CAMBRIA

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Alameda County
MAY 0 6 2003
Environmental Health

May 2, 2003

Mr. Amir Gholami
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: **Site Summary Conduit Study and Groundwater Monitoring Report**
2345 International Boulevard (formerly E. 14th Street)
Oakland, California
Fuel Leak Case No. RO0000327

Dear Mr. Gholami:

The *Site Summary, Conduit Study and Monitoring Report* (Report) was mailed prior to final review. Please disregard the report sent yesterday, as the Figures were omitted. Enclosed is the Report and accept my sincere apologies for any inconvenience. Cambria looks forward to working with you on this project. If you have any questions or comments, please contact me at (510) 420-3307.

Sincerely,
Cambria Environmental Technology, Inc.

Mary C. Holland-Ford
Project Geologist

H:\Sb-2004 (UST Fund)\Stanley Wong (Credit Auto)\Correspondence\Transmittal letter May 2003.doc

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CAMBRIA

SITE SUMMARY, CONDUIT STUDY AND MONITORING REPORT

Credit World Auto Sales
2345 International Boulevard
Oakland, California 94601
Cambria Project No. 513-1000

April 30, 2003

Prepared for:

Mr. Stanley Wong
2200 East 12th Street
Oakland, California 94606

Prepared by:

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Credit World Auto Sales
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SITE SUMMARY, CONDUIT STUDY AND MONITORING REPORT

Credit World Auto Sales
2345 International Boulevard
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April 30, 2003

1.0 INTRODUCTION

Cambria Environmental Technology, Inc. (Cambria) is pleased to submit this *Site Summary, Conduit Study and Monitoring Report* (Report) for the above-referenced site on behalf of Mr. Stanley Wong. As requested by the Alameda County Health Care Services Agency (ACHCSA) on September 9, 2002, this report summarizes historical site activities and subsurface conditions, and presents our conclusions and recommendations for the site. This report also describes recent activities conducted by Cambria to facilitate evaluation of the site conditions. The recent activities conducted by Cambria include preparation of geologic cross-sections, a conduit study, groundwater monitoring, and free product removal. As verbally requested by new regulatory case worker Amir Gholami, this report discusses hydrocarbon trends, plume stability, methyl tert-butyl ether, and chlorinated hydrocarbons, and includes a risk evaluation. Mr. Gholami requested comparison of contaminant concentrations to risk-based screening levels (RBSLs) established by the San Francisco Bay Regional Water Quality Control Board (RWQCB).

2.0 SITE BACKGROUND

Site background information is presented below. Boring logs, analytical results and additional information from previous investigations is presented in Appendix A.

2.1 Site Use, Location and Description

The site located is located in a commercial/residential area at the southwest corner of the intersection of International Boulevard (formerly East 14th Street) and Miller Avenue in Oakland, California (Figure 1). The site is at an elevation of approximately 23 feet above mean sea level, based on City of Oakland datum. The site is currently operated by Credit World Auto Sales, a

used car dealership. One building occupies the site, and the building is used as an office and automotive service bay. The remainder of the site is a paved parking area (Figure 2).

In August 1988, SCS removed four underground storage tanks (USTs) along with two dispenser islands and associated piping from the site (Figure 2). Soil samples from the fuel tank showed concentration of total petroleum hydrocarbons as gasoline (TPHg) and benzene. Soil samples from the used oil excavation area showed impact of total petroleum hydrocarbons as diesel (TPHd) and total oil and gas (TOG).

2.2 Site Investigation

Several phases of soil and groundwater assessments have been conducted at the site since 1988. Soil and groundwater analytical results from these investigations is summarized in Tables 2 and 3, respectively.

November 1988: California Environmental Consultants (CEC) advanced three soil borings to assess the extent hydrocarbon impact in the soil and groundwater in the vicinity of the former UST locations. Borings B-1 and B-2 were advanced adjacent to the former fuel USTs. TPHg and benzene, toluene ethylbenzene, and xylenes (BTEX) were detected in the soil and groundwater samples from both borings. Boring B-3, located near the former used oil UST location, showed concentrations of TOG and BTEX in soil and groundwater samples.

May to August 1991: Earth Systems Environmental advanced five onsite borings (TH-1 through TH-5) and installed three groundwater monitoring wells (MW-1 through MW-3) at the site to further delineate the onsite hydrocarbon impact. Borings B-1 and B-2 were advanced adjacent to the former fuel USTs. TPHg and BTEX were detected in the soil and groundwater. Soil and groundwater samples from boring B-3, located near the former used oil UST location, showed concentrations of TOG and BTEX. Groundwater was encountered 19 feet below grade surface (bgs) during this assessment.

July 1993: Tank Protect Engineering (Tank Protect) installed two monitoring wells (TMW-4 and TMW-5) at the site. No petroleum hydrocarbons were detected in soil samples from borings for wells TMW-4 and TMW-5. Separate-phase hydrocarbons (SPH) were observed in wells MW-1, MW-2 and TMW-5 and was removed by hand bailing. Groundwater flow direction beneath the

site ranged from north-northeast to west-southwest with an average gradient of 0.029 feet/feet during this assessment. Tank Protect concluded that confined and unconfined groundwater is present beneath the site, and that wells MW-2 and MW-3 monitor an upper, unconfined water bearing zone while MW-1, TMW-4, and TMW-5 monitor both the upper unconfined zone and a lower, confined water bearing zone. Tank Protect concluded that sands logged in well MW-2 are characteristic of a buried stream channel, trending north-south beneath and across the site.

April 1997 to May 1997: Tank Protect advanced five borings (SB-1 through SB-5) to assess the offsite hydrocarbon impact. TPHg was detected in soil and water samples from boring SB-5 and benzene was detected in boring SB-2. Benzene and methyl tert-butyl ether (MTBE) were detected in groundwater from boring SB-5. No petroleum hydrocarbons or MTBE were detected in soil and groundwater samples from borings SB-1, SB-3, and SB-4. Tank Protect concluded that northern and southern extent of the hydrocarbon plume has been defined.

May 2001: Sequoia Environmental (Sequoia) advanced seven onsite borings (SB-1 through SB-7), converting boring SB-7 into monitoring well MW-6. No MTBE was detected in all soil samples. SPH was detected in wells MW-1, MW-2, MW-3 and TMW-5, and 4.5 gallons of SPH was removed by hand bailing from the monitoring wells. MTBE was not detected in all groundwater samples Sequoia reports groundwater flow to the west-southwest during this assessment.

Groundwater Monitoring: Groundwater monitoring of site wells was conducted regularly between August 1991 and December 1999, and was conducted once in 2001 and once again in 2002. Groundwater analytical data and groundwater elevation data is summarized in Table 3. Results of the groundwater monitoring are described later in this report.

2.3 Site Remediation

In August 1988, SCS removed four USTs, two dispensers and associated piping from the site (Figure 2). Several remedial activities have been conducted since UST removal.

2.3.1 Soil Excavation

December 1994 through October 1996: Tank Protect conducted multiple phases of soil excavation and verification sampling at the site. As shown on Figure 2, the excavation was conducted around the UST area in the center of the site, and the depth of the excavation ranged

from 12 feet to 19 feet bgs. A total of 1,550 cubic yards (cy) of soil was excavated. Approximately 1,019 cy of the excavated soil was stockpiled on site, remediated via aeration and hydrogen peroxide treatment, and placed back into the excavation cavity with the approval of the ACHCSA. Approximately 531 cy of soil was removed from the site and disposed of at a licensed facility. The final verification samples detected a TPHg maximum concentration of 110 milligrams per kilogram (mg/kg) in sidewall samples, and 66 mg/kg in excavation bottom samples. Additional information on excavation activities and confirmation sampling results is presented in Appendix A.

2.3.2 SPH Removal

Due to the presence of SPH in site wells, Tank Protect installed a free product recovery system and bailed site wells during groundwater monitoring events. Groundwater monitoring and sampling results and SPH thickness information is presented in Table 3.

The free product removal system first consisted of a selective oil skimmer, down-well mounted bladder product pump, and two product storage drums. Tank Protect reported that trace quantities of free product were removed during between July 27 and August 18, 1995. To enhance free product recovery, Tank Protect installed a continuously operating free product recovery system in August 1997. Tank Protect reported removing 3 to 5 gallons of SPH between August 20, 1997 and January 14, 1998. SPH removal by manual bailing by Cambria is described below and summarized in Table 5.

2.3.3 Bio-Remediation System

A bio-remediation system was installed and operated at the site by Sequoia between March 2002 and July 2002. According to Sequoia, this system pumped water from four wells (MW-1, MW-2, MW-3 and TMW-5) into four "bioreactor" tanks containing microbes, nutrients, and hydrogen peroxide. The treated, microbe-rich water was then injected into the subsurface through an infiltration well (MW-1). Monthly project updates submitted by Sequoia do not provide detailed information about system layout, startup, or operation. Between March 2002 and July 2002, four bio-treatment events were reported where treated, microbe-rich water was injected into well MW-1. The system was shut down and removed in July 2002. Groundwater samples collected by Sequoia on June 20, 2002 after the initiation of bio-remediation activities were generally

consistent with historical groundwater hydrocarbon concentration trends. Insufficient data is available to assess the effectiveness of the bio-remediation system.

2.3.4 Vacuum Truck Operations

Vacuum truck operations were conducted by Sequoia on July 20, 2002 as an interim remedial measure. Vacuum truck operations were performed to remove the SPH found in wells MW-2, MW-3 and TMW-5. Details are not available describing the length of vacuum truck operations or amount of SPH and groundwater recovered.

3.0 RECENT ACTIVITIES

Cambria prepared geologic cross-sections, conducted a conduit study, monitored site groundwater wells, and bailed SPH from site wells. These activities were required by ACHCSA and are described below.

3.1 Geologic Cross Sections

To illustrate the site's stratigraphic and hydrogeologic characteristics, Cambria constructed geologic cross sections A-A' and B-B' from boring logs (see Figures 3 and 4). The geologic cross sections illustrate that the stratigraphy consists primarily of low to moderately permeable clays and silts with interbedded higher permeability sand and gravel layers to the total depth explored of 36 feet bgs. Two water-bearing units were encountered, and confined and unconfined conditions may be present at the site. Soil analytical results and historic high and low groundwater depths are shown on the cross sections. The site geology and hydrogeology are described further in Section 4.

3.2 Conduit Study

Cambria performed a conduit study to evaluate the potential for subsurface utility conduits to serve as preferential pathways for hydrocarbon migration. To obtain information regarding buried utilities in the site vicinity, Cambria contacted the City of Oakland, Pacific Bell, Pacific Gas & Electric (PG&E), and East Bay Municipal Utilities District (EBMUD). The location, diameter and approximate depth of subsurface conduits beneath and adjacent the site are shown on Figure 5. A

subsurface utility map from the City of Oakland Department of Engineering is included in Appendix B. Based on the City of Oakland map and telephone conversations with Pacific Bell, PG&E and EBMUD, the depth to nearby utilities ranges from approximately 3 to 18 feet bgs. A telephone line is located at approximately 3.5 feet bgs along International Blvd. A sanitary sewer crosses the site (presumably shallower than 5 feet bgs) and enters a 10-inch diameter sanitary sewer beneath the middle of International Boulevard, which is located at approximately 8 to 9 feet bgs (approximate 15 feet flow line elevation). A water line crosses the site (presumably shallower than 5 feet bgs) and enters a 36-inch diameter water main near the other side of International Blvd located at 5 feet bgs. A 24-inch diameter storm drain, also on the other side of International Blvd, is located approximately 3 feet bgs (top of conduit) to 5 feet bgs (bottom of conduit; approximate 18 feet flow line elevation). A sanitary sewer (presumably 6- or 8-inch diameter) is located near the other side of Miller Avenue at approximately 8 to 9 feet bgs (approximate 14 feet flow line elevation). A 75-inch diameter storm drain is located beneath Miller Avenue at approximately 10 to 16 feet bgs, with an approximate 7 feet flow line elevation as it passes the site. Overhead electrical service runs along Miller Avenue.

To compare sewer and utility depths to groundwater depth, Cambria reviewed existing surveying information. Because surveying datum information was not provided in reviewed reports, Cambria contacted the Renner Survey Company of Burlingame, California, who researched old records and determined that the site wells were surveyed to the City of Oakland bench mark datum (See Appendix C).

As described below, site groundwater has historically fluctuated primarily between approximately 9 and 17 feet bgs, and has occasionally risen to approximately 6 feet bgs at some locations. This information suggests that onsite utility conduits and the shallow offsite storm drain beneath International Boulevard, which are shallower than 6 feet bgs, have not historically intersected site groundwater. The two offsite sanitary sewer conduits, located at approximately 8 to 9 feet bgs, do not likely intersect groundwater during its typical fluctuation between 9 to 17 feet bgs, but likely do intersect groundwater during the occasional groundwater rise to approximately 6 feet bgs. Although groundwater could occasionally intersect these sanitary sewer conduits, the prevalent clay in the shallow site subsurface would limit the potential for hydrocarbons to migrate to nearby conduits. Furthermore, groundwater analytical results from offsite borings SB-1, SB-3 and SB-4, located between the site and the sanitary sewers, suggests hydrocarbons have not migrated offsite

toward the sanitary sewers. As described below, no hydrocarbons were detected in soil or groundwater from these borings.

Our primary concern is the 75-inch storm drain beneath Miller Avenue located approximately 60 feet from site well SB-7/MW-6, which had SPH detected (0.04 feet) for the first time during monitoring in December 2002. This 75-inch diameter storm drain, located at approximately 16 feet bgs, apparently intersects groundwater almost year round and could be located within the upper sandy water-bearing unit. However, groundwater analytical results from offsite boring SB-1 (installed in 1997 and located between the site and storm drain) suggest that hydrocarbons have not migrated offsite toward the offsite storm drain (no hydrocarbons were detected in soil or groundwater from boring SB-1).

3.3 Groundwater Monitoring

Cambria conducted gauging and monitoring of site wells on October 21, 2002 and December 27, 2002. During the October 2002 gauging event, groundwater monitoring wells MW-1, MW-3 and MW-6 were not accessible. SPH thickness was observed in wells MW-2 and TMW-5 at 0.24 feet and 0.10 feet, respectively. SPH was not observed in well TMW-4. Depth to groundwater in site wells ranged from 13.6 to 16.98 feet bgs. During the December 27, 2002 monitoring event, SPH was observed in all site wells and groundwater sample collection was not performed due to the presence of SPH. Groundwater monitoring data is summarized on Table 3. A groundwater elevation contour map for December 27, 2002 is presented as Figure 6.

To more accurately estimate the groundwater flow direction at the site, Cambria has estimated the top of casing elevation for wells MW-3 and TMW-4. Site records indicate that other site wells were surveyed to the Oakland datum in June 2001, while wells MW-3 and TMW-4 were not resurveyed at that time. The resurveying in June 2001 by the Renner Survey Company effectively lowered the groundwater elevation of the other site wells (MW-1, MW-2, and TMW-5) by an average of 2.80 feet. Cambria assumes that the wells were previously surveyed to NGVD 29 datum, which is approximately 3 feet higher than the City of Oakland datum. To estimate the top of casing (TOC) elevation for wells MW-3 and TMW-4 with respect to City of Oakland datum, Cambria subtracted 3 feet from the prior TOC elevation from August 1993. Figure 6 and Table 3 present the revised groundwater elevation based on the Oakland datum.

3.4 SPH Removal Activities

During the December 2002 monitoring event, SPH was observed in all site wells. Cambria technicians removed approximately 13.5 liters (21.78 pounds) of SPH from site wells by hand bailing on December 27, 2002. To estimate prior SPH removal by hand bailing and/or well purging by Tank Protect, Cambria multiplied the tabulated SPH thickness (feet) by the well casing area (i. e., 2-inch diameter casing = 0.60 liters per foot) for each purging/bailing event. Cambria estimates that approximately 69.6 pounds of SPH were bailed and/or purged by others. In addition, Tank Protect reported that a continuous free product recovery system removed approximately 3 to 5 gallons (18.3 to 30.5 pounds) between August 1997 and January 1998. As summarized on Table 5, Cambria estimates that 121.88 pounds of petroleum hydrocarbons have been removed from site wells to date.

4.0 SUBSURFACE CONDITIONS

The site geology, hydrogeology, chemicals of concern (COC), and hydrocarbon distribution in soil and groundwater are described below.

4.1 Geology

The site is located within the Coast Range geomorphic province of California. In general, the Coast Range province consists of Jurassic eugeosynclinal basement rocks and Cretaceous and Cenozoic sedimentary and volcanic rocks that have been faulted and folded with a northwest-southeast trend. The site lies within the Bay Plains Basin. Sediments beneath the site consist of coalescing alluvial deposits from the Diablo Range to the east known as the San Leandro Cone. According to the USGS Professional paper 943, the site is located on quaternary age alluvial deposits consisting of medium-grained, unconsolidated moderately sorted permeable fine sand, silt, and clayey silt with thin beds of coarse sand.

The site geology consists primarily of low to moderately permeability clays and silts with interbedded higher permeability sand and gravel layers to the total depth explored of 36 feet bgs. Aggregate base material (fill) under site asphalt at approximately one foot bgs is underlain by dry gray to black or brown clay ranging to total depths of 7½ to 12 feet bgs, with damp gray to green clay to ranging from approximately 17 to 23 feet bgs. This shallow clay is underlain by a

discontinuous water-bearing unit from approximately 17 to 27 feet bgs, which consists of silty to clayey sand grading to brown clayey sand. The silty/clayey sand unit is shallowest near wells MW-2 and SB-7/MW-6. This water-bearing unit is underlain by gravelly clay to a depth of 32½ feet bgs. A deeper relatively permeable sand and gravel layer is present in boring for wells MW-1 and TMW-4 at depths of 31.5 to 35 feet bgs and 30.5 to 32.5 feet, respectively. It cannot be determined if the lower and upper higher permeability sand layers shown in the geologic cross sections are interconnected or separated by the lower permeability clay layers. Geologic cross-sections are shown on Figures 3 and 4. The upper and lower sand units may be discontinuous, and may be confined or unconfined.

The boring logs presented in Appendix A illustrate that wells MW-1 and MW-3 appear to be screened across two water-bearing units. Well TMW-4, screened from 14 to 34 feet bgs, may also be screened across the two water-bearing units; the well screens the lower water-bearing unit at 30 to 32.5 feet bgs and may encounter thin sand stringer units at approximately 15 feet bgs (Figure 4). Similarly, well MW-2 is screened from 15 to 35 feet bgs, and may encounter thin sand stringer units near the lower water-bearing unit at approximately 32 to 36 feet bgs (Figure 3). Based on historic high and low water levels shown on Figures 3 and 4, all site well screens are often fully submerged by site groundwater.

4.2 Hydrogeology

Major groundwater bearing materials beneath the Bay Plain Basin occur at depths ranging from 50 feet to more than 1,000 feet bgs. Groundwater from these aquifers is presently used largely for irrigation and industrial purposes. Regionally, groundwater flow is generally to from the Diablo Range toward San Francisco Bay. The nearest surface water body to the site is Brooklyn Basin Tidal Canal located ½ mile to the west.

Since 1991, the depth to groundwater beneath the site has ranged from approximately 6.5 to 17 feet bgs. However, the groundwater depth has typically fluctuated between approximately 10 to 15 feet bgs. The historical high and low groundwater depths are shown on Figures 3 and 4. Historically, the groundwater flow direction has varied significantly, generally flowing either northwestward or radially outward from the center of the site. Cambria and previous site consultants have inferred a radial direction of groundwater flow based on groundwater elevation data from site wells dating back to August 1993. A radial groundwater flow direction could be

explained by water mounding within the UST cavity (from August 1993 to September 1994) or within the UST excavation (after December 1994 when excavation commenced). It is also possible that infiltrating rainwater enters the former UST excavation area through the asphalt cap or via the onsite water and sanitary sewer conduits presumably located in the unsaturated zone. The radial groundwater flow direction could also be explained by the apparent screening of some site wells across two water-bearing units. The well screen intervals (particularly well MW-1) could also contribute to groundwater mounding beneath the site since the lower water-bearing unit may be confined. However, as described in Section 4.1, the actual groundwater flow direction may be different if based on wells with appropriate screening. Wells are screened for up to 20 feet in length, are screened across two water-bearing units, and are often fully submerged by site groundwater. The well screen intervals do not allow proper evaluation of SPH thickness in the subsurface. Well completion data is summarized on Table 4. The estimated groundwater flow direction from past monitoring events is summarized on Table 1.

4.3 Hydrocarbon Distribution

The COCs at this site are petroleum hydrocarbons as described below. The extent of hydrocarbons in the site subsurface has been assessed by several investigations since 1988. One investigation in 1997 evaluated the offsite extent of hydrocarbons using soil borings. Described below are the COCs and the distribution of hydrocarbons in soil and groundwater.

4.3.1 Chemicals Of Concern

During site investigation activities, only petroleum hydrocarbons and MTBE have been detected in analyzed soil and groundwater. The detected petroleum hydrocarbons are predominately in the gasoline, oil and grease ranges. Oil and grease has been detected primarily near the former used oil UST.

MTBE has been detected in groundwater from one boring grab sample [12 micrograms per liter (µg/L)] and sporadically in select wells by Environmental Protection Agency (EPA) Method 8020. MTBE detection have *not* been confirmed by EPA Method 8260 analysis. No MTBE was detected in site soil. This information suggests that MTBE may not be a COC at this site, and that groundwater analysis by EPA Method 8260 is merited for any detected MTBE by EPA Method 8020.

During removal of the former fuel USTs and the used oil UST (and during an investigation in 1988), select soil and groundwater samples were analyzed for volatile organic compounds (VOCs) by EPA Method 8260 and for halogenated VOCs (HVOCs) by EPA Method 8010. No HVOCs were detected in analyzed samples. Only BTEX compounds detected in samples analyzed for VOCs by EPA Method 8260. MTBE, VOC and HVOC data is presented in Tables 2 and 3. For purposes of the hydrocarbon distribution presented below, petroleum hydrocarbons are considered the COCs for the site.

