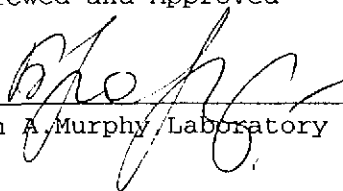
Quality Control/Quality Assurance

Lab Number: 02-0907  
 Client: Advanced Assessment & Remd.  
 Project: SEKHON GAS STATION/6600 FOOTHILL BLVD.  
 Date Reported: 08/18/2002  
 Gasoline, BTEX and MTBE by Methods SW8020F

Analyte	Method	Reporting Limit	Unit	Blank	Avg MS/MSD Recovery	RPD
Gasoline Range	SW8020F	50	UG/L	ND	80/83	4
Benzene	SW8020F	0.5	UG/L	ND	102/107	5
Toluene	SW8020F	0.5	UG/L	ND	96/101	5
Ethylbenzene	SW8020F	0.5	UG/L	ND	97/102	5
Xylenes	SW8020F	1.0	UG/L	ND	92/96	4
Methyl-tert-butyl	SW8020F	0.5	UG/L	ND	96/98	2

ELAP Certificate NO:1753

Reviewed and Approved

  
 John A. Murphy, Laboratory Director





# North State Environmental Analytical Laboratory

90 South Spruce Avenue, Suite W, South San Francisco, CA 94080

Phone: (650) 266-4563 Fax: (650) 266-4560

02-0860

Chain of Custody / Request for Analysis

Lab Job No.: \_\_\_\_\_ Page 1 of 1

Client: <i>Advanced Assessment + Remd. Svcs.</i>	Report to: <i>TRIDIB GUHA</i>	Phone: <i>925-363-1999</i>	Turnaround Time <b>5 DAYS</b>
Mailing Address: <i>2380 SALVIO STREET, SUITE 202 CONCORD, CA 94520</i>	Billing to: <i>SAME</i>	Fax: <i>925-363-1998</i>	
		PO# / Billing Reference: <i>SEKHON GAS</i>	Date: <i>6-27-02</i>
			Sampler: <i>T. GUHA</i>

Project / Site Address:					Analysis Requested								Comments / Hazards
Sample ID	Sample Type	Container No. / Type	Pres.	Sampling Date / Time	TPH	BTEX	MTSE						
<i>SB-1/GW</i>	<i>WATER</i>	<i>2 VOAS</i>	<i>HCL</i>	<i>6-27-02/11:45</i>	<i>X</i>	<i>X</i>	<i>X</i>						
<i>SB-2/GW</i>	<i>WATER</i>	<i>2 VOAS</i>	<i>HCL</i>	<i>6-27-02/10:30</i>	<i>X</i>	<i>X</i>	<i>X</i>						
<i>SB-1-S@10'</i>	<i>SOIL</i>	<i>1 BRASS T.</i>	<i>NOHE</i>	<i>6-27-02/11:15</i>	<i>X</i>	<i>X</i>	<i>X</i>						
<i>SB-2-S@10'</i>	<i>SOIL</i>	<i>1 BRASS T.</i>	<i>NOHE</i>	<i>6-27-02/8:55</i>	<i>X</i>	<i>X</i>	<i>X</i>						

Relinquished by: <i>Tridib Guha</i>	Date: <i>6/27/02</i>	Time: <i>11:40</i>	Received by: <i>[Signature]</i>	Lab Comments <i>RECEIVED IN 9000 COND. 11:40 AM</i>
Relinquished by:	Date:	Time:	Received by:	
Relinquished by:	Date:	Time:	Received by:	