4.3.2 Soil

Petroleum hydrocarbons were detected in 21 of the 25 borings with analyzed soil samples. Soil analytical results are summarized in Table 2. The extent of TPHg and benzene in soil is shown on Figures 8 and 9, respectively. The vertical extent of TPHg is shown on geologic cross-sections on Figures 3 and 4.

Soil analytical results indicate that petroleum hydrocarbons are primarily located in the capillary fringe and saturated zone at depths ranging from approximately 10 to 25 feet bgs. Shallower unsaturated soil has presumably been remediated by site excavation activities. Limited shallow soil data is available, and the maximum TPHg concentration detected in shallow (<10 feet bgs) was 2.4 mg/kg at 5.5 feet bgs in TMW-5, which was overexcavated around and adjacent the former USTs.

TPHg concentrations in soil are highest north and northwest of former UST excavation area (see Figure 8). The maximum detected TPHg concentrations in subsurface ($\leq$ 10 feet bgs) soil are 4,320 mg/kg TPHg in MW-2 at 10 feet bgs, 1,800 mg/kg in SB-3 at 15 feet bgs, and 450 mg/kg in TH-4 at 19.5 feet bgs. Benzene concentrations in soil are also highest north and northwest of the former UST area, although elevated benzene concentrations are also detected southwest of the former USTs. The maximum benzene concentration detected was 61 mg/kg at 15 feet bgs in B-5, but this sample location from the 1988 UST removal may have been overexcavated. The maximum TOG concentration detected was 1,600 mg/kg in TH-4 at 19.5 feet bgs. This sample was near the former used oil UST location in the northwestern portion of the site.

The lateral extent of hydrocarbons in soil appears to be adequately defined by onsite and offsite borings in all directions, except for benzene in the west and southwest directions. No BTEX

compounds were detected by the four offsite borings (SB-1, SB-3, SB-4, and SB-5) installed in 1997. TPHg was detected in only one of the four offsite borings, at a concentration of 91 mg/kg (SB-5). However, the three offsite borings with no TPHg or BTEX detected were apparently sampled in the saturated zone, at depths of approximately 22 and 27 feet bgs. The one boring sampled near the presumed capillary fringe (SB-5 sampled at 11.5 to 12 feet bgs) had the TPHg detection of 91/ mg/kg. While *soil* sampling may not have adequately characterized capillary fringe soil, *groundwater* analytical results from these four offsite borings suggests that petroleum hydrocarbons have only migrated offsite in the northwest direction (near SB-5). No hydrocarbons were detected in grab groundwater north or south of the site, based on results from SB-1, SB-3 and SB-4 described below.

4.3.3 Groundwater

Groundwater monitoring data and analytical results indicate that SPH is present across the site in all monitoring wells, the SPH plume is not stable, elevated benzene is present onsite, and the hydrocarbon extent is not fully characterized. Groundwater analytical results and monitoring data are summarized in Table 3. The current and historic maximum SPH thickness observed in the site wells is presented in Figure 7. The historical extent of benzene concentration in groundwater is shown on Figure 10.

Cambria observed SPH in all site wells during the most recent monitoring event on December 27, 2002. As shown on Figure 7, the SPH thickness on this date ranged from 0.04 feet (MW-6) to 0.43 feet (MW-2). Most importantly, SPH was detected for the first time in wells TMW-4 and MW-6 during this monitoring event. The maximum SPH thickness reported is site wells has been 7.44 feet in MW-2 (March 1995), 4.36 feet in well MW-1 (June 2001), 0.46 feet in MW-3 (March 1995), and 0.10 feet in TMW-5 (December 2002) (see Figure 7). This indicates that the greatest SPH thickness has been observed north of the former USTs (MW-2) and west-southwest of the former USTs (MW-1 and MW-3). In general, SPH thickness increases when the groundwater elevation lowers, as especially observed in wells MW-1 and MW-3. The SPH appears to be primarily located in the upper sand unit, and is likely present in historic smear zone comprised of clayey soil and possibly thin interbedded sand units. In well MW-2, the SPH thickness is typically highest when the groundwater elevation rises, possibly due to the rising water table entering the upper sand unit where elevated TPHg was detected in soil and SPH is likely present. The submerged well screen is likely effecting the SPH thickness observed in well MW-2. The detection of SPH for the first time in perimeter site wells TMW-4 and MW-6 could be

explained by SPH migration caused by groundwater mounding and the inferred radial groundwater flow direction. The SPH detection could also be explained by historic high groundwater elevation for wells TMW-4 and MW-6 during the recent monitoring.

Groundwater analytical results suggest that dissolved hydrocarbons are present across most of the site, with the highest concentrations near the former UST area. The historical benzene concentrations detected in site groundwater are shown on Figure 9. The highest benzene concentrations (>10,000 µg/L) have been detected in 26,000 µg/L in well TMW-5 (in the former UST area), 17,000 µg/L in boring B-2 immediately adjacent TMW-5, and 14,000 µg/L in boring B-1 just southwest of the former UST area. Elevated benzene concentrations (>1,000 µg/L) have been detected southwest of the former UST area (MW-1, MW-3, MW-6 and SB-5), and north of the former UST (MW-2).

The horizontal extent of the dissolved hydrocarbon plume has been adequately characterized in all directions except the southwest and eastern directions. Groundwater analytical results from offsite borings SB-1, SB-3 and SB-4 (1997) and perimeter borings SB-1, SB-2 and SB-6 (2001) suggest that little or no hydrocarbons have not migrated north, east and south of the site. No hydrocarbons were detected in groundwater samples from borings SB-1, SB-3, SB-4, SB-6, and low concentrations were detected in onsite borings SB-1 and SB-2. With the recent detection of SPH in TMW-4, the hydrocarbon plume is not adequately characterized in the eastern direction. With benzene and other hydrocarbons detected in each of the five borings/wells along the southwestern property boundary, the extent of dissolved hydrocarbons is not adequately characterized in the southwest direction. Offsite assessment in this direction has been constrained by the large building on the adjacent property.

5.0 RISK EVALUATION

To evaluate the potential risk from residual hydrocarbons, Cambria conducted a risk evaluation using the RWQCB guidance document *Application of Risk Based Screening Levels and Decision Making to Sites With Impacted Soil and Groundwater* (RWQCB 2001). To conduct the risk evaluation, Cambria compared residual contaminant concentration data to Tier 1 Risk Based Screening Levels (RBSLs) ('final RBSLs') established by the RWQCB. For constituents whose residual concentrations exceed the Tier 1 RBSLs, Cambria conducted a Tier 2 risk evaluation in

accordance with the RWQCB guidance document. The Tier 2 risk evaluation involves modifying the Tier 1 RBSLs based on site-specific considerations. This risk evaluation can assist with the establishment of target cleanup levels for residual contaminants in soil and groundwater. This risk evaluation does not consider or apply to SPH present in the site subsurface.

5.1 Soil

Soil analytical results and select RBSLs for the COCs are summarized on Table 2. Table 2 shows the Tier 1 *final* RBSLs for both residential and commercial categories where site groundwater is not considered a current or potential drinking water resource. Cambria included the residential RBSLs due to the presence of residences north of the site; the building southwest of the site is commercial. Table 2 also shows the 'Tier 2' RBSLs for indoor air impacts, for residential and commercial categories. Cambria presents the RBSLs for surface soil (≤3 meters bgs). The RBSLs for *sub*surface soil (>3 meters bgs) are identical or similar to the surface soil RBSLs and would be applicable to most soil analytical results which are >3 meters bgs.

Petroleum hydrocarbon concentrations in soil exceeding the Tier 1 RWQCB RBSLs for surface soil have been detected in several borings at the site. As shown on Table 2, concentrations of TPHg, TOG, benzene, ethylbenzene and xylenes in some borings exceed the commercial Tier 1 final RBSLs. Figures 8 and 9 present the historical TPHg and benzene concentrations in soil, respectively, with concentrations exceeding the commercial final RBSL shown in bold. TPHg and benzene concentrations exceeding the Tier 1 final RBSLs are located nearby the former UST area, with one benzene RBSL exceedance further from the former UST area, located along the southwest property boundary at 20 feet bgs in SB-5 (2001).

To conduct a 'Tier 2' evaluation, Cambria considered modifying Tier 1 RBSLs based on site-specific considerations. All the final RBSLs (except for benzene) are derived for the risks associated with petroleum hydrocarbons leaching from soil into groundwater. Since the impacted soil is primarily in the capillary fringe/saturated zone, and since groundwater data is present, Cambria assumes that soil leaching is not a regulatory concern. With the site fully paved and no nearby ecological receptors, Cambria assumes that the RBSL protective of indoor air impact would be the appropriate RBSL for the site. Again, the indoor air impact RBSLs for residential and commercial site use are summarized on Table 2. If indoor air impact is considered the only potential completed pathway for exposure to residual compounds, only select benzene

concentrations exceed the indoor air impact RBSL (commercial use). Figure 9 presents benzene concentrations exceeding the indoor air impact RBSL, which is the same as the Tier 1 RBSL for benzene. These exceedences are located near the former USTs and along the southwest property boundary at 20 feet bgs. No RBSLs for indoor air impacts are established for TPH compounds in soil.

5.2 Groundwater

Groundwater analytical results and select RBSLs for the COCs are summarized on Table 3. Table 3 shows the Tier 1 *final* RBSLs for sites where groundwater is not considered a current or potential drinking water resource. Table 3 also shows the 'Tier 2' RBSLs for indoor air impacts. The groundwater RBSLs are not differentiated into residential and commercial categories.

Petroleum hydrocarbon concentrations in groundwater exceeding the Tier 1 RWQCB RBSLs for surface soil have been detected in several borings/wells at the site. As shown on Table 3, concentrations of TPHg, TOG, benzene, toluene, ethylbenzene, xylenes, and MTBE in some groundwater samples exceed the commercial Tier 1 final RBSLs.

To conduct a 'Tier 2' evaluation, Cambria considered modifying Tier 1 RBSLs based on site-specific considerations. The site Tier 1 final RBSLs are derived for the risks associated with protection of aquatic life. With the site fully paved and no nearby ecological receptors, Cambria assumes that the RBSL protective of indoor air impact would be the appropriate RBSL for the site. Again, the indoor air impact RBSLs are summarized on Table 3. No RBSLs for indoor air impacts are established for TPH compounds in groundwater.

If indoor air impact is considered the only potential completed pathway for exposure to residual compounds, only select benzene concentrations exceed the indoor air impact RBSL. Because site surface soil consists primarily of clay, Cambria used the benzene RBSL associated with fine-grained soil (5,800 µg/L) rather than coarse-grained soil (84 µg/L). Figure 10 presents benzene concentrations exceeding the indoor air impact RBSL. The benzene RBSL exceedences are located primarily near the former UST area (TMW-5, B-1 and B-2). While RBSL exceedences were also detected along the southwest property boundary in a grab sample from boring SB-5, groundwater samples from nearby monitoring well MW-3 are likely more representative of dissolved benzene concentrations near the southwest boundary of the site.

6.0 CONCLUSIONS

Cambria concludes the following based on our review of the site conditions:

1. Separate-phase hydrocarbons and elevated concentrations of petroleum hydrocarbons are present in site soil and groundwater. These petroleum hydrocarbons are primarily TPHg and BTEX compounds, and TOG near the former used oil UST location. Although MTBE has been detected sporadically in groundwater, MTBE has not been confirmed by EPA Method 8260 analysis. If MTBE is confirmed in the subsurface, the MTBE would likely be from another source since the USTs were removed in 1988 prior to common MTBE use.

2. The site hydrogeology consists of primarily of clays and silts with interbedded higher permeability sand and gravel layers to the total depth explored of 36 feet bgs. The two sand units (upper and lower) may be discontinuous, and may be confined or unconfined by the clay layers. The groundwater flow direction at the site has varied historically, generally flowing either northwestward or radially outward from the center of the site. A radial groundwater flow direction could be explained by water mounding within the UST excavation cavity or from the apparent screening of some site wells across the two water-bearing sand units. Cambria has concluded that wells MW-1 and MW-3 appear to be screen across two water-bearing units, wells MW-2 and TMW-4 may be screened into two water-bearing units, and all site well screens are often fully submerged by site groundwater.

3. Separate-phase hydrocarbons (i.e., free product) have been detected in all six site wells and are likely primarily located in the capillary fringe area and submerged in the upper sandy unit at the site. SPH thickness is typically greatest when groundwater levels decrease and expose the SPH, although SPH thickness is greatest in well MW-2 when the groundwater level rises into the upper sand unit. The recent detection of SPH in perimeter site wells TMW-4 and MW-6 for the first time suggests that the SPH plume in not stable.

4. Petroleum hydrocarbons in soil are primarily located in the capillary fringe and saturated zone at depths ranging from approximately 10 to 25 feet bgs, with the highest concentrations detected north and northwest of former UST excavation area and elevated benzene concentrations southwest of the former USTs. Shallower unsaturated soil has presumably been remediated by site excavation activities. The lateral extent of hydrocarbons in soil

appears to be adequately defined by onsite and offsite borings in all directions, except for benzene in the west and southwest directions.

5. Hydrocarbons are present in groundwater across most of the site, with the highest concentrations near the former UST area. The horizontal extent of the dissolved hydrocarbon plume has been adequately characterized in all directions except the southwest and eastern directions. With the recent detection of SPH in TMW-4, the hydrocarbon plume is not adequately characterized in the eastern direction. With benzene and other hydrocarbons detected in each of the five borings/wells along the southwestern property boundary, the extent of dissolved hydrocarbons is not adequately characterized in the southwest direction. Offsite assessment in this direction has been constrained by the large building on the adjacent property.

6. Results of the conduit study indicate that dissolved hydrocarbons and SPH are migrating toward the 75-inch diameter storm drain beneath Miller Avenue located approximately 60 feet from site well MW-6. This storm drain, located at approximately 13 to 16 feet bgs, apparently intersects groundwater year-round, is fully submerged by groundwater periodically, and could be located within the upper sandy water-bearing unit. Groundwater analytical results from offsite boring SB-1, located between the site and the storm drain, suggest that hydrocarbons have not migrated offsite toward the offsite storm drain.

7. Our risk evaluation indicates while TPH, TOG and BTEX concentrations in soil and groundwater exceed Tier 1 RBSLs, only *benzene* exceeds the proposed 'Tier 2' RBSLs based on site-specific considerations. The proposed Tier 2 RBSL for benzene is the RBSL for indoor air impact. The Tier 2 RBSL exceedences for benzene are located nearby the former UST area and along the southwest property boundary at 20 feet bgs.

8. Although SPH and elevated petroleum hydrocarbons are present in the site subsurface, the migration and exposure to residual hydrocarbons can be managed. The current site capping by the building foundation and site pavement helps manages the risk. Site remediation would abate residual hydrocarbons and further reduce the risk associated with the subsurface hydrocarbons.

7.0 RECOMMENDED ACTIVITIES

Based on our conclusions for the site, Cambria offers the recommendations presented below.

7.1 Additional Investigation, Well Replacement, and Well Surveying

Cambria recommends preparation of a workplan to further define the extent of hydrocarbons at the site. The proposed investigation would assess offsite soil and groundwater south and east of the site, beyond the recent observation of free product in site wells TMW-4 and MW-6. The investigation would further evaluate conditions between the site and the 75-inch diameter storm drain beneath Miller Avenue, which could act as a conduit for hydrocarbon migration. The investigation would include continuous coring to further evaluate soil hydrogeology and the depth of SPH. The workplan would also evaluate the existing well screen intervals and propose abandonment and replacement of wells. Finally, the investigation workplan would propose well installation for feasibility testing (recommended below). In conjunction with the additional investigation, Cambria recommends surveying of wells MW-3 and TMW-4 (and any new wells) to the City of Oakland datum. The other site wells have been surveyed to the Oakland datum, while wells MW-3 and MW-4 are presumably surveyed to NGVD 29 datum, which is approximately 3 feet higher than the Oakland datum.

7.2 Feasibility Testing

To facilitate evaluation of appropriate remedial alternatives, Cambria recommends conducting a feasibility test. The feasibility test would most likely use dual-phase extraction techniques to assess hydrocarbon recovery rates, vapor flow rates, groundwater extraction rates, SPH recovery rates and thickness in the formation, and radius of influence. Results of the feasibility testing would be used in preparation of a corrective action plan for site remediation. Cambria recommends preparation of a feasibility test plan in conjunction with the investigation workplan.

7.3 Interim Remedial Activities

Because of the unstable SPH plume and the continued presence of SPH in site wells, Cambria recommends implementing hydrocarbon recovery using passive skimmers and hand bailing. During the recent monitoring event Cambria hand bailed approximately 13.5 liters of SPH from

site wells. To enhance SPH recovery, Cambria recommends installing passive SPH skimmers in wells MW-1 and MW-2, which have historically contained the highest SPH thickness at the site. The passive skimmers consist of an active buoy assembly designed to remove free product to a sheen. The buoy allows free product but not water to collect in the 2 liter (0.53 gallon) collection canister. The buoy system is equally effective with water table fluctuations as great as 24 inches.

Cambria proposes hand bailing of the remaining site wells that contain SPH. Cambria proposes monitoring/emptying of the skimmers and hand bailing on a monthly basis during the winter and spring months, and on a semi-monthly (every two weeks) during the dry summer and fall months. The monitoring, emptying and bailing schedule would be modified as dictated by the actual SPH recovery rates in the individual wells. SPH recovery may be discontinued upon implementation of a more permanent corrective action.

7.4 Quarterly Monitoring and Sampling

Cambria recommends continued quarterly groundwater monitoring to further evaluate SPH thickness, groundwater flow direction, and plume stability. All groundwater wells will be gauged and inspected for SPH on a quarterly basis. Groundwater samples will be collected from site wells without SPH and analyzed for TPHg by modified EPA Method 8015, and BTEX and MTBE by EPA Method 8020, with confirmation analysis for detectable MTBE by EPA Method 8260. Quarterly groundwater monitoring and SPH removal reports will be prepared.

H:\Sb-2004 (UST Fund)\Stanley Wong (Credit Auto)\Summary Report\Site Summary Report.doc

CAMBRIA

May 1, 2003

Mr. Amir Gholami
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: **Site Summary and Groundwater Monitoring Report**
2345 International Boulevard (formerly E. 14th Street)
Oakland, California
Fuel Leak Case No. RO0000327

Dear Mr. Gholami:

On behalf of Mr.'s Aaron and Stanley Wong, Cambria Environmental Technology, Inc. (Cambria) has prepared this *Site Summary, Conduit Study and Monitoring Report* for the site referenced above. As requested by the Alameda County Health Care Services Agency, this report incorporates fourth quarter 2002 monitoring results.

We look forward to working with you on this project. If you have any questions or comments, please contact me at (510) 420-3307 or Mr. Bob Clark-Riddell at (510) 420-3303.

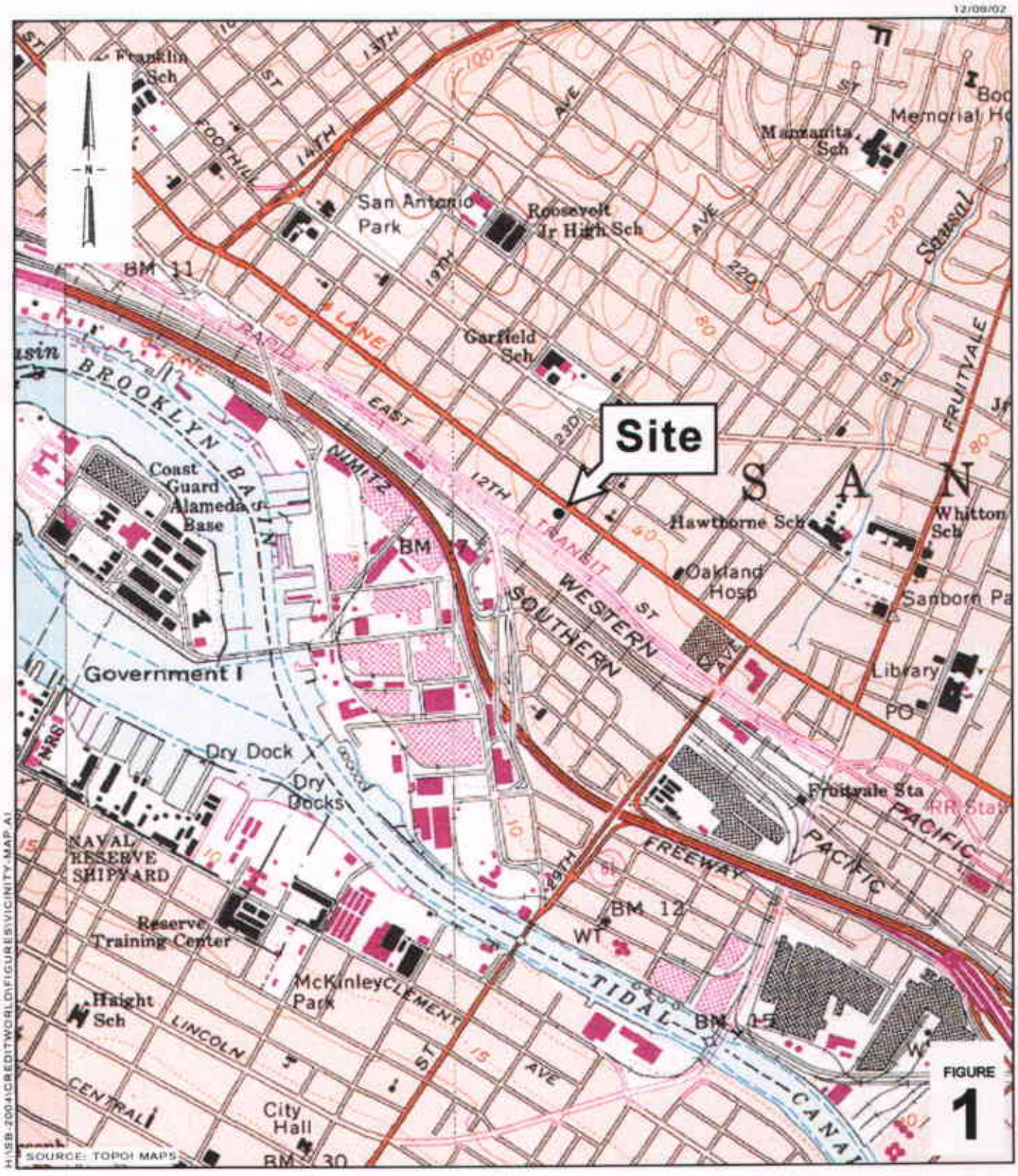
Sincerely,
Cambria Environmental Technology, Inc.

Mary C. Holland-Ford
Project Geologist

cc: Mr. Stanley Wong, 2200 East 12th Street, Oakland, California 94606

H:\Sb-2004 (UST Fund)\Stanley Wong (Credit Auto)\Correspondence\Transmittal letter May 2003.doc

Cambria Environmental Technology, Inc.
5900 Hollis Street
Suite A
Emeryville, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170



Credit World Auto Sales

2345 E. 14th Street

Oakland, California

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Vicinity Map

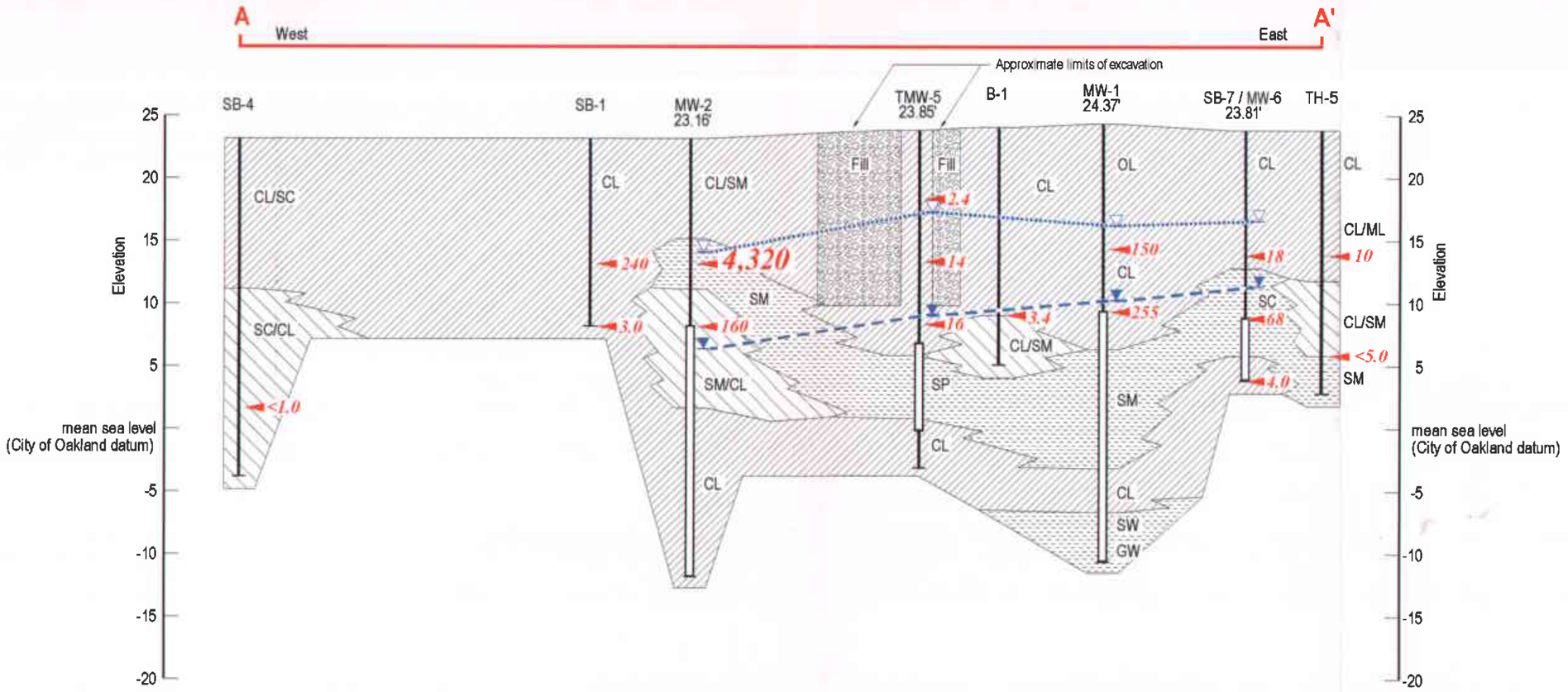
FIGURE
2

Site Plan

CAMBRIA

Credit World Auto Sales
2345 International Boulevard
Oakland, California

Geologic Cross Section A - A'



EXPLANATION

- = Low Permeability Soils CL, MH, SC, GC
- = Moderate Permeability Soils SM
- = High Permeability Soils GW, SW, SP
- = Fill

Well ID / Elev. — Well Designation and Elevation

Groundwater Monitoring Well

Well Screen Interval

Bottom of boring

Highest Groundwater level and Groundwater Table

Lowest Groundwater level and Groundwater Table

Depth of Soil sample

TPHg — TPHg concentrations in soil (mg/kg), larger if above RBSL of 400 mg/kg

CL = Clay
MH = Diatomaceous Silt
SC = Clayey Sand
OL = Organic Silts
SM = Silty Sand
ML = Clayey Silt
GW = Well Graded Gravel
SW = Well Graded Sand

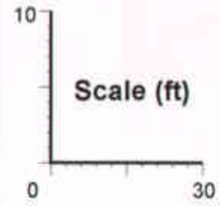


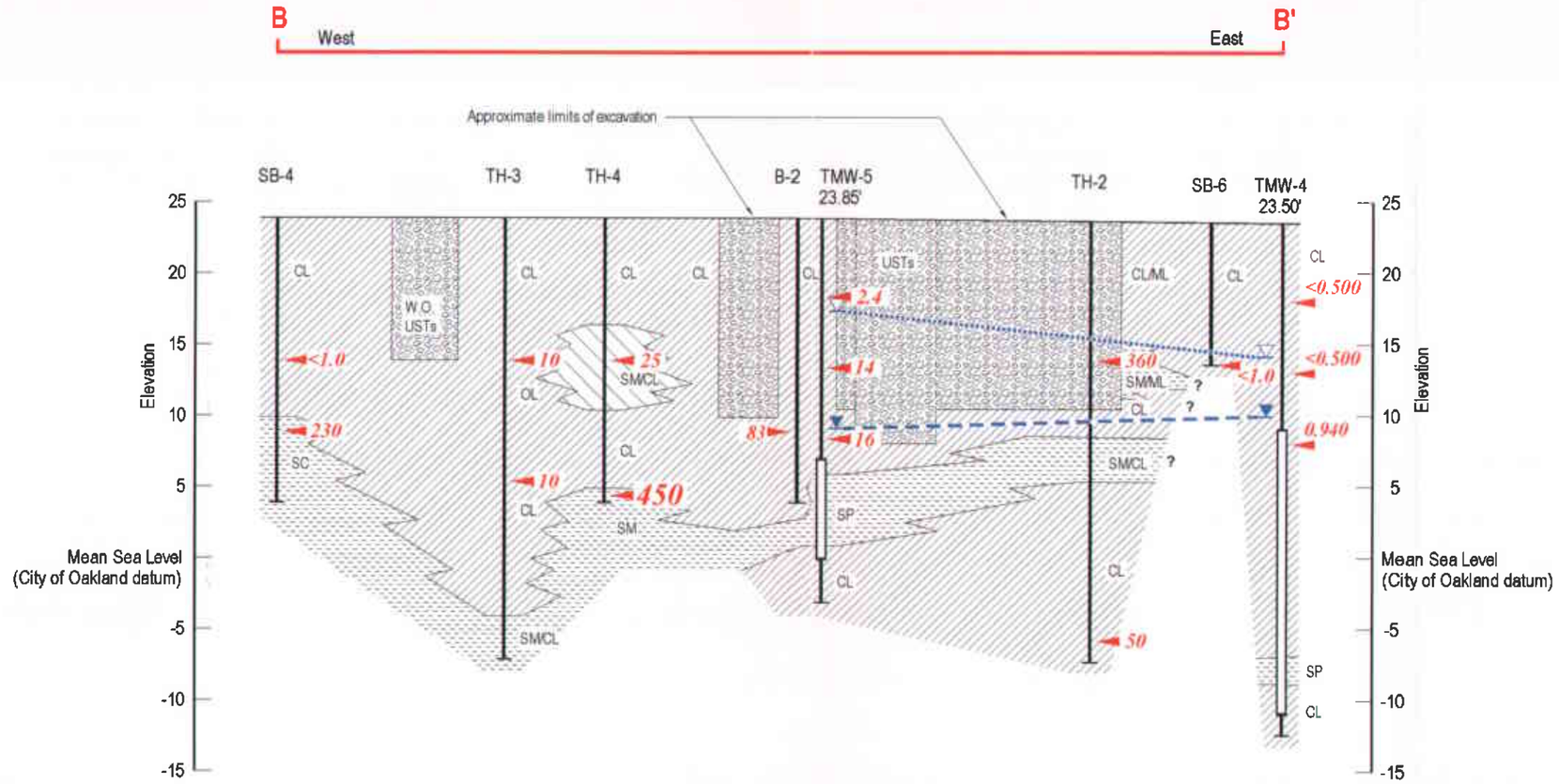
FIGURE
3

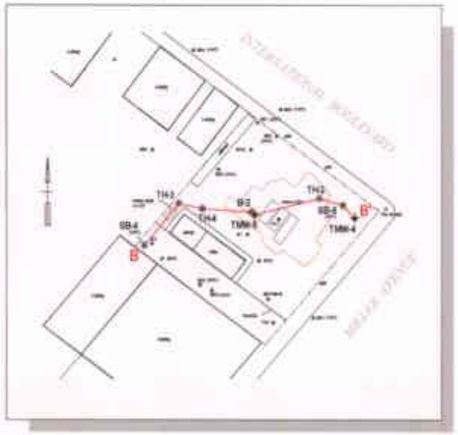
Credit World Auto Sales
2345 International Boulevard
Oakland, California

CAMBRIA

H:\SB-2004\STANLEY WONG CREDIT WORLD\FIGURES\2004-SECTION A.DWG

Geologic Cross Section B - B'





EXPLANATION

- = Low Permeability Soils CL, MH, SC, GC
- = Moderate Permeability Soils SM, ML
- = High Permeability Soils GW, SW, SP
- = Fill (Tank Pit)

Well ID / Elev. — Well Designation and Elevation

Groundwater Monitoring Well

Well Screen Interval

Bottom of boring

Highest Groundwater level and Groundwater Table

Lowest Groundwater level and Groundwater Table

Depth of Soil sample

TPHg — TPHg concentrations in soil (mg/kg), larger if above RBSL of 400 mg/kg

CL = Clay
OL = Organic Silt
SC = Clayey Sand
SM = Silty Sand
ML = Clayey Silt
SP = Poorly Graded Sand

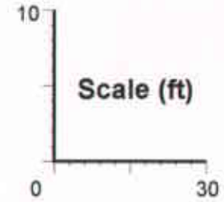


FIGURE
4

Credit World Auto Sales
2345 International Boulevard
Oakland, California

H:\SB-299\ASTHLEY WORD CREDIT WORLD\FIGURES\X-SECTION-B.DWG

Utility and Conduit Map

EXPLANATION

- MW-1 — Monitoring well location
- SB-1 — Soil boring location
- Electrical line
- Storm drain
- Sanitary sewer
- Water line
- Phone and utility services
- Gas line
- Flow direction
- (75") — Known conduit diameter in parenthesis
- FL — Flow line elevation for sanitary sewer and storm drain, City of Oakland datum
- Approximate limits of excavation

INTERNATIONAL BOULEVARD

MILLER AVENUE

building
lot
building
building
SB-4 (1997)
SB-3 (1997)
SB-1 (2001)
SB-2 (2001)
gate
billboard
MW-2
SB-5 (1997)
SB-3 (2001)
sanitary sewer
water
FL = ~15'
5' depth
FL = ~15' ~5' depth
gas 5' depth
storm drain (24")
water (36")
sanitary sewer (10")
FL = ~15.5' ~5' depth
<5' depth?
<5' depth?
gate
phone service (3.5' depth)
overhead electric
water
sanitary sewer
FL = 15'
FL = 7.97'
former waste oil UST
TH-3
TH-4
B-2
former USTs
TH-2
SB-6 (2001)
TMW-5
TH-1
TMW-4
FH
B-1
SB-4 (2001)
B-3
garage
office
MW-3
MW-1
SB-5 (2001)
SB-2 (1997)
SB-7/MW-6
fenceline
TH-5
building
building
gate
storm drain (75")
FL = -7' ~16' depth
sanitary sewer (67")
FL = 14.2' ~9' depth
SB-1 (1997)
FL = 6.50'

N

0 15 30 60

Scale (ft)

H:\SB-2004\STANLEY WONG CREDIT WORLD\FIGURES\UTILITY.DWG

FIGURE

5

Credit World Auto Sales
2345 International Boulevard
Oakland, California

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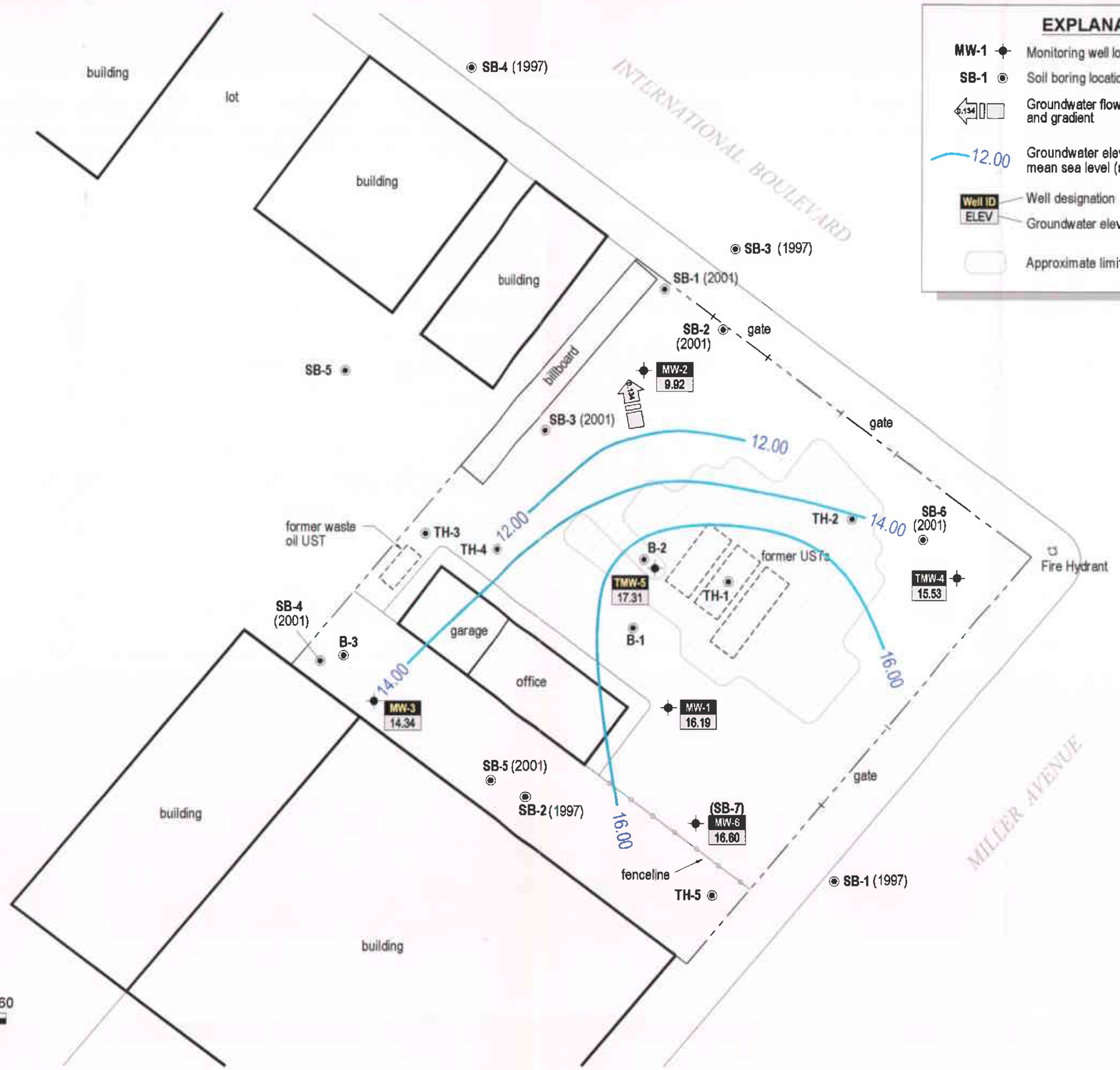
Groundwater Elevation Contour Map

December 27, 2002



FIGURE

6

Credit World Auto Sales
2345 International Boulevard
Oakland, California

CAMBRIA

Separate Phase Hydrocarbon Thickness

FIGURE

7

Credit World Auto Sales
2345 International Boulevard
Oakland, California

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Historical TPHg Concentrations in Soil

EXPLANATION

MW-1 (2001)	Monitoring well location (year sampled in parenthesis)
SB-1 (1997)	Soil boring location (year sampled in parenthesis)
91 (11.5')	TPHg in mg/kg (depth of sample in feet in parenthesis)
450	Concentrations above the Tier 1 RWQCB RBSL (400 mg/kg) are shown in bold
NS	Not Sampled
	Approximate limits of excavation

INTERNATIONAL BOULEVARD

SB-4 (1997) <1.0 (21.5')

SB-1 (2001) 240 (10') 3.0 (15')

SB-3 (1997) <1.0 (21.5')

SB-2 (2001) 89 (10') <1.0 (15') <1.0 (20')

SB-5 (1997) 91 (11.5')

TH-4 (1991) 25 (10') **450** (19.5')

MW-2 (1991) **4,320** (10') 160 (15')

SB-3 (2001) 300 (10') **1,800** (15') 8.5 (20')

TH-2 (1991) 360 (10') 50 (29.5') (excavated)

TH-3 (1991) 10 (10') 10 (18.5')

B-2 (1988) 83 (15')

former waste oil UST

former USTs

SB-6 (2001) <1.0 (10')

FH

B-3 (1988) NS

SB-4 (2001) <1.0 (10') 230 (15') <1.0 (20')

TMW-5 (1993) 2.4 (5.5') 14 (10.5') 16 (15.5')

TMW-4 (1993) <0.500 (5.5') <0.500 (10.5') 0.940 (15.5')

B-1 (1988) 3.4 (15')

MW-3 (1991) 50 (10') 25 (15')

MW-1 (1991) 150 (10') 256 (15')

TH-1 (1991) **2,775** (15') (excavated)

SB-2 (1997) 3.7 (16.5')

SB-7 / MW-6 (2001) 18 (10') 68 (15') <1.0 (20')

SB-5 (2001) 25 (15') 1.9 (20')

TH-5 (1991) 10 (10') <5.0 (18')

SB-1 (1997) <1.0 (26.5')

building

lot

billboard

garage

office

fenceline

gate

MILLER AVENUE

N

0 15 30 60

Scale (ft)

H:\SB-2004\SANLEY WONG CREDIT WORLD\FIGURES\TPHG-SOIL.DWG

FIGURE

8

Credit World Auto Sales
2345 International Boulevard
Oakland, California

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Historical Benzene Concentrations in Soil

EXPLANATION

MW-1 (2001) — Monitoring well location (year sampled in parenthesis)

SB-1 (1997) — Soil boring location (year sampled in parenthesis)

<0.005 (11.5') — Benzene in mg/kg (depth of sample in feet in parenthesis)

7.275 — Concentrations shown in **Bold** are above RWQCB RBSL of 0.390 mg/kg for commercial site use (non drinking water resource)

Approximate limits of excavation

SB-4 (1997)
<0.005 (21.5')

SB-1 (2001)
<0.04 (10')
<0.005 (15')

SB-3 (1997)
<0.005 (21.5')

SB-2 (2001)
<0.005 (10')
<0.005 (15')
<0.005 (20')

SB-5 (1997)
<0.005 (11.5')

TH-4 (1991)
<0.005 (10')
<0.005 (19.5')

SB-3 (2001)
<0.01 (10')
3.3 (15')
0.009 (20')

MW-2 (1991)
7.275 (10')
<0.005 (15')

TH-2 (1991)
<0.005 (10')
<0.005 (29.5')
(excavated)

TH-3 (1991)
<0.005 (10')
<0.005 (18.5')

B-2 (1988)
1.6 (15')

former waste oil UST

former USTs

SB-6 (2001)
<0.005 (10')

B-3 (1988)
0.36 (15')

SB-4 (2001)
<0.005 (10')
0.23 (15')
<0.005 (20')

TMW-5 (1993)
0.026 (5.5')
0.900 (10.5')
0.846 (15.5')

TMW-4 (1993)
<0.005 (5.5')
<0.005 (10.5')
<0.005 (15.5')

B-1 (1988)
0.31 (15')

MW-3 (1991)
<0.005 (10')
<0.005 (15')

MW-1 (1991)
0.460 (10')
1.505 (15')

TH-1 (1991)
1.235 (15')
(excavated)

SB-2 (1997)
0.012 (16.5')

SB-7 / MW-6 (2001)
<0.005 (10')
0.28 (15')
<0.005 (20')

SB-5 (2001)
0.035 (15')
0.62 (20')

TH-5 (1991)
<0.005 (10')
<0.005 (18')

SB-1 (1997)
<0.005 (26.5')

building
lot
building
building
billboard
garage
office
building
building
fenceline
gate
gate
gate
FH
INTERNATIONAL BOULEVARD
MILLER AVENUE

N

0 15 30 60
Scale (ft)

FIGURE
9

Credit World Auto Sales
2345 International Boulevard
Oakland, California

CAMBRIA

H:\GIS_2004\GAWLEY WORK\CREDIT WORLD\FIGURES\BENZENE-SOIL.DWG

Historical Benzene Concentrations in Groundwater

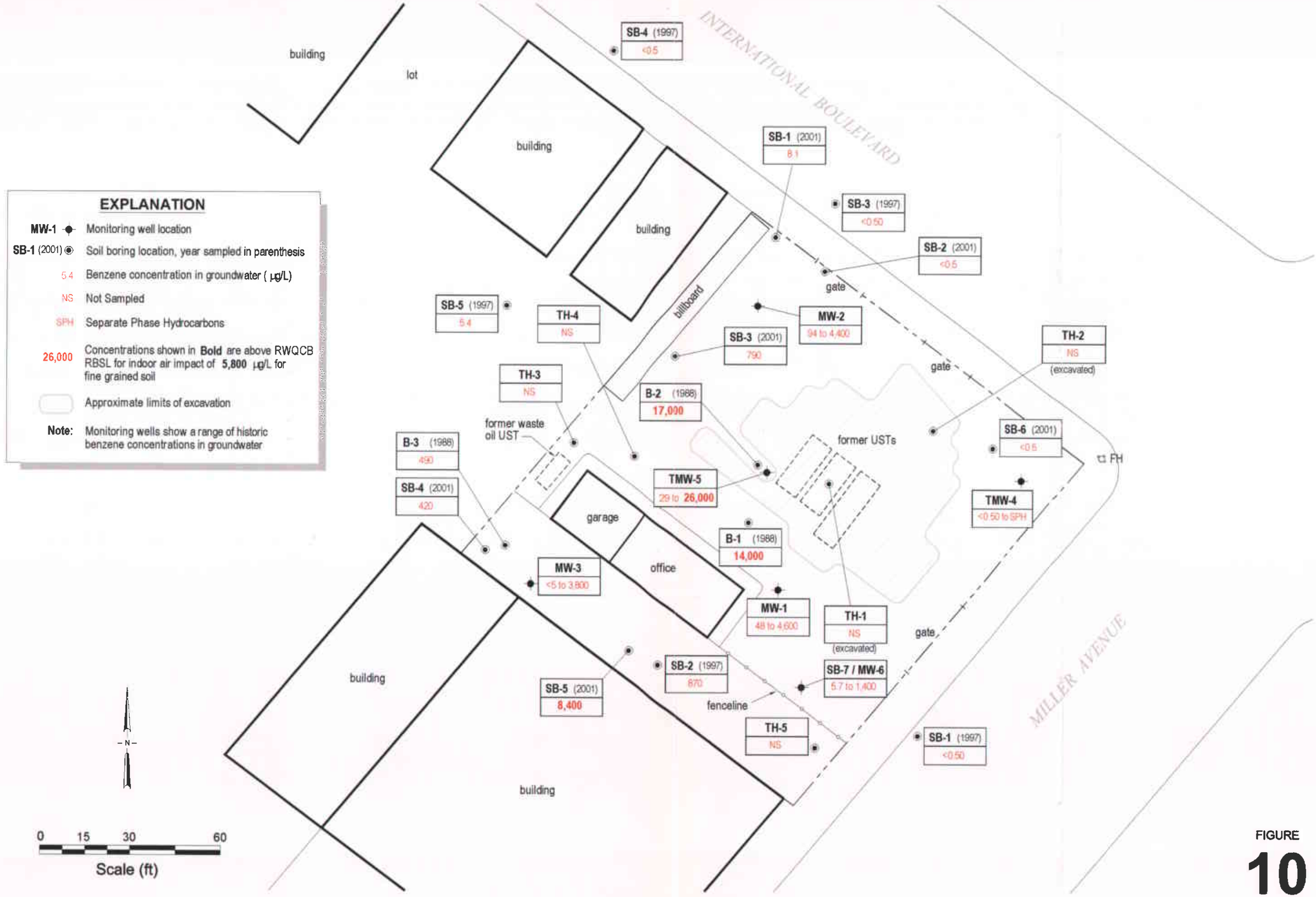

FIGURE
10

Credit World Auto Sales
2345 International Boulevard
Oakland, California

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Table 1. Groundwater Flow Direction and Gradient
Credit World Auto Sales
2345 International Boulevard, Oakland, California

Date Measured	Hydraulic Gradient	Flow Direction
04-16-92	0.021	Northwest
06-11-93	0.026	Northwest
08-17-93	0.029	Radial
03-31-94	0.050	Radial
06-27-94	0.020	Radial
09-16-94	0.0179-0.0411	Radial
03-31-95	0.075	Radial
06-28-95	0.025-0.053	Radial
09-28-95	0.025	Northwest
12-26-95	0.048	Radial
03-22-96	0.034-0.132	Radial
06-20-96	0.016	Northwest
09-30-96	0.019	Northwest
12-27-96	0.024-0.029	North-Northwest
03-07-97	0.020-0.035	North-Northwest
06-28-97	0.027-0.04	Northwest
09-18-97	0.02-0.026	Radial
12-30-97	0.025-0.030	North-Northwest
03-25-98	0.021-0.033	Radial
06-29-98	0.013-0.019	Northwest
10-02-98	0.011-0.019	Northwest
12-08-98	0.23	Northwest
03-26-99	0.01	North-Northwest
06-15-99	0.01	Northwest
09-15-99	0.011	North-Northwest
12-28-99	0.02	North-Northwest

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Table 2. Soil Analytical Data - Credit World Auto Sales
2345 International Boulevard, Oakland, California

Sample Location	Date Sampled	Depth (feet)	TPHg (mg/kg)	TPHd (mg/kg)	TOG (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)	VOCs (mg/kg)	HVOCs (mg/kg)
Residential Final RBSL - non drinking water Risk Driver			400 soil leaching	500 soil leaching	500 soil leaching	0.180 indoor air	8.4 soil leaching	24 soil leaching	1.0 soil leaching	1.0 soil leaching	N/A	N/A
Commercial Final RBSL - non drinking water Risk Driver			**400** soil leaching	**500** soil leaching	**500** soil leaching	**0.39** indoor air	**8.4** soil leaching	**24** soil leaching	**1.0** soil leaching	**1.0** soil leaching	N/A	N/A
Residential RBSL - indoor air impact			NE	NE	NE	0.180	30	76	210	3.4 (68)	N/A	N/A
Commercial RBSL - indoor air impact			NE	NE	NE	0.390	89	220	210	12 (290)	N/A	N/A
SCS Engineers (UST Removal Sampling)												
B-1	8/25/1988	15	360	--	--	0.3	2.2	3.4	**31**	--	--	--
B-2	8/25/1988	15	**1,500**	--	--	**3.0**	6.4	2.5	**160**	--	--	--
B-3	8/25/1988	15	130	--	--	0.17	0.4	1.3	**10**	--	--	--
B-4	8/25/1988	--	150	--	--	**0.8**	1.9	8.7	**86**	--	--	--
B-5	8/25/1988	--	**790**	--	--	**61**	1.3	4.8	**30**	--	--	--
B-6	8/25/1988	--	**1,300**	--	--	**1.5**	4.7	9.6	**75**	--	--	--
B-7	8/25/1988	--	--	110	**570**	(<5.0)	(<5.0)	(5.0)	**(48)**	--	ND*	--
B-8	8/25/1988	--	--	65	**780**	(<5.0)	(<5.0)	(5.0)	**(12)**	--	ND*	--
California Environmental Consultants											--	--
B-1	10/3/1988	15	3.4	--	--	0.31	<0.1	<0.1	0.14	--	--	--
B-2	10/3/1988	15	83	--	--	**1.6**	1.1	1.8	**9.6**	--	--	--
B-3	10/3/1988	15	--	--	88	(0.36)	(0.65)	(0.47)	(0.85)	--	ND*	ND
Earth Systems Environmental												
TH-1	8/21/1991	15-15.5	**2,775**	--	--	**1.235**	1.060	1.625	5.280	--	--	--
TH-2	8/21/1991	10-10.5	360	--	--	<0.005	<0.005	<0.005	0.770	--	--	--
TH-2	8/21/1991	29.5-30	50	--	--	<0.005	<0.005	<0.005	<0.005	--	--	--
TH-3	8/22/1991	10-10.5	10	--	60	<0.005	<0.005	<0.005	<0.005	--	--	--
TH-3	8/22/1991	18.5-19	10	--	20	<0.005	<0.005	<0.005	<0.005	--	--	--
TH-4	8/22/1991	10-10.5	25	--	40	<0.005	<0.005	<0.005	0.175	--	--	--
TH-4	8/22/1991	19.5-20	**450**	--	**1,600**	<0.005	<0.005	<0.005	<0.005	--	--	--
TH-5	8/22/1991	10-10.5	10	--	--	<0.005	<0.005	<0.005	<0.005	--	--	--
TH-5	8/22/1991	18-18.5	<5.0	--	--	<0.005	<0.005	<0.005	<0.005	--	--	--
MW-1	5/22/1991	10-10.5	150	--	--	**0.460**	0.365	0.305	0.960	--	--	--
MW-1	5/22/1991	15-15.5	255	--	--	**1.505**	4.255	4.015	**4.270**	--	--	--
MW-2	8/21/1991	10-10.5	**4,320**	--	--	**7.275**	6.620	3.470	**13.815**	--	--	--
MW-2	8/21/1991	15-15.5	160	--	--	<0.005	<0.005	<0.005	<0.005	--	--	--
MW-3	8/22/1991	10-10.5	50	--	90	<0.005	<0.005	<0.005	<0.005	--	--	--
MW-3	8/22/1991	15-15.5	25	--	40	<0.005	<0.005	<0.005	<0.005	--	--	--
Tank Protect Engineering												
TMW-4	7/22/1993	5.5-6	<0.500	--	--	<0.0050	<0.0050	<0.0050	<0.015	--	--	--
TMW-4	7/22/1993	10.5-11	<0.500	--	--	<0.0050	<0.0050	<0.0050	<0.015	--	--	--
TMW-4	7/22/1993	15.5-16	0.940	--	--	<0.0050	<0.0050	<0.0050	<0.015	--	--	--
TMW-5	7/23/1993	5.5-6	2.4	--	--	0.026	<0.0050	<0.0050	0.053	--	--	--
TMW-5	7/23/1993	10.5-11	**14**	--	--	**0.900**	<0.0050	1.6	<0.140	--	--	--
TMW-5	7/23/1993	15.5-16	**16**	--	--	**0.840**	<0.0050	0.690	**1.3**	--	--	--
											--	--
SB-1	4/21/1997	26.5-27	<1.0	--	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
SB-2	4/21/1997	16.5-17	3.7	--	--	0.012	0.0071	0.042	<0.005	<0.05	--	--
SB-3	5/1/1997	21.5-22	<1.0	--	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
SB-4	5/1/1997	21.5-22	<1.0	--	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
SB-5	5/1/1997	11.5-12	91	--	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--

Table 2. **Soil Analytical Data** - Credit World Auto Sales
2345 International Boulevard, Oakland, California

Sample Location	Date Sampled	Depth (feet)	TPHg (mg/kg)	TPHd (mg/kg)	TOG (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)	VOCs (mg/kg)	HVOCs (mg/kg)
Residential Final RBSL - non drinking water Risk Driver			400 soil leaching	500 soil leaching	500 soil leaching	0.180 indoor air	8.4 soil leaching	24 soil leaching	1.0 soil leaching	1.0 soil leaching	N/A	N/A
Commercial Final RBSL - non drinking water Risk Driver			**400** soil leaching	**500** soil leaching	**500** soil leaching	**0.39** indoor air	**8.4** soil leaching	**24** soil leaching	**1.0** soil leaching	**1.0** soil leaching	N/A	N/A
Residential RBSL - indoor air impact			NE	NE	NE	0.180	30	76	210	3.4 (68)	N/A	N/A
Commercial RBSL - indoor air impact			NE	NE	NE	0.390	89	220	210	12 (290)	N/A	N/A
Sequoia Environmental												
SB-1	5/22/2001	10	240	--	--	<0.04	0.19	0.19	0.45	<0.20	--	--
SB-1	5/22/2001	15	3.0	--	--	<0.005	0.005	0.009	0.013	<0.05	--	--
SB-2	5/22/2001	10	89	--	--	<0.005	<0.005	0.033	0.25	<0.10	--	--
SB-2	5/22/2001	15	<1.0	--	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
SB-2	5/22/2001	20	<1.0	--	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
SB-3	5/22/2001	10	300	--	--	<0.01	<0.01	0.76	**1.2**	<0.20	--	--
SB-3	5/22/2001	15	**1,800**	--	--	**3.3**	5.5	**48**	**53**	<2.0	--	--
SB-3	5/22/2001	20	8.5	--	--	0.009	0.023	0.10	0.12	<0.05	--	--
SB-4	5/22/2001	10	<1.0	--	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
SB-4	5/22/2001	15	230	--	--	0.23	<0.005	1.5	**1.1**	<0.10	--	--
SB-4	5/22/2001	20	<1.0	--	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
SB-5	5/22/2001	15	25	--	--	0.035	<0.005	0.10	0.11	<0.05	--	--
SB-5	5/22/2001	20	1.9	--	--	**0.62**	<0.005	<0.005	<0.005	<0.05	--	--
SB-6	5/22/2001	10	<1.0	--	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
SB-7 (MW-6)	5/22/2001	10	18	--	--	<0.005	<0.005	0.056	0.11	<0.05	--	--
SB-7 (MW-6)	5/22/2001	15	68	--	--	0.28	0.25	0.36	0.35	<0.10	--	--
SB-7 (MW-6)	5/22/2001	20	<1.0	--	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--

Abbreviations and Notes:

1,300 = concentrations exceeding commercial final RBSLs shown in bold.

TPHg = Total petroleum hydrocarbons as gasoline

Benzene, Toluene, Ethylbenzene, Xylenes by EPA Method 8020, and by 8260 if in parenthesis

MTBE methyl tert butyl ether by EPA Method 8020

VOCs = volatile organic compounds by EPA Method 8260

ND = not detected above laboratory detection limits

ND* = not detected with the exception of reported concentrations for benzene, toluene, ethylbenzene and xylenes

HVOCs = halogenated volatile organic compounds by EPA Method 8010

mg/kg = Milligrams per kilogram

<n = Below detection limit of n mg/kg

-- = Not analyzed

Residential RBSLs = Table B-1 - Risk Based Screening Level Components for Surface Soil (Potentially Impacted Groundwater is not a Current or Potential Source of Drinking Water) for commercial/industrial reuse for established by the SFBRWQCB, Interim Final December 2001. (The risk driver is also shown). MTBE RBSL for coarse soil (fine soil).

Commercial RBSLs = Table B-2 - Risk Based Screening Level Components for Surface Soil (Potentially Impacted Groundwater is not a Current or Potential Source of Drinking Water) for commercial/industrial reuse for established by the SFBRWQCB, Interim Final December 2001. (The risk driver is also shown). MTBE RBSL for coarse soil (fine soil).

RBSLs for indoor air = Tables B-1 and B-2 from SFBRWQCB above, Interim Final December 2001

Table 3. Groundwater Analytical Data - Credit World Auto Sales, 2345 International Boulevard, Oakland, California

Sample ID/ Well ID	Date Sampled	Casing Elevation (feet)	Depth to GW (feet bgs)	Depth to SPH (feet bgs)	SPH Thickness (feet)	GW Elevation (feet)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	TOG (ug/L)	VOCs (ug/L)
Final RBSL - Potential Drinking Water Source							100	1.0	40	30	13	5.0	640	N/A
Risk Driver							human toxicity	aquatic life	aquatic life	aquatic life	aquatic life	taste & odor	aquatic life	
Final RBSL - Not a Potential Drinking Water Source							500	46	130	290	13	1,800	640	N/A
Risk Driver							aquatic life	aquatic life	aquatic life	aquatic life	aquatic life	aquatic life	aquatic life	
RBSL - Indoor Air Impact							NE	84 (5800)	76000 (530000)	170,000	150000 (160000)	50000(4.9E+05)	NE	N/A
California Environmental Consultants														
B-1-W	10/3/1988	--	--	--	--	--	67,000	14,000	2,400	2,500	9,100	--	--	--
B-2-W	10/3/1988	--	--	--	--	--	110,000	17,000	2,600	3,000	12,000	--	--	--
B-3-W	10/3/1988	--	--	--	--	--	--	(490)	(160)	(770)	(1,300)	--	290,000	ND*
Tank Protect Engineering														
SB-1W	4/21/1997	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
SB-2W	4/21/1997	--	--	--	--	--	6,100	870	35	17	28	<5.0	--	--
SB-3W	5/1/1997	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
SB-4W	5/1/1997	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
SB-5W	5/1/1997	--	--	--	--	--	890	5.4	<0.50	1.4	<0.50	12	--	--
Sequoia Environmental														
SB-1	5/22/2001	--	--	--	--	--	11,000	8.1	23	81	7.1	<20	--	--
SB-2	5/22/2001	--	--	--	--	--	1,200	<0.5	3.5	5.5	<0.5	<5.0	--	--
SB-3	5/22/2001	--	--	--	--	--	53,000	790	110	2,000	2,000	<200	--	--
SB-4	5/22/2001	--	--	--	--	--	170,000	420	<45	1,500	800	<200	--	--
SB-5	5/22/2001	--	--	--	--	--	27,000	8,400	99	230	120	<500	--	--
SB-6	5/22/2001	--	--	--	--	--	50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--
Monitoring Well Sampling Data														
MW-1	12/30/1997	27.33[b]	10.96	10.79	0.17	16.51	61,000	4,300	1,800	1,600	6,900	1,400	--	--
MW-1	3/24/1998	27.33	9.33	--	0.00	18.00	24,000	1,000	1,000	1,300	4,300	2,000	--	--
MW-1	6/29/1998	27.33	12.20	--	0.00	15.13	130,000	3,800	370	1,200	4,200	3,300	--	--
MW-1	10/2/1998	27.33	13.46	--	0.00	13.87	22,000	66	21	26	140	<0.50	--	--
MW-1	12/10/1998	27.33	10.49	--	0.00	16.84	32,000	4,600	970	1,700	4,900	<250	--	--
MW-1	3/26/1999	27.33	9.44	--	0.00	17.89	230,000	370	290	280	720	<0.50	--	--
MW-1	6/11/1999	27.33	12.56	12.55	0.01	14.78	180,000	210	170	220	400	<0.50	--	--
MW-1	9/15/1999	27.33	14.85	13.85	1.00	13.28	21,000	3,800	280	590	2,200	<250	--	--
MW-1	12/28/1999	27.33	14.50	13.18	1.32	13.89	27,000	48	36	46	83	<0.5	--	--
MW-1	6/13/2001	24.37[c]	15.83	11.47	4.36	12.03	--	--	--	--	--	--	--	--
MW-1	**12/27/2002**	**24.37**	**8.31**	**8.15**	**0.16**	**16.19**	--	--	--	--	--	--	--	--

Table 3. Groundwater Analytical Data - Credit World Auto Sales, 2345 International Boulevard, Oakland, California

Sample ID/ Well ID	Date Sampled	Casing Elevation (feet)	Depth to GW (feet bgs)	Depth to SPH (feet bgs)	SPH Thickness (feet)	GW Elevation (feet)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	TOG (ug/L)	VOCs (ug/L)
Final RBSL - Potential Drinking Water Source							100	1.0	40	30	13	5.0	640	N/A
Risk Driver							human toxicity	aquatic life	aquatic life	aquatic life	aquatic life	taste & odor	aquatic life	
Final RBSL - Not a Potential Drinking Water Source							500	46	130	290	13	1,800	640	N/A
Risk Driver							aquatic life	aquatic life	aquatic life	aquatic life	aquatic life	aquatic life	aquatic life	
RBSL - Indoor Air Impact							NE	84 (5800)	76000 (530000)	170,000	150000 (160000)	50000(4.9E+05)	NE	N/A
MW-2	8/23/1991	98.585[a]	13.77	--	0.00	84.82	10,000	<5	<5	<5	<5	--	--	--
MW-2	4/16/1992	25.92[b]	15.38	12.57	2.81	12.79	--	--	--	--	--	--	--	--
MW-2	6/11/1993	25.92	13.19	--	0.00	12.74	--	--	--	--	--	--	--	--
MW-2	8/17/1993	25.92	14.04	14.03	0.01	11.89	49,000	94	240	250	980	--	--	--
MW-2	3/28/1994	25.92	13.61	13.07	0.54	12.74	14,000	4,200	<250	910	1,400	--	--	--
MW-2	6/27/1994	25.92	14.24	13.44	0.80	12.32	24,000	4,400	72	1,100	1,700	--	--	--
MW-2	9/16/1994	25.92	17.82	13.36	4.46	11.67	40,000	2,300	250	2,000	4,100	--	--	--
MW-2	3/31/1995	25.92	16.72	9.28	7.44	15.15	28,000	4,000	<120	1,100	1,400	--	--	--
MW-2	6/28/1995	25.92	13.50	12.77	0.73	13.00	40,000	2,700	130	1,700	2,900	--	--	--
MW-2	9/28/1995	25.92	14.63	14.09	0.54	11.72	7,500	420	14	250	190	<62	--	--
MW-2	12/26/1995	25.92	12.58	11.68	0.90	14.06	22,000	1,300	88	950	1,800	<250	--	--
MW-2	3/22/1996	25.92	11.46	11.31	0.15	14.58	9,800	2,200	<120	400	<380	<1,200	--	--
MW-2	6/20/1996	25.92	13.08	12.71	0.37	13.14	35,000	770	<0.50	240	<0.50	550	--	--
MW-2	9/30/1996	25.92	16.67	12.92	3.75	12.25	58,000	1,600	230	2,200	4,000	<5.0	--	--
MW-2	12/27/1996	25.92	15.74	8.17	7.57	16.24	29,000	2,100	<0.50	1,200	1,800	<5.0	--	--
MW-2	3/7/1997	25.92	12.55	--	0.00	13.37	13,000	1,300	37	290	180	<5.0	--	--
MW-2	6/28/1997	25.92	11.98	11.94	0.04	13.97	12,000	840	<0.50	640	360	<5.0	--	--
MW-2	9/18/1997	25.92	13.44	13.44	0.00	12.48	12,000	680	<0.50	320	84	<5.0	--	--
MW-2	12/30/1997	25.92	11.31	--	0.00	14.61	13,000	1,100	40	350	220	<5.0	--	--
MW-2	3/25/1998	25.92	10.02	--	0.00	15.90	8,100	1,300	51	410	230	670	--	--
MW-2	6/29/1998	25.92	11.96	--	0.00	13.96	12,000	880	13	180	72	430	--	--
MW-2	10/2/1998	25.92	13.74	--	0.00	12.18	47,000	140	100	110	200	<0.50	--	--
MW-2	12/10/1998	25.92	12.91	10.81	2.10	14.69	26,000	1,000	210	1,500	1,900	<1,000	--	--
MW-2	3/26/1999	25.92	9.06	8.86	0.20	17.02	110,000	190	150	120	380	<0.50	--	--
MW-2	6/11/1999	25.92	12.18	--	0.00	13.74	190,000	310	250	320	540	<0.50	--	--
MW-2	9/15/1999	25.92	15.59	12.59	3.00	12.73	25,000	720	<100	1,300	1,600	<1,000	--	--
MW-2	12/28/1999	25.92	16.81	12.31	4.50	12.71	75,000	130	98	130	230	<0.50	--	--
MW-2	6/13/2001	23.16[c]	14.84	11.69	3.15	10.84	--	--	--	--	--	--	--	--
MW-2	6/20/2002	23.16	14.80	14.10	0.70	8.92	53,000	2,200	140	3,300	3,000	<1,000	--	--
MW-2	10/21/2002	23.16	16.98	16.74	0.24	6.37	--	--	--	--	--	--	--	--
MW-2	**12/27/2002**	**23.16**	**13.58**	**13.15**	**0.43**	**9.92**	--	--	--	--	--	--	--	--
MW-3	8/23/1991	99.25[a]	15.07	--	0.00	84.18	<5,000	<5	<5	<5	<5	--	--	--
MW-3	4/16/1992	27.57[b]	14.14	13.98	0.16	13.56	--	--	--	--	--	--	--	--
MW-3	6/11/1993	27.57	14.28	--	0.00	13.30						--	--	--
MW-3	8/17/1993	27.57	15.77	--	0.00	11.80	9,600	4.1	17	28	54	--	--	--
MW-3	3/28/1994	27.57	14.35	--	0.00	13.22	8,400	2,400	56	67	200	--	--	--

Table 3. Groundwater Analytical Data - Credit World Auto Sales, 2345 International Boulevard, Oakland, California

Sample ID/ Well ID	Date Sampled	Casing Elevation (feet)	Depth to GW (feet bgs)	Depth to SPH (feet bgs)	SPH Thickness (feet)	GW Elevation (feet)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	TOG (ug/L)	VOCs (ug/L)
Final RBSL - Potential Drinking Water Source							100	1.0	40	30	13	5.0	640	N/A
Risk Driver							human toxicity	aquatic life	aquatic life	aquatic life	aquatic life	taste & odor	aquatic life	
Final RBSL - Not a Potential Drinking Water Source							**500**	**46**	**130**	**290**	**13**	**1,800**	**640**	N/A
Risk Driver							aquatic life	aquatic life	aquatic life	aquatic life	aquatic life	aquatic life	aquatic life	
RBSL - Indoor Air Impact							NE	84 (5800)	76000 (530000)	170,000	150000 (160000)	50000(4.9E+05)	NE	N/A
MW-3	6/27/1994	27.57	14.77	--	0.00	12.80	**9,900**	**3,300**	<22	<25	**73**	--	--	--
MW-3	9/16/1994	27.57	15.42	15.37	0.05	12.19	**16,000**	**2,300**	80	**620**	**240**	--	--	--
MW-3	3/31/1995	27.57	12.98	12.52	0.46	14.96	**16,000**	**2,800**	70	<25	**920**	--	--	--
MW-3	6/28/1995	27.57	14.20	14.15	0.05	13.41	**11,000**	**2,300**	32	81	**240**	--	--	--
MW-3	9/28/1995	27.57	15.17	--	0.00	12.40	**6,300**	**1,900**	<42	200	<120	<420	--	--
MW-3	12/26/1995	27.57	13.33	13.27	0.06	14.29	**25,000**	**3,800**	97	94	**1,600**	<250	--	--
MW-3	3/22/1995	27.57	12.81	12.77	0.04	14.79	**16,000**	**3,100**	75	69	**350**	250	--	--
MW-3	6/20/1996	27.57	13.95	13.88	0.07	13.68	**8,500**	1,400	28	140	**15**	220	--	--
MW-3	9/24/1996	27.57	14.86	14.82	0.04	12.74	**12,000**	**2,400**	87	**340**	110	<5.0	--	--
MW-3	12/27/1996	27.57	11.04	10.98	0.06	16.58	**5,800**	1,700	28	<0.50	**42**	240	--	--
MW-3	3/10/1997	27.57	13.80	--	0.00	13.77	**9,000**	1,700	<0.50	110	<0.50	<5.0	--	--
MW-3	6/28/1997	27.57	13.72	13.66	0.06	13.90	**15,000**	**2,200**	<0.50	160	**190**	<5.0	--	--
MW-3	9/18/1997	27.57	14.76	--	0.00	12.81	**28,000**	**3,800**	<0.50	100	<0.50	<5.0	--	--
MW-3	12/30/1997	27.57	12.97	--	0.00	14.60	**21,000**	**2,200**	<0.50	31	<0.50	300	--	--
MW-3	3/24/1998	27.57	11.75	--	0.00	15.82	**2,300**	**870**	7.2	20	<0.50	85	--	--
MW-3	6/29/1998	27.57	13.38	--	0.00	14.19	**6,500**	**1,300**	12	62	**14**	140	--	--
MW-3	10/2/1998	27.57	14.42	--	0.00	13.15	**11,000**	31	27	35	**69**	<0.50	--	--
MW-3	12/10/1998	27.57	12.55	--	0.00	15.02	**<2,500**	**2,800**	68	42	**55**	<250	--	--
MW-3	3/26/1999	27.57	10.54	--	0.00	17.03	**10,000**	21	14	10	**41**	<0.50	--	--
MW-3	6/15/1999	27.57	13.91	--	0.00	13.66	**87,000**	**90**	71	92	**180**	<0.50	--	--
MW-3	9/15/1999	27.57	14.70	--	0.00	12.87	**8,700**	**2,100**	71	110	**66**	<100	--	--
MW-3	12/28/1999	27.57	15.16	14.91	0.25	12.61	**4,300**	7.7	5.2	7.2	13	<0.50	--	--
MW-3	6/13/2001	24.57[c]	14.70	14.30	0.40	10.19	**8,400**	**1,300**	25	64	**32**	<20	--	--
MW-3	6/20/2002	24.57[c]	14.68	14.66	0.02	9.91	**7,800**	**1,100**	23	66	**15**	<50	--	--
MW-3	**12/27/2002**	**24.57[c]**	**11.37**	**11.20**	**0.17**	**13.34**	--	--	--	--	--	--	--	--
TMW-4	8/17/1993	26.50[b]	13.26	--	0.00	13.24	150	<0.50	0.8	1.4	3.7	--	--	--
TMW-4	3/28/1994	26.50	12.40	--	0.00	14.10	<50	<0.50	<0.50	<0.50	<1.5	--	--	--
TMW-4	6/27/1994	26.50	12.84	--	0.00	13.66	<50	<0.50	<0.50	<0.50	<1.5	--	--	--
TMW-4	9/16/1994	26.50	13.58	--	0.00	12.92	<50	<0.50	<0.50	<0.50	<1.5	--	--	--
TMW-4	3/31/1995	26.50	10.23	--	0.00	16.27	<50	<0.50	<0.50	<0.50	<1.5	--	--	--
TMW-4	6/28/1995	26.50	12.21	--	0.00	14.29	<50	<0.50	<0.50	<0.50	<1.5	--	--	--
TMW-4	9/28/1995	26.50	13.38	--	0.00	13.12	<50	<0.50	<0.50	<0.50	<1.5	<5.0	--	--
TMW-4	12/26/1995	26.50	11.32	--	0.00	15.18	<50	<0.50	<0.50	<0.50	<1.5	<5.0	--	--
TMW-4	3/22/1996	26.50	10.54	--	0.00	15.96	<50	<0.50	<0.50	<0.50	<1.5	<5.0	--	--
TMW-4	6/20/1996	26.50	12.14	--	0.00	14.36	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
TMW-4	9/24/1996	26.50	13.01	--	0.00	13.49	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
TMW-4	12/27/1996	26.50	9.51	--	0.00	16.99	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--

Table 3. **Groundwater Analytical Data** - Credit World Auto Sales, 2345 International Boulevard, Oakland, California

Sample ID/ Well ID	Date Sampled	Casing Elevation (feet)	Depth to GW (feet bgs)	Depth to SPH (feet bgs)	SPH Thickness (feet)	GW Elevation (feet)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	TOG (ug/L)	VOCs (ug/L)
Final RBSL - Potential Drinking Water Source Risk Driver							100 human toxicity	1.0 aquatic life	40 aquatic life	30 aquatic life	13 aquatic life	5.0 taste & odor	640 aquatic life	N/A
Final RBSL - Not a Potential Drinking Water Source Risk Driver							500 aquatic life	46 aquatic life	130 aquatic life	290 aquatic life	13 aquatic life	1,800 aquatic life	640 aquatic life	N/A
RBSL - Indoor Air Impact							NE	84 (5800)	76000 (530000)	170,000	150000 (160000)	50000(4.9E+05)	NE	N/A
TMW-4	3/10/1997	26.50	11.92	--	0.00	14.58	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
TMW-4	6/27/1997	26.50	10.70	--	0.00	15.80	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
TMW-4	9/18/1997	26.50	12.94	--	0.00	13.56	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
TMW-4	12/30/1997	26.50	10.92	--	0.00	15.58	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
TMW-4	3/25/1998	26.50	9.60	--	0.00	16.90	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
TMW-4	6/29/1998	26.50	11.32	--	0.00	15.18	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
TMW-4	10/2/1998	26.50	12.56	--	0.00	13.94	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--
TMW-4	12/10/1998	26.50	10.44	--	0.00	16.06	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--
TMW-4	3/26/1999	26.50	9.38	--	0.00	17.12	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--
TMW-4	6/15/1999	26.50	11.58	--	0.00	14.92	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--
TMW-4	9/15/1999	26.50	12.89	--	0.00	13.61	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
TMW-4	12/28/1999	23.50[c]	12.92	--	0.00	10.58	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--
TMW-4	10/21/2002	23.50[c]	12.70	--	0.00	10.80	--	--	--	--	--	--	--	--
TMW-4	**12/27/2002**	**23.50[c]**	**9.07**	**8.95**	**0.12**	**14.53**	--	--	--	--	--	--	--	--
TMW-5	8/17/1993	26.51[b]	12.98	12.95	0.03	13.55	120,000	640	730	790	3,600	--	--	--
TMW-5	3/28/1994	26.51	11.39	--	0.00	15.12	70,000	23,000	1,500	4,100	15,000	--	--	--
TMW-5	6/28/1994	26.51	12.24	--	0.00	14.27	56,000	26,000	940	5,500	26,000	--	--	--
TMW-5	9/16/1994	26.51	13.02	12.97	0.05	13.53	96,000	17,000	720	3,500	12,000	--	--	--
TMW-5	3/31/1995	26.51	7.38	--	0.00	19.13	64,000	13,000	470	3,500	6,100	--	--	--
TMW-5	6/28/1995	26.51	11.31	11.25	0.06	15.25	65,000	9,000	240	2,600	5,300	--	--	--
TMW-5	9/28/1995	26.51	14.42	--	0.00	12.09	79,000	17,000	1,800	2,700	7,000	<1,200	--	--
TMW-5	12/26/1995	26.51	10.16	10.11	0.05	16.39	110,000	11,000	800	2,300	4,500	<1,200	--	--
TMW-5	3/22/1996	26.51	7.59	7.54	0.05	18.96	--	--	--	--	--	--	--	--
TMW-5	6/26/1996[d]	--	7.12	--	0.00	--	30,000	4,000	180	1,500	2,500	830	--	--
TMW-5	9/30/1996	--	7.42	--	0.00	--	6,900	1,600	79	130	370	<5.0	--	--
TMW-5	12/27/1996	--	6.38	--	0.00	--	78,000	12,000	1,900	2,900	9,700	<5.0	--	--
TMW-5	3/10/1997	--	11.12	--	0.00	--	84,000	9,900	1,100	2,600	8,800	<5.0	--	--
TMW-5	8/17/1997	--	12.98	12.95	0.03	--	--	--	--	--	--	--	--	--
TMW-5	9/18/1997	--	12.00	--	0.00	--	65,000	8,000	<0.5	2,000	4,700	<5.0	--	--
TMW-5	12/30/1997	--	8.97	--	0.00	--	79,000	6,400	340	2,300	5,500	<5.0	--	--
TMW-5	3/25/1998	--	7.32	--	0.00	--	20,000	6,000	260	2,700	5,800	2,400	--	--
TMW-5	6/29/1998	--	11.50	--	0.00	--	--	--	--	--	--	--	--	--
TMW-5	10/8/1998	--	12.56	--	0.00	--	46,000	120	98	120	240	<0.50	--	--
TMW-5	12/8/1998	--	10.14	--	0.00	--	46,000	5,900	320	2,200	5,400	<1,200	--	--
TMW-5	3/26/1999	--	7.08	--	0.00	--	35,000	69	61	37	120	<0.50	--	--
TMW-5	6/11/1999	--	11.40	--	0.00	--	26,000	29	32	43	72	<0.50	--	--

Table 3. Groundwater Analytical Data - Credit World Auto Sales, 2345 International Boulevard, Oakland, California

Sample ID/ Well ID	Date Sampled	Casing Elevation (feet)	Depth to GW (feet bgs)	Depth to SPH (feet bgs)	SPH Thickness (feet)	GW Elevation (feet)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	TOG (ug/L)	VOCs (ug/L)
Final RBSL - Potential Drinking Water Source							100	1.0	40	30	13	5.0	640	N/A
Risk Driver							human toxicity	aquatic life	aquatic life	aquatic life	aquatic life	taste & odor	aquatic life	
Final RBSL - Not a Potential Drinking Water Source							**500**	**46**	**130**	**290**	**13**	**1,800**	**640**	N/A
Risk Driver							aquatic life	aquatic life	aquatic life	aquatic life	aquatic life	aquatic life	aquatic life	
RBSL - Indoor Air Impact							NE	84 (5800)	76000 (530000)	170,000	150000 (160000)	50000(4.9E+05)	NE	N/A
TMW-5	9/15/1999	--	12.52	--	0.00	--	**37,000**	**7,300**	**400**	**2,400**	**6,000**	<1,000	--	--
TMW-5	12/28/1999	--	12.44	--	0.00	--	**25,000**	44	32	41	**75**	<0.50	--	--
TMW-5	5/23/2001	23.85[c]	11.31	--	0.00	12.54	--	--	--	--	--	--	--	--
TMW-5	6/20/2002	23.85	11.29	11.24	0.05	12.60	**51,000**	**5,100**	**290**	**2,300**	**5,800**	<250	--	--
TMW-5	10/21/2002	23.85	13.60	13.50	0.10	10.33	--	--	--	--	--	--	--	--
TMW-5	**12/27/2002**	**23.85**	**6.60**	**6.53**	**0.07**	**17.31**	--	--	--	--	--	--	--	--
MW-6	5/23/2001	23.81[c]	12.47	--	0.00	11.34	--	--	--	--	--	--	--	--
MW-6	6/13/2001	23.81	12.47	--	0.00	11.34	**7,600**	**1,400**	42	19	14	<10	--	--
MW-6	6/20/2002	23.81	12.45	--	0.00	11.36	79	5.7	<0.5	<0.5	<0.5	<5.0	--	--
MW-6	**12/27/2002**	**23.81**	**7.24**	**7.20**	**0.04**	**16.60**	--	--	--	--	--	--	--	--
TRIP BLANK	8/17/1993	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	--	--	--
TRIP BLANK	3/28/1994	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	--	--	--
TRIP BLANK	6/27/1994	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	--	--	--
TRIP BLANK	9/16/1994	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	--	--	--
TRIP BLANK	3/31/1995	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	--	--	--
TRIP BLANK	6/28/1995	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<5.0	--	--
TRIP BLANK	9/28/1995	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	--	--	--
TRIP BLANK	12/26/1995	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<5.0	--	--
TRIP BLANK	3/22/1996	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<5.0	--	--
TRIP BLANK	9/24/1996	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
TRIP BLANK	9/30/1996	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
TRIP BLANK	6/20/1996	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
TRIP BLANK	12/27/1996	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
TRIP BLANK	3/10/1997	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
TRIP BLANK	9/18/1997	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--
TRIP BLANK	12/30/1997	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--
TRIP BLANK	3/25/1998	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--
TRIP BLANK	6/29/1998	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--
TRIP BLANK	10/2/1998	--	--	--	--	--	--	--	--	--	--	--	--	--
TRIP BLANK	12/10/1998	--	--	--	--	--	--	--	--	--	--	--	--	--
TRIP BLANK	3/26/1999	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--
TRIP BLANK	6/15/1999	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--
TRIP BLANK	9/15/1999	--	--	--	--	--	**33,000**	**6,200**	**300**	**2,000**	**4,800**	<1,000	--	--
TRIP BLANK	12/28/1999	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--

Table 3. Groundwater Analytical Data - Credit World Auto Sales, 2345 International Boulevard, Oakland, California

Sample ID/ Well ID	Date Sampled	Casing Elevation (feet)	Depth to GW (feet bgs)	Depth to SPH (feet bgs)	SPH Thickness (feet)	GW Elevation (feet)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	TOG (ug/L)	VOCs (ug/L)
Final RBSL - Potential Drinking Water Source							100	1.0	40	30	13	5.0	640	N/A
Risk Driver							human toxicity	aquatic life	aquatic life	aquatic life	aquatic life	taste & odor	aquatic life	
Final RBSL - Not a Potential Drinking Water Source							**500**	**46**	**130**	**290**	**13**	**1,800**	**640**	N/A
Risk Driver							aquatic life	aquatic life	aquatic life	aquatic life	aquatic life	aquatic life	aquatic life	
RBSL - Indoor Air Impact							NE	84 (5800)	76000 (530000)	170,000	150000 (160000)	50000(4.9E+05)	NE	N/A

Abbreviations and Methods:

bgs = below grade surface
(ug/L) = micrograms per Liter
Depth to GW = Depth to groundwater relative to top of casing
SPH = Separate phase hydrocarbons
TOG = Total oil and grease by modified EPA Method 3550
TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015
Benzene, Toluene, Ethylbenzene, Xylenes by EPA Method 8020, and by 8260 if in parenthesis
MTBE methyl tert butyl ether by EPA Method 8020
VOCs = volatile organic compounds by EPA Method 8260
ND* = not detected with the exception of reported concentrations for benzene, toluene, ethylbenzene and xylenes
GW Elevation = Groundwater elevation in relation to mean sea level; calculated according to the relationship GW elevation = TOC - DTW + (0.8)(SPH thickness)
a = Relative to site datum established by Earth Systems Engineering
b = Top of casing elevation surveyed 8/10/93 by professional engineer (assumed based on NGVD 29 datum that is approximately 3 feet higher than City of Oakland datum)
c = Top of casing elevation surveyed 6/13/01 to City of Oakland datum by Renner Survey Company of Burlingame, CA. for Sequoia Environmental. Wells MW-3 and MW-4 were not surveyed
d = Casing damaged during excavation activities; not surveyed
e = Assumed top of casing elevation relative to City of Oakland datum, estimated by subtracting 3.00 feet from previous elevation presumably from NGVD 29 datum
1,300 = concentrations exceeding commercial final RBSLs (not a potential drinking water resource) shown in bold
Final RBSL - Potential Drinking Water Source = Table F-1 - Components for Groundwater Screening Levels (Groundwater is not a Current or Potential Drinking Water Resource) established by the SFRWQCB, Interim Final December 2001. (The risk driver is also shown)
Final RBSL - Not A Potential Drinking Water Source = Table F-2 - Components for Groundwater Screening Levels (Groundwater is not a Current or Potential Drinking Water Resource) established by the SFRWQCB, Interim Final December 2001. (The risk driver is also shown).
RBSLs for indoor air = Tables F-1 and F-2 from SFRWQCB above, Interim Final December 2001

Table 4. **Well Completion Data** - Credit World Auto Sales, 2345 International Boulevard, Oakland, California

Well No.	Installation Date	Boring Diameter (inches)	Well Diameter (inches)	Screen Size (inches)	Total Depth (feet bgs)	Surface Seal (feet bgs)	Sand Pack Interval (feet bgs)	Screened Interval (feet bgs)
MW-1	5/22/1991	8	2	0.010	35	0-12	12-35	15-35
MW-2	8/21/1991	8	2	0.010	35	0-12	12-35	15-35
MW-3	8/22/1991	8	2	0.010	35	0-12	12-35	15-35
TMW-4	7/22/1993	8	2	0.010	36	0-12	12-34	14-34
TMW-5	7/23/1993	8	2	0.010	27	0-15	15-24	17-24
MW-6	5/22/2001	6.75	4	0.020	20	0-13	13-20	15-20

bgs = below ground surface
ft-msl = feet above mean sea level

Table 5. Separate Phase Hydrocarbon Removal - Credit World Auto Sales
ternational Boulevard, Oakland, California

Sample ID/ Well ID	Date Sampled	Casing Elevation (feet)	Depth to GW (feet bgs)	Depth to SPH (feet bgs)	SPH Thickness (feet)	GW Elevation (feet)	Hydrocarbons Removed (liters)	Hydrocarbons Removed (lbs.)	Cumulative Hydrocarbons Removed (lbs.)
MW-1	12/30/1997	27.33	10.96	10.79	0.17	16.51	0.10	0.17	0.17
MW-1	6/11/1999	27.33	12.56	12.55	0.01	14.78	0.01	0.01	0.18
MW-1	9/15/1999	27.33	14.85	13.85	1.00	13.28	0.60	0.97	1.15
MW-1	12/28/1999	27.33	8.31	8.15	0.16	19.15	0.10	0.16	1.31
MW-1	6/13/2001	24.37	8.31	8.15	0.16	16.19	0.10	0.16	1.46
MW-1	**12/27/2003**	**24.37**	**8.31**	**8.15**	**0.16**	**16.19**	**3.00**	**4.84**	**6.30**
MW-2	6/28/1995	25.92	13.50	12.77	0.73	13.00	0.44	0.71	0.71
MW-2	9/28/1995	25.92	14.63	14.09	0.54	11.72	0.33	0.53	1.24
MW-2	12/26/1995	25.92	12.58	11.68	0.90	14.06	0.54	0.88	2.12
MW-2	3/22/1996	25.92	11.46	11.31	0.15	14.58	0.09	0.15	2.26
MW-2	6/20/1996	25.92	13.08	12.71	0.37	13.14	0.22	0.36	2.62
MW-2	9/30/1996	25.92	16.67	12.92	3.75	12.25	2.27	3.66	6.28
MW-2	12/27/1996	25.92	15.74	8.17	7.57	16.24	4.58	7.38	13.66
MW-2	6/28/1997	25.92	11.98	11.94	0.04	13.97	0.02	0.04	13.70
MW-2	9/18/1997	25.92	13.44	13.44	0.00	12.48	0.00	0.00	13.70
MW-2	12/10/1998	25.92	12.91	10.81	2.10	14.69	1.27	2.05	15.75
MW-2	3/26/1999	25.92	9.06	8.86	0.20	17.02	0.12	0.19	15.94
MW-2	9/15/1999	25.92	15.59	12.59	3.00	12.73	1.81	2.92	18.87
MW-2	12/28/1999	25.92	16.81	12.31	4.50	12.71	2.72	4.39	23.25
MW-2	6/13/2001	23.16	14.84	11.69	3.15	10.84	9.45	15.23	38.49
MW-2	6/20/2002	23.16	14.80	14.10	0.70	8.92	0.42	0.68	39.17
MW-2	10/21/2002	23.16	16.98	16.74	0.24	6.37	0.00	0.00	39.17
MW-2	**12/27/2002**	**23.16**	**13.58**	**13.15**	**0.43**	**9.92**	**3.00**	**4.84**	**44.00**
MW-3	4/16/1992	27.57	14.14	13.98	0.16	13.56	0.10	0.16	0.16
MW-3	9/16/1994	27.57	15.42	15.37	0.05	12.19	0.03	0.05	0.20
MW-3	3/31/1995	27.57	12.98	12.52	0.46	14.96	0.28	0.45	0.65
MW-3	6/28/1995	27.57	14.20	14.15	0.05	13.41	0.03	0.05	0.70
MW-3	12/26/1995	27.57	13.33	13.27	0.06	14.29	0.04	0.06	0.76
MW-3	3/22/1995	27.57	12.81	12.77	0.04	14.79	0.02	0.04	0.80
MW-3	6/20/1996	27.57	13.95	13.88	0.07	13.68	0.04	0.07	0.87
MW-3	9/24/1996	27.57	14.86	14.82	0.04	12.74	0.02	0.04	0.91
MW-3	12/27/1996	27.57	11.04	10.98	0.06	16.58	0.04	0.06	0.97
MW-3	6/28/1997	27.57	13.72	13.66	0.06	13.90	0.04	0.06	1.02
MW-3	12/28/1999	27.57	15.16	14.91	0.25	12.61	0.15	0.24	1.27
MW-3	6/13/2001	27.57	14.70	14.30	0.40	13.19	7.56	12.19	13.45
MW-3	6/20/2002	27.57	14.68	14.66	0.02	12.91	0.01	0.02	13.47
MW-3	**12/27/2002**	**27.57**	**11.37**	**11.20**	**0.17**	**16.34**	**3.00**	**4.84**	**18.31**
TMW-4	**12/27/2002**	**26.50**	**9.07**	**8.95**	**0.12**	**17.53**	**1.50**	**2.42**	**2.42**
TMW-5	8/17/1993	26.51	12.98	12.95	0.03	13.55	0.02	0.029	0.03
TMW-5	9/16/1994	26.51	13.02	12.97	0.05	13.53	0.03	0.049	0.08
TMW-5	6/28/1995	26.51	11.31	11.25	0.06	15.25	0.04	0.058	0.14
TMW-5	12/26/1995	26.51	10.16	10.11	0.05	16.39	0.03	0.049	0.19
TMW-5	3/22/1996	26.51	7.59	7.54	0.05	18.96	0.03	0.049	0.23

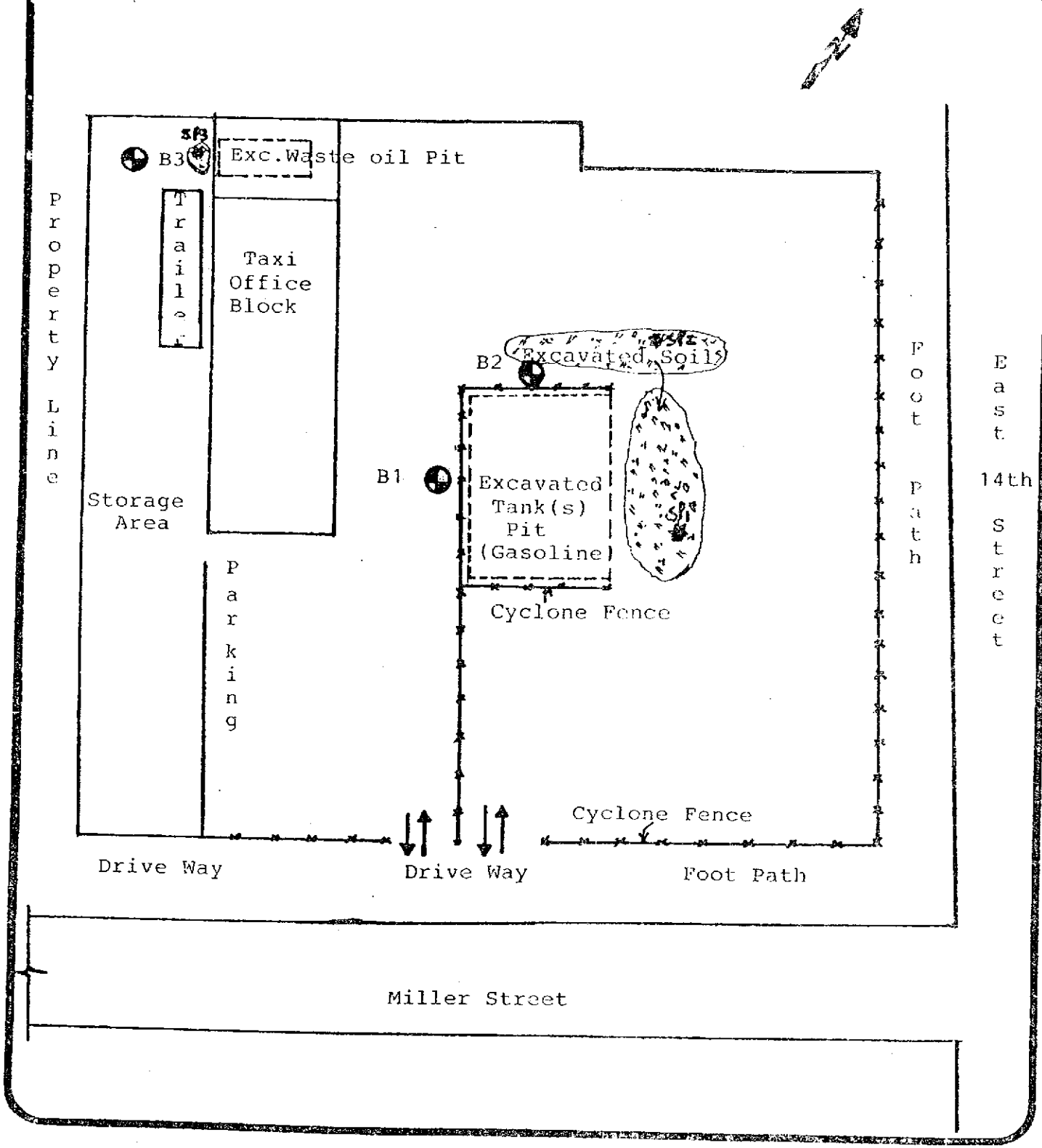
Table 5. Separate Phase Hydrocarbon Removal - Credit World Auto Sales
ternational Boulevard, Oakland, California

Sample ID/ Well ID	Date Sampled	Casing Elevation (feet)	Depth to GW (feet bgs)	Depth to SPH (feet bgs)	SPH Thickness (feet)	GW Elevation (feet)	Hydrocarbons Removed (liters)	Hydrocarbons Removed (lbs.)	Cumulative Hydrocarbons Removed (lbs.)
TMW-5	8/17/1997	--	12.98	12.95	0.03	--	0.02	0.029	0.26
TMW-5	5/23/2001	23.85	11.31	--	0.00	12.54	9.45	15.23	15.47
TMW-5	6/20/2002	23.85	11.29	11.24	0.05	12.60	0.03	0.049	15.52
TMW-5	10/21/2002	23.85	13.60	13.50	0.10	10.33	0.00	0.00	15.52
TMW-5	**12/27/2002**	**23.85**	**13.60**	**13.50**	**0.10**	**10.33**	**1.50**	**2.42**	**17.93**
MW-6	**12/27/2002**	**23.81**	**7.24**	**7.20**	**0.04**	**16.60**	**1.50**	**2.42**	**2.42**
							Hydrocarbons removed by bailing or purging (lbs.) =		*91.38*
							Hydrocarbons removed by free product removal system (see Note 1) (lbs) =		*30.5*
							Total estimated hydrocarbons removed (lbs) =		*121.88*

1. Tank Protect reported that the continuous free product removal system removed approximately 3 to 5 gallons between 8/20/97 and 1/14/98.
SPH Removal data provided for 5/23/01, 6/13/01, and 12/27/02 data.
bgs = below ground surface
When data is unavailable, hydrocarbon removal volume prior to 12/27/2002 is estimated by multiplying the well casing area (2" diameter casing = 0.60L/ft) by SPH thickness (feet)

Appendix A

Background Information



10/3/88

Site Plan Showing Location of Three Borings at 2345 East 14th Street, Oakland, CA.
Scale 1"=25' 0 12.5 25

FIGURE NO. 1

CEC/SBW
PROJECT NO. 8[illegible]2

CEC

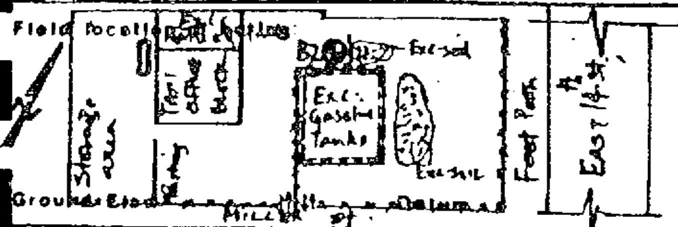
CALIFORNIA ENVIRONMENTAL CONSULTANTS

LOG OF EXPLORATORY BORING

PROJECT No CEC/SBh 88-2 DATE Oct 3,88
CLIENT West Coast Tank Testing
LOCATION 2345 East 14th street
LOGGED BY TS DRILLER Hew Drilling

BORING No B2
Sheet 1 of 1

Field location of boring



Ground Elev. / Datum

Drilling method Solid Stem Auger
CME-55 Mobile Drill Rig
Hole dia 6inches
Casing installation data

Water level ▼	19 ft	▽	16 ft.
Time	9.30 AM		
Date	10.03.88		

Pocket Torr vane TSF	Pocket Penetrometer TSF	Blows/ft. or Pressure PSI	Type of Sample	Sample Number	Depth Ft.	Sample	Soil Group Symbol (U.S.C.S.)	DESCRIPTION
			1.94 inch dia. brass sleeves					0-9" Asphalt/Base rock
								Black silty clay w/ gasoline odor.Damp
		3 4 7	B2-5		5		CL	Black to greenish silty clay w/ gasoline odor. Damp, Soft to med.stiff.
		3 8 10	B2-10		10		CL	Greenish,soft to med.stiff silty clay w/ some sand. Slight discoloration and damp.
		10 15 15	B2-15		15		CL	Greenish to brown silty clay w/ some sand Med. stiff and Damp.Slight discoloration observed.
						▽		
						▼		Water encountered at 19 feet.Boring botto

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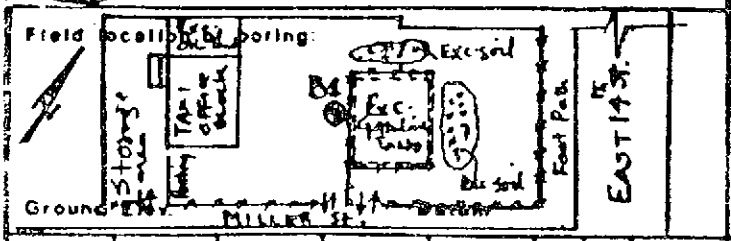
1117 HAPPY VALLEY AVENUE • SAN JOSE, CA 95129 • (408) 725-2644

LOG OF EXPLORATORY BORING

PROJECT No. CEC/SB[illegible]88-2 DATE Oct 3,88
CLIENT West Coast Tank Testing
LOCATION 2345 East 14th street
LOGGED BY TS DRILLER New Drilling
BORING No. B1
Sheet 1 of 1

Field location of boring:



Drilling method: Solid Stem Auger CME-55 Mobile Drill Rig
Hole dia: 6 inches
Casing installation data:

Water level	19 ft		1644
Time	8.30 AM		
Date	10.03.88		

Pocket Torvane TSF	Pocket Penetrometer TSF	Blows/ft. or Pressure PSI	Type of Sample	Sample Number	Depth Ft.	Sample	Soil Group Symbol (U.S.C.S.)	DESCRIPTION
			1.94 inch dia. brass sleeves					0-9" Asphalt/Base rock
							CL	Damp silty clay. Soft and Blackish
		3						
		3						
		6	B1-5		5		CL	Blackish silty clay, soft to med. stiff with gasoline odor.
		4						
		6						
		10	B1-10		10		CL	Damp grecnish to Black silty clay w/ some sand content. Slight discoloration observed. Med. stiff w/ gasoline odor.
		15						
		13						
		18	B1-15		15		CL &SM	Moist greenish silty sandy clay w/ fines Med. stiff to stiff w/ slight discoloration
								Ground water encountered at 19 feet. Boring bottom.

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SEQUOIA ANALYTICAL
680 Chesapeake Drive · Redwood City, CA 94063
(415) 364-9222 · FAX (415) 364-9233

California Environmental Consultants
1117 Happy Valley Avenue
San Jose, CA 95129
Attn: Munir Butt

Date Sampled: 10/03/88
Date Received: 10/03/88
Date Analyzed: 10/12/88
Date Reported: 10/31/88

Project:#CEC-SBW 9-88-2

TOTAL PETROLEUM FUEL HYDROCARBONS WITH BTEX DISTINCTION

Sample Number	Sample Description Soil	Low to Medium Boiling Point Hydrocarbons ppm	Benzene ppm	Toluene ppm	Ethyl Benzene ppm	Xylenes ppm
8100025	B1-15'	3.4	0.31	N.D.	N.D.	0.14
8100026	B2-15'	83	1.6	1.1	1.8	9.6
Detection Limits:		1.0	0.05	0.1	0.1	0.1

Method of Analysis: EPA 5030 or 3810/8015/8020

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

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California Environmental Consultants
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San Jose, CA 95129
Attn: Munir Butt

Date Sampled: 10/03/88
Date Received: 10/03/88
Date Analyzed: 10/06/88
Date Reported: 10/31/88

Project: #CEC/SBW 9-88-2

HALOGENATED VOLATILE ORGANICS

Sample Number: 8100027

Sample Description: Soil, B3-15'

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane	25	N.D.
Bromoform	25	N.D.
Bromomethane	25	N.D.
Carbon tetrachloride	25	N.D.
Chlorobenzene	25	N.D.
Chloroethane	130	N.D.
2-Chloroethylvinyl ether	25	N.D.
Chloroform	25	N.D.
Chloromethane	25	N.D.
Dibromochloromethane	25	N.D.
1,2-Dichlorobenzene	50	N.D.
1,3-Dichlorobenzene	50	N.D.
1,4-Dichlorobenzene	50	N.D.
1,1-Dichloroethane	25	N.D.
1,2-Dichloroethane	25	N.D.
1,1-Dichloroethene	25	N.D.
trans-1,2-Dichloroethene	25	N.D.
1,2-Dichloropropane	25	N.D.
cis-1,3-Dichloropropene	25	N.D.
trans-1,3-Dichloropropene	25	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	25	N.D.
Tetrachloroethene	25	N.D.
1,1,1-Trichloroethane	25	N.D.
1,1,2-Trichloroethane	25	N.D.
Trichloroethene	25	N.D.
Trichlorofluoromethane	25	N.D.
Vinyl chloride	50	N.D.

Method of Analysis: EPA 5030/8010
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL LABORATORY

Scot Cocam

Arthur G. Burton
Laboratory Director

CHAIN OF SAMPLE CUSTODY RECORD

Collector: Tanner Shah Date Sampled: 10-03-88 Time: 2-3:30PM

Location of Sampling: 2345 East 14th Street, Oakland, CA

Project Number: CEC/SBW 9.8.2 Survey Number:

Sample Type: Grab Ground Water

Container Type and Condition: Six number 40ml VOA's

Contract Laboratory Record/Name: Sequoia Analytical Lab, 2549 Middlefield Rd, Redwood City CA 94063

Sample ID	Field Information
B_1-W	Grab Ground Water Sample from boring B_1
B_2-W	Grab Ground Water Sample from boring B_2
B_3-W	Grab Ground Water Sample from boring B_3

Analysis Requested: (I) Analyse Water Samples B_1-W and B_2-W
(1) TPH G by EPA Test Method 5030
(2) B, T, X & C by EPA Test Method 602

(II) Analyse water Sample B_3-W by:
(1) EPA Method 5030 and

Results Needed By: (2) EPA 601 (3) EPA 602, (4) EPA 503 A & E.

Travel Blank:	☐ Yes	☒ No	Travel Blank to be Analyzed Separately:	☐ Yes	☒ No
Duplicate Samples:	☐ Yes	☒ No	Duplicates to be Analyzed Separately:	☐ Yes	☒ No
Field Blank:	☐ Yes	☒ No	Field Blank to be Analyzed Separately:	☐ Yes	☒ No
Background Soil Sample:	☐ Yes	☒ No	Background Soil Sample to be Analyzed Separately:	☐ Yes	☒ No

Chain of Custody:

1. Field Personnel		Oct 3, 88 Date
2. Courier		Oct 3, 88 Date
3. Lab		10/3/88 2:30 Date

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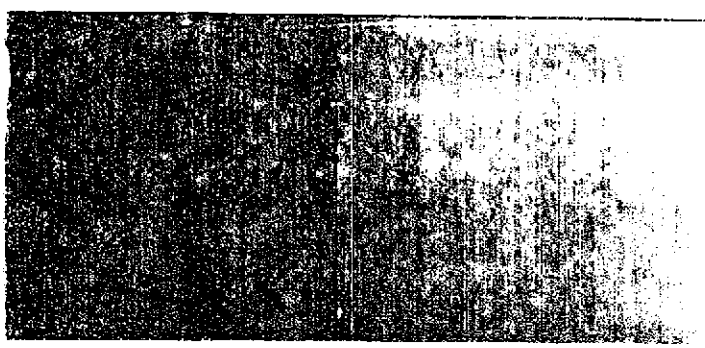

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California Environmental Consultants
1117 Happy Valley Avenue
San Jose, CA 95129
Attn: Munir Butt

Date Sampled: 10/03/88
Date Received: 10/03/88
Date Extracted: 10/28/88
Date Reported: 10/31/88

Project: #CEC/SBW 9-88-2

TOTAL OIL AND GREASE

Sample Number	Sample Description	Detection Limit	Gravimetric Petroleum Oil
	Water	ppm	ppm
8100019	B3-W	5.0	290

Method of Analysis: EPA 3550 with trichlorotrifluoroethane and gravimetric determination.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL LABORATORY

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California Environmental Consultants
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San Jose, CA 95129
Attn: Munir Butt

Date Sampled: 10/03/88
Date Received: 10/03/88
Date Analyzed: 10/06/88
Date Reported: 10/31/88

Project: #CEC/SBW 9-88-2

AROMATIC VOLATILE ORGANICS

Sample Number: 8100019

Sample Description: Water, B3-W

Analyte	Detection Limit µg/L	Sample Results µg/L
Benzene	25	490
Chlorobenzene	50	N.D.
1,4-Dichlorobenzene	100	N.D.
1,3-Dichlorobenzene	100	N.D.
1,2-Dichlorobenzene	100	N.D.
Ethyl Benzene	25	770
Toluene	25	160
Xylenes	25	1300

Method of Analysis: EPA 5030/8020

Analytes reported as N.D. were not present above the stated limit of detection.

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California Environmental Consultants
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San Jose, CA 95129
Attn: Munir Butt

Date Sampled: 11/02/88
Date Received: 11/02/88
Date Analyzed: 11/03/88
Date Reported: 11/07/88

Project: CEC/SBW9.88.2.1

TOTAL PETROLEUM FUEL HYDROCARBONS WITH BTEX DISTINCTION

Sample Number	Sample Description Soil	Low to Medium Boiling Point Hydrocarbons ppm	Benzene ppm	Toluene ppm	Ethyl Benzene ppm	Xylenes ppm
8110126	SP1	1.3	N.D.	N.D.	N.D.	N.D.
8110127	SP2	13	N.D.	N.D.	N.D.	N.D.
Detection Limits:		1.0	0.05	0.1	0.1	0.1

Method of Analysis: EPA 5030 or 3810/8015/8020

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

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California Environmental Consultants
1117 Happy Valley Avenue
San Jose, CA 95129
Attn: Munir Butt

Date Sampled: 11/02/88
Date Received: 11/02/88
Date Analyzed: 11/03/88
Date Reported: 11/07/88

Project: CEC/SBW9.88.2.1

AROMATIC VOLATILE ORGANICS

Sample Number	Sample Description
8110128	Soil, SP3

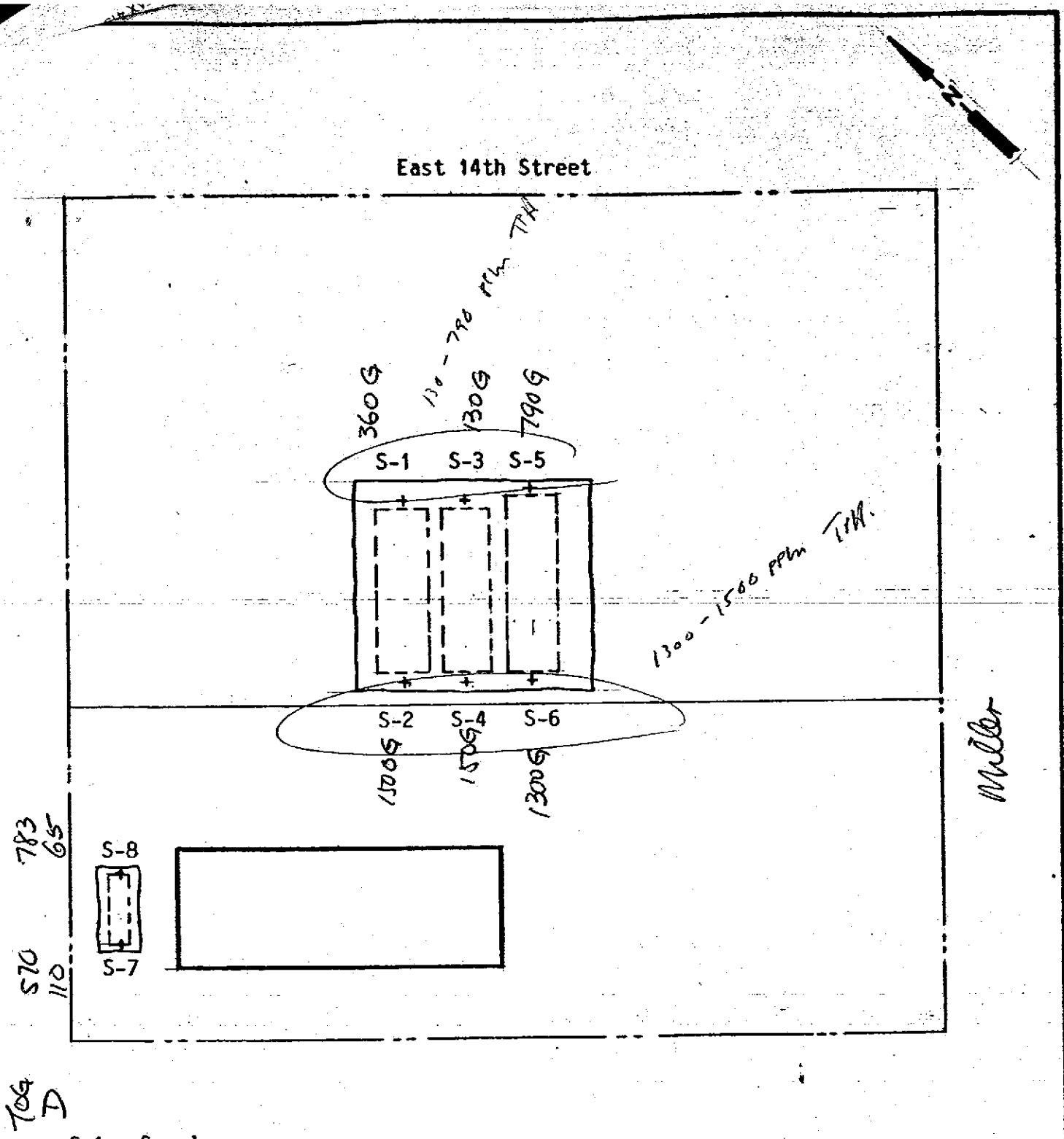
Analyte	Detection Limit µg/kg	Sample Results µg/kg
Benzene	5.0	N.D.
Chlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	10	N.D.
1,3-Dichlorobenzene	10	N.D.
1,2-Dichlorobenzene	10	N.D.
Ethyl Benzene	5.0	N.D.
Toluene	5.0	N.D.
Xylenes	5.0	N.D.

Method of Analysis: EPA 5030/8020

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director



S-1 - Sample

Not To Scale

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS INC.
8781-D SIERRA COURT
DUBLIN CA 94568

WEST COAST TANK COMPANY
TAXI-TAXI
OAKLAND, CALIFORNIA
SITE PLAN

Project No 38812.01 Date 9-14-88

Plate 1

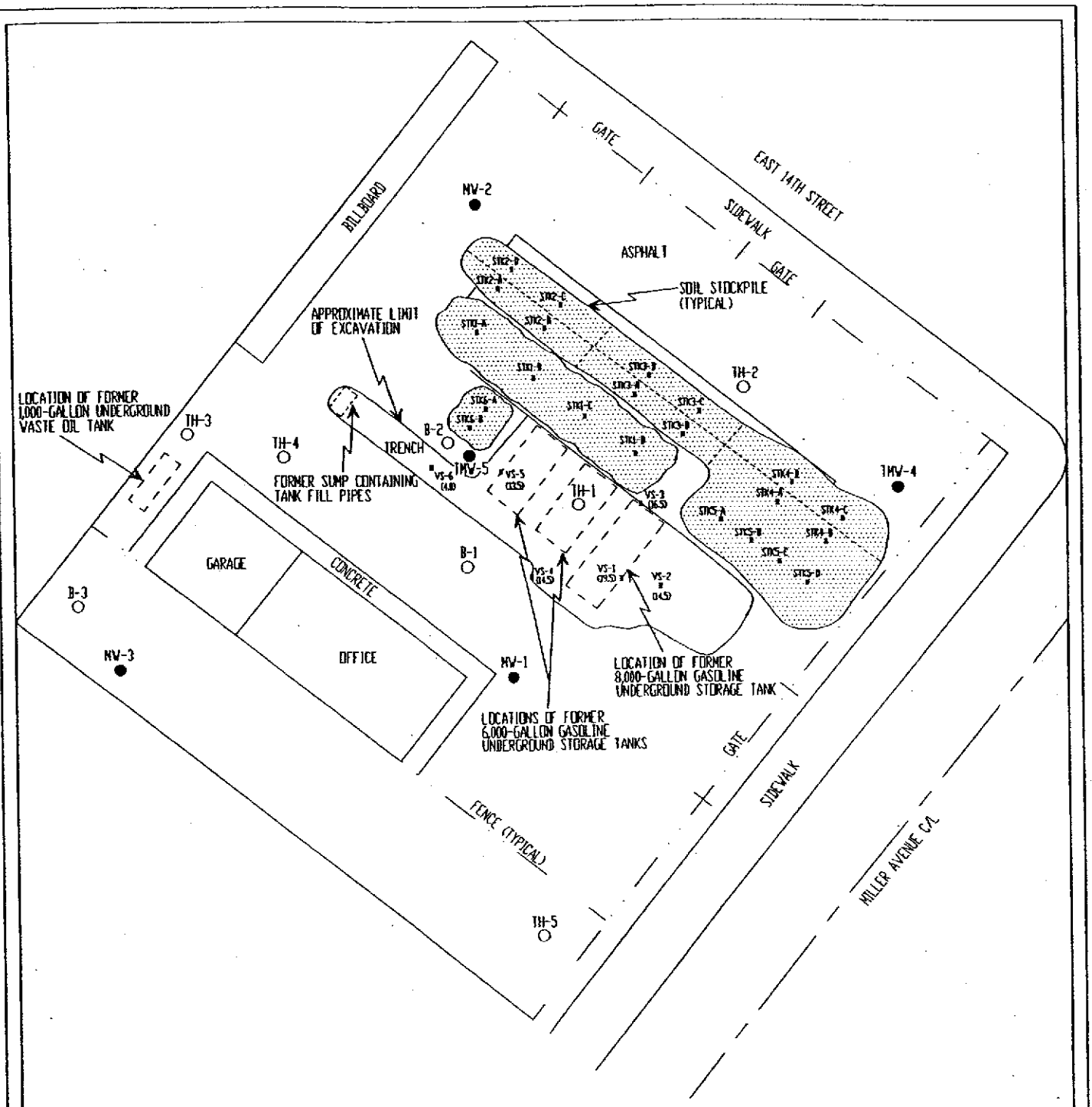
TABLE I

Results of Analysis

Sample	Benzene	Toluene	Ethylbenzene	Xylene	Gasoline	Total Lead
B-1	0.3	2.2	3.4	31	360	4.6
B-2	3.0	6.4	2.5	160	1,500	316
B-3	0.17	0.4	1.3	10	130	4.8
B-4	0.8	1.9	8.7	86	150	255
B-5	61	1.3	4.8	30	790	259
B-6	1.5	4.7	9.6	75	1,300	197

	Total Oil & Grease (503E)	Total Extractable Hydrocarbons as Diesel (8015 as Diesel)
B-7	570	110
B-8	783	65

- ALL STOCK PILES NEED TO BE SAMPLED & LESS THAN 100 PPM TPH



LEGEND

- TMW-4 ● — NAME AND LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY TPE
- MW-1 ● — NAME AND LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY OTHERS
- B-1 ○ — NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS
- VS-1 ✕ (19.5) — NAME, LOCATION, AND DEPTH OF SOIL SAMPLE

-N-

0 30

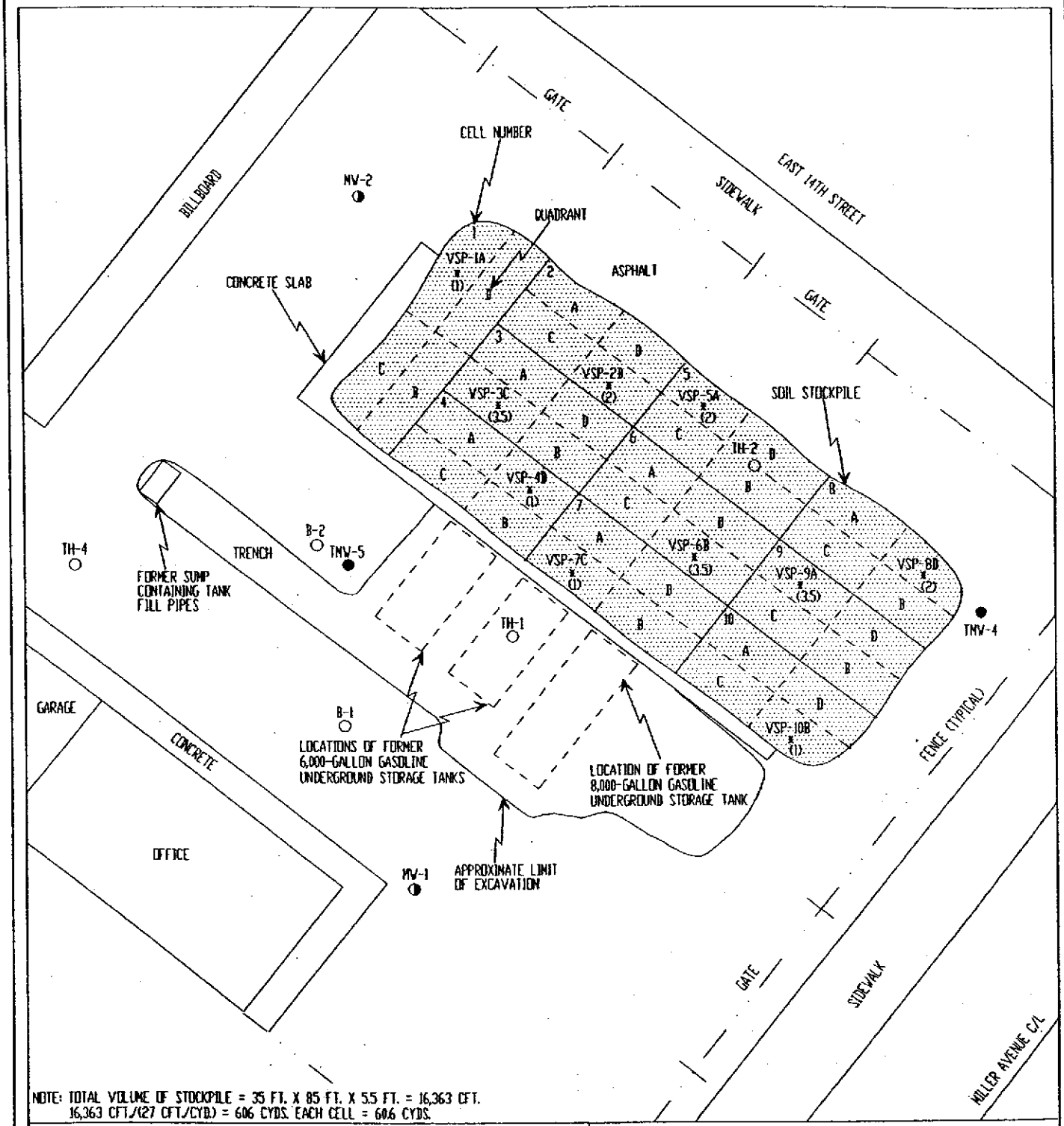
APPROXIMATE SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN
EXCAVATION (12/15/94)

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	12/11/96
FIGURE	3
FILE #	267-3N
DRAWN BY	VK
CHECKED BY	LNH



NOTE: TOTAL VOLUME OF STOCKPILE = 35 FT. X 85 FT. X 5.5 FT. = 16,363 CFT.
16,363 CFT./(27 CFT./CYD.) = 606 CYDS. EACH CELL = 60.6 CYDS.

LEGEND

TMW-4 ●	NAME AND LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY TPE
MW-1 ◑	NAME AND LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY OTHERS
B-1 ○	NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS
VSP-1A x (1)	NAME, DEPTH AND APPROXIMATE LOCATION OF VERIFICATION SOIL SAMPLE

-N-

0 20

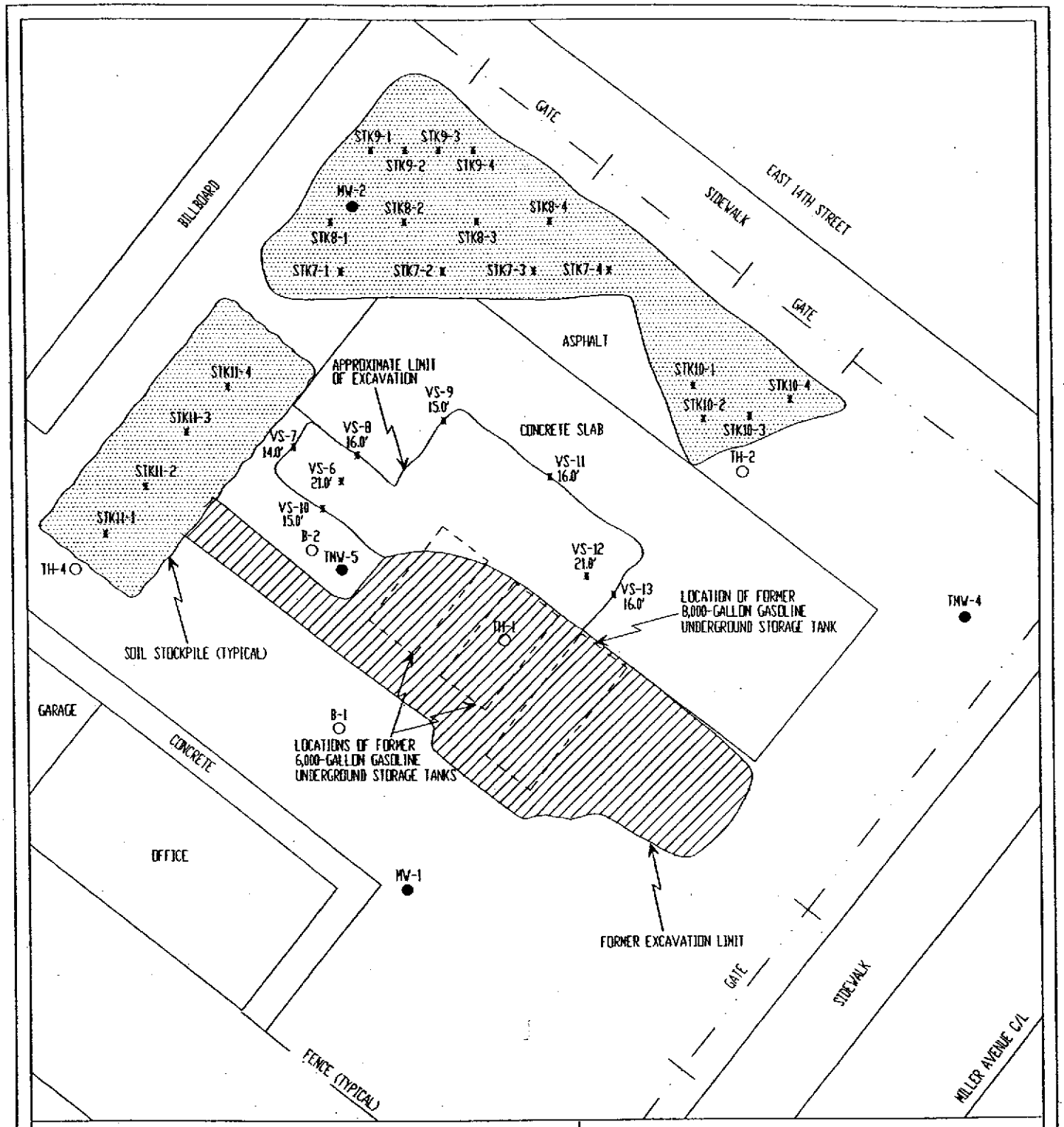
APPROXIMATE SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN
VERIFICATION STOCKPILE SAMPLING (5/12/95)

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	12/11/96
FIGURE	4
FILE #	267-4N
DRAWN BY	VK
CHECKED BY	LNH



LEGEND

- TMW-4 ● NAME AND LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY TPE
- MW-1 ● NAME AND LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY OTHERS
- B-1 ○ NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS
- VS-9 15.0' * NAME, DEPTH, AND LOCATION OF SOIL SAMPLE
- AREA BACKFILLED

-N-

0 20

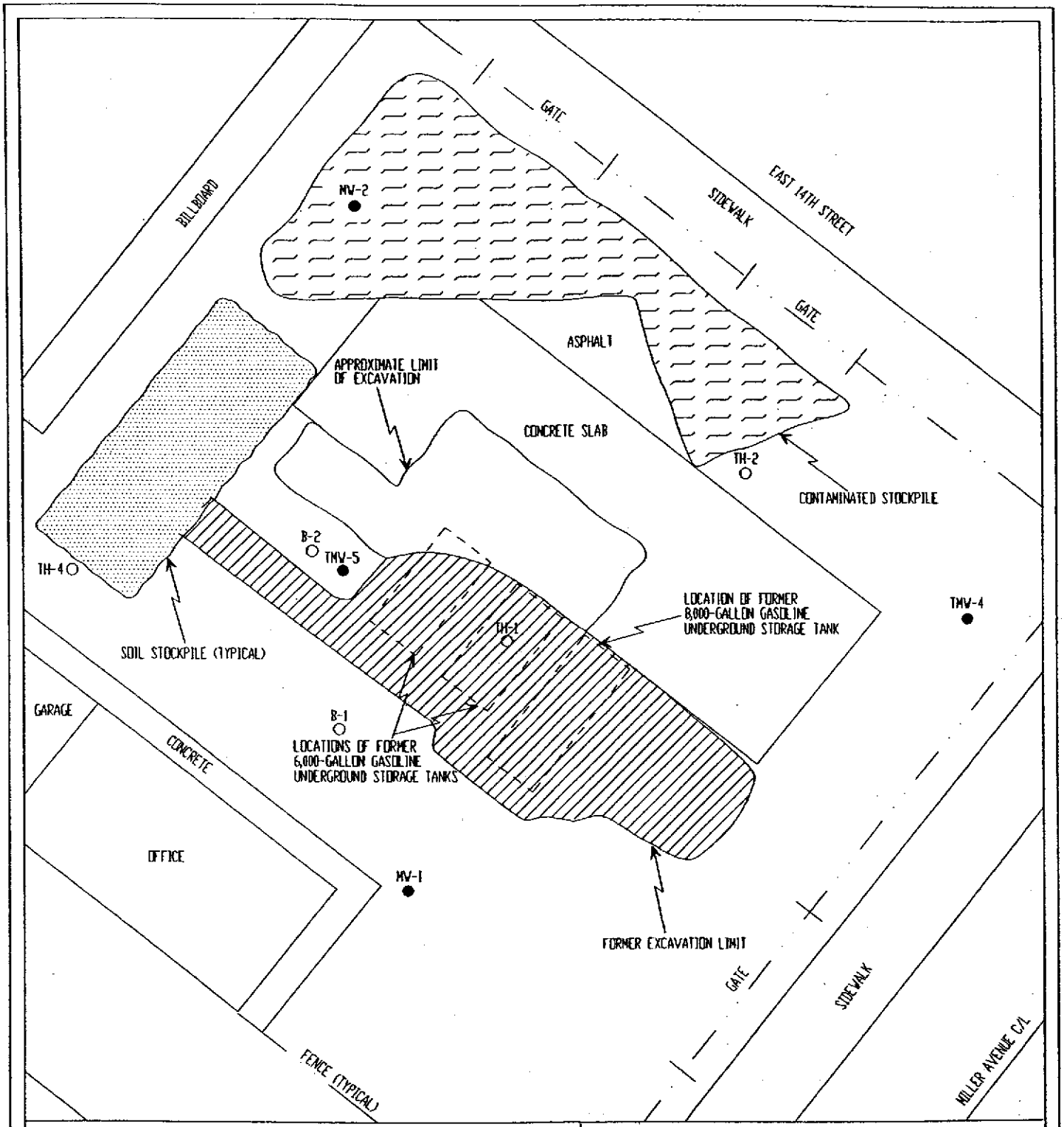
APPROXIMATE SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN:
EXCAVATION (6/30/95 THROUGH 7/5/95)

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	12/11/96
FIGURE	5
FILE #	267-SN
DRAWN BY	VK
CHECKED BY	LNH



LEGEND

- TMW-4 ● NAME AND LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY TPE
- MW-1 ● NAME AND LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY OTHERS
- B-1 ○ NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS
- LOCATION OF STOCKPILE SAMPLED (7/12/95)
- AREA BACKFILLED

-N-

0 20

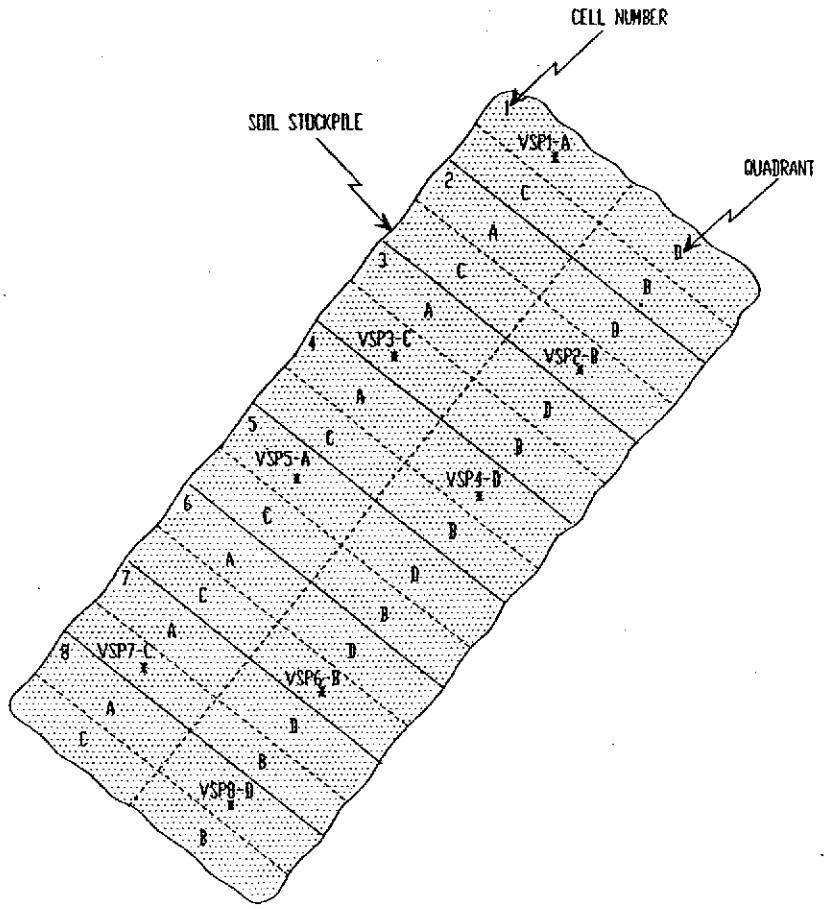
APPROXIMATE SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN:
LOCATION OF VERIFICATION STOCKPILE SAMPLING (7/12/95)

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	12/11/96
FIGURE	6
FILE #	267-6N
DRAWN BY	VK
CHECKED BY	LNH



NOTE: TOTAL VOLUME OF STOCKPILE 42X17X6 = 4284 CFT
4284 CFT / 27 CFT/ CYD = 158.66 CYDS
EACH CELL = 19.83 CYDS

LEGEND

VSP1-A * NAME AND APPROXIMATE LOCATION OF SOIL SAMPLE

-N-

0 10

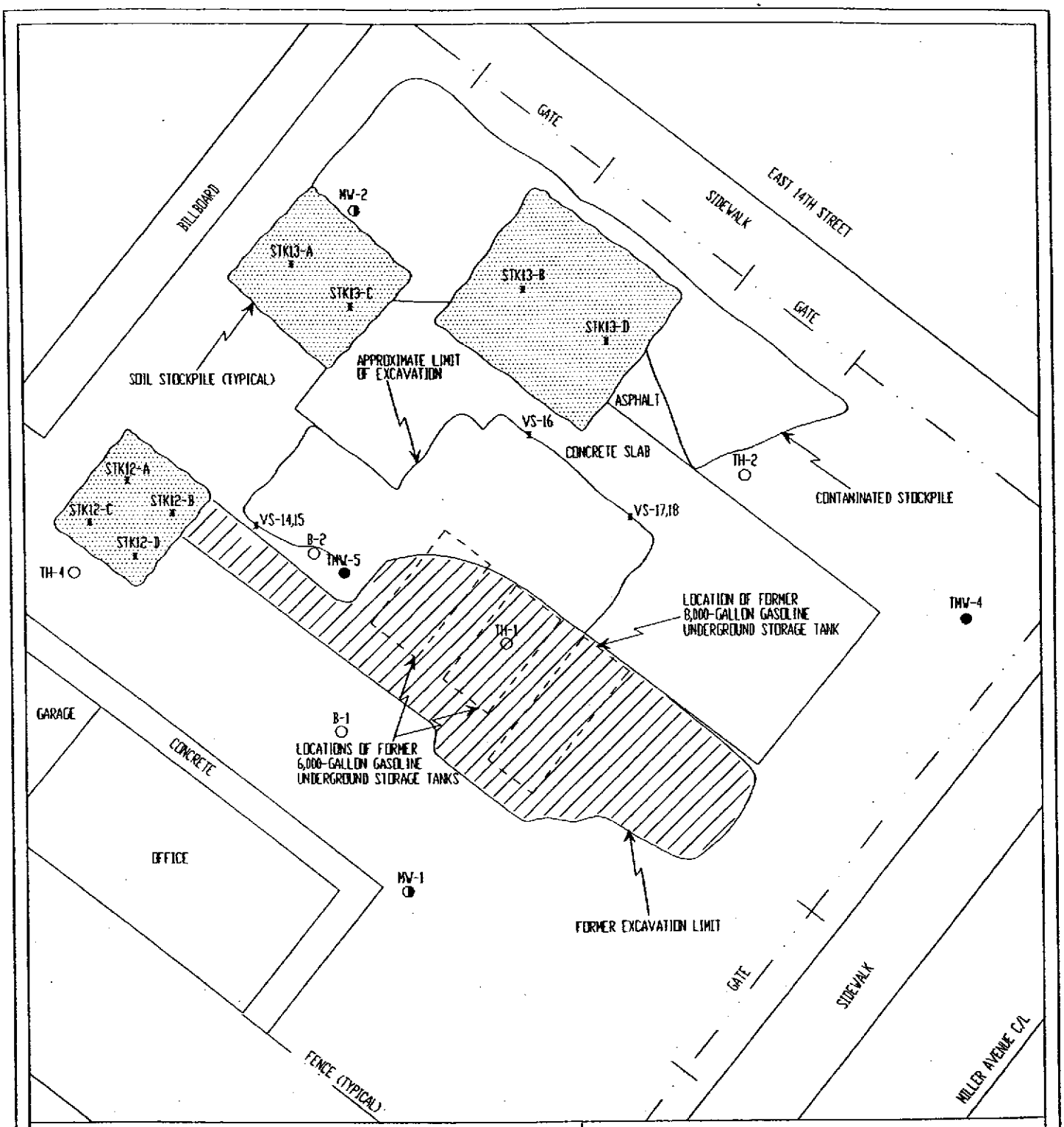
SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN:
VERIFICATION STOCKPILE SAMPLING (7/12/95)

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	12/11/96
FIGURE	7
FILE #	267-7N
DRAWN BY	VK
CHECKED BY	LNH



LEGEND

TMW-4 ●	NAME AND LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY TPE
MW-1 ◑	NAME AND LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY OTHERS
B-1 ○	NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS
STK12A VS-16' ✱	NAME AND LOCATION OF SOIL SAMPLE
▨	AREA BACKFILLED

-N-

0 20

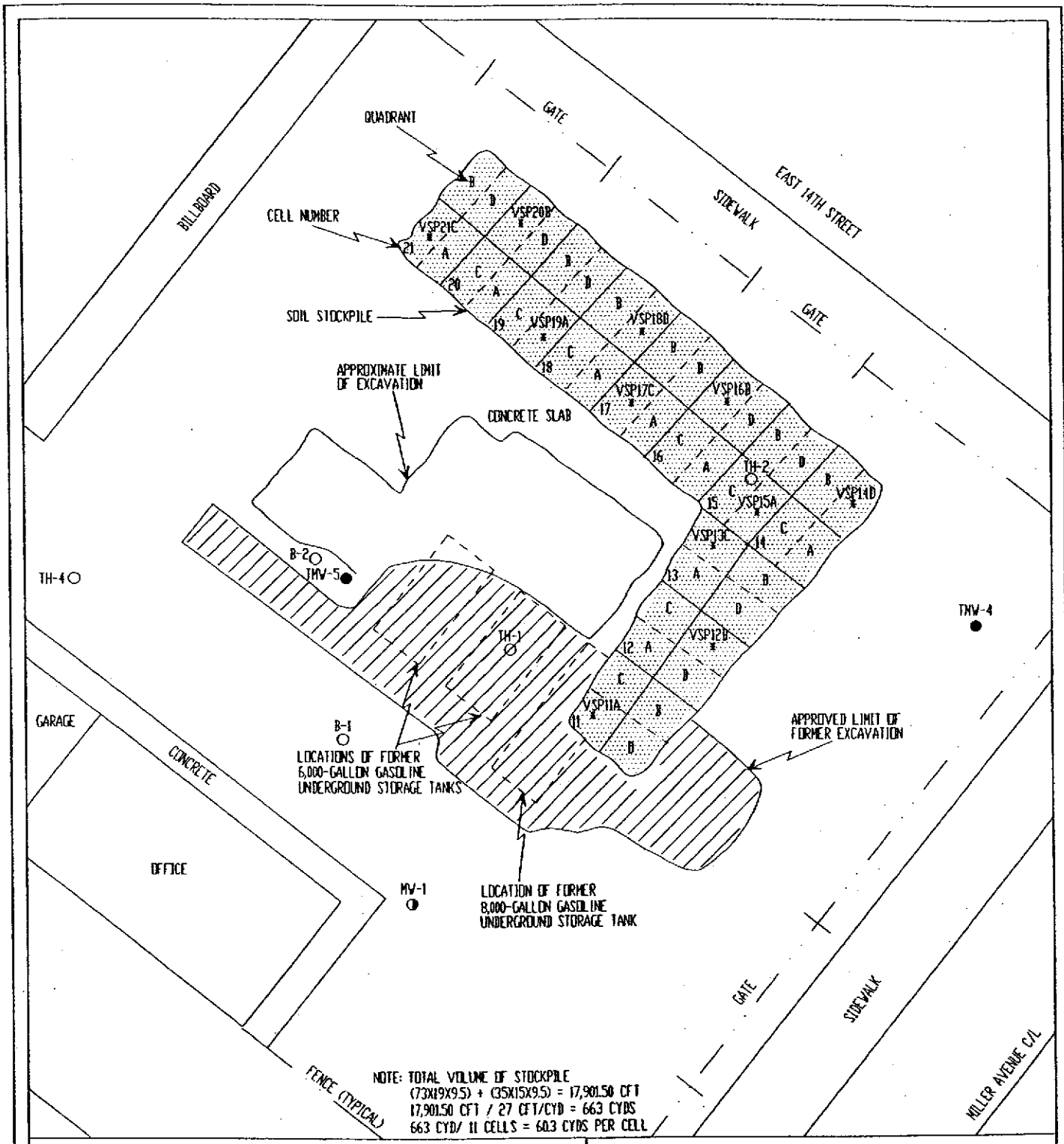
APPROXIMATE SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN:
EXCAVATION (7/28/95)

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	12/11/96
FIGURE	8
FILE #	267-8N
DRAWN BY	VK
CHECKED BY	LNH



NOTE: TOTAL VOLUME OF STOCKPILE
(73X19X9.5) + (35X15X9.5) = 17,901.50 CFT
17,901.50 CFT / 27 CFT/CYD = 663 CYDS
663 CYD/ 11 CELLS = 60.3 CYDS PER CELL

LEGEND

- TMW-4 ● NAME AND LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY TPE
- MW-1 ◑ NAME AND LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY OTHERS
- B-1 ○ NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS
- VSP11A * NAME AND LOCATION OF SOIL SAMPLE
- AREA BACKFILLED

-N-

0 20

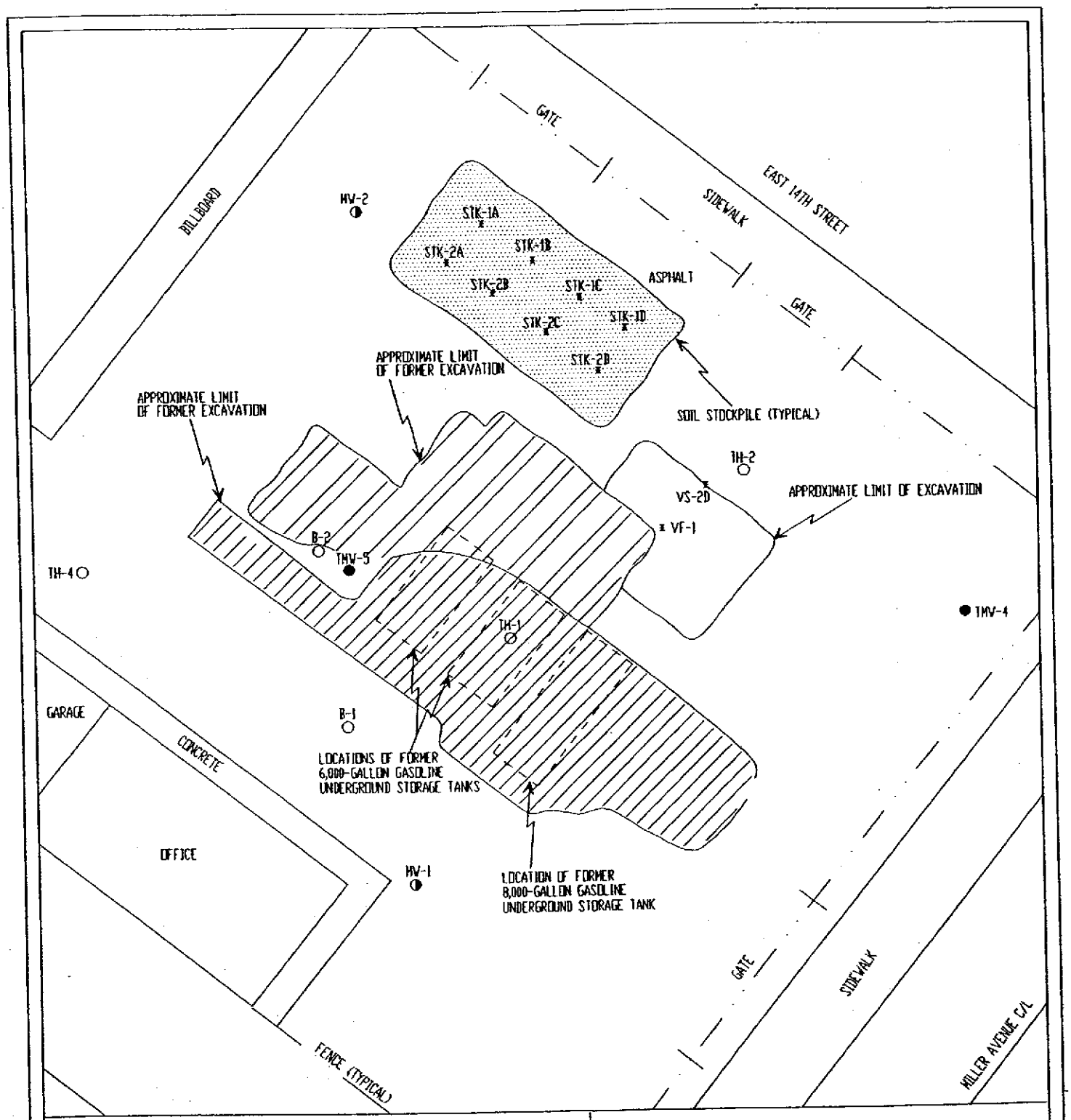
APPROXIMATE SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN:
VERIFICATION STOCKPILE SAMPLING (10\2\95)

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	12/11/96
FIGURE	9
FILE #	267-9N
DRAWN BY	VK
CHECKED BY	LNH



LEGEND

TMW-4 ●	NAME AND LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY TPE
MW-1 ◑	NAME AND LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY OTHERS
B-1 ○	NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS
STK-1A ✕	NAME AND LOCATION OF SOIL SAMPLE
▨	AREA BACKFILLED

-N-

0 20

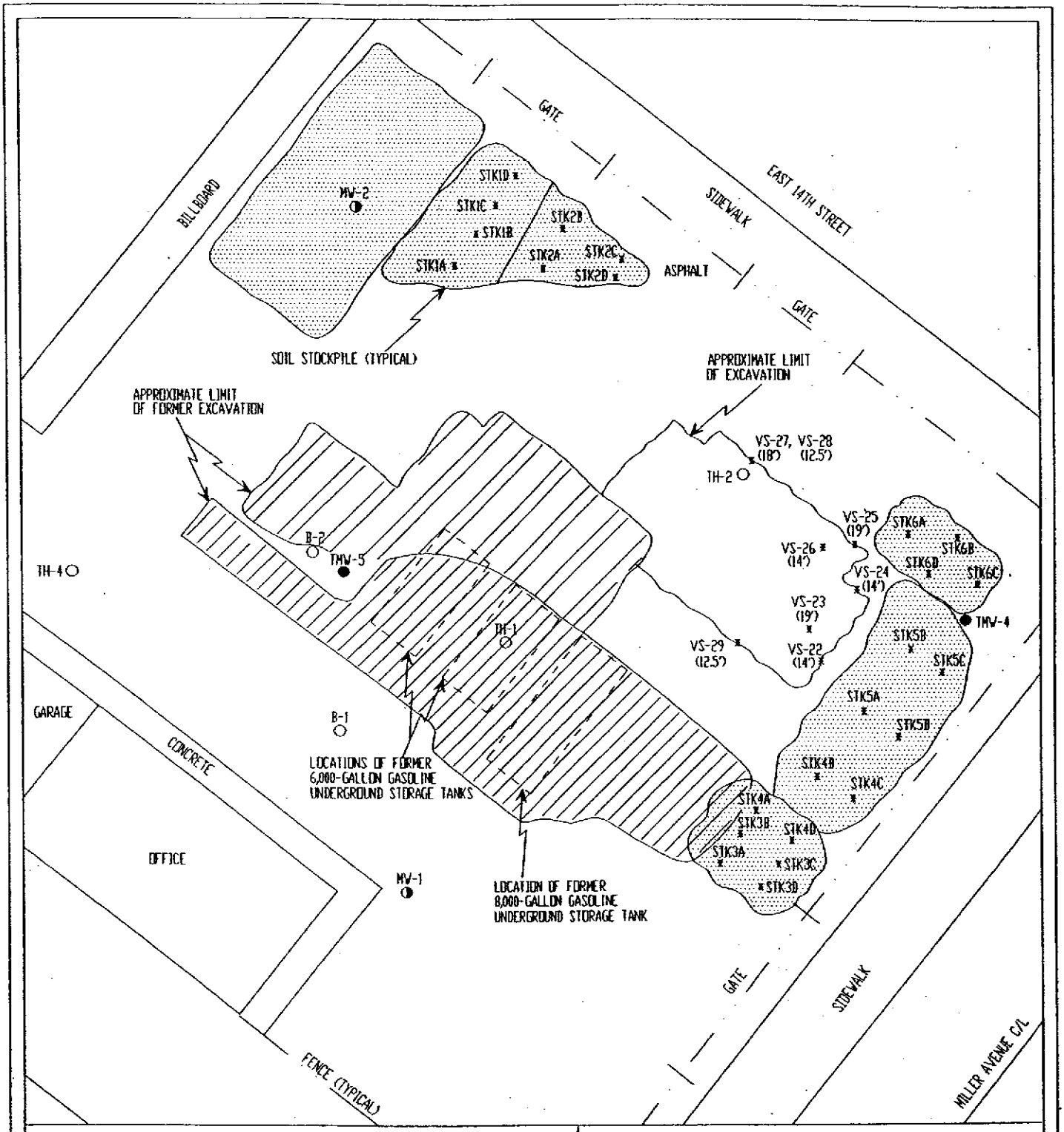
APPROXIMATE SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN: EXCAVATION (5/24/96)

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	12/11/96
FIGURE	1B
FILE #	267-10N
DRAWN BY	VK
CHECKED BY	LNH



LEGEND

TMW-4 ●	NAME AND LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY TPE
MW-1 ◑	NAME AND LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY OTHERS
B-1 ○	NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS
VS-27 (18') ✕	NAME, DEPTH, AND LOCATION OF SOIL SAMPLE
▨	AREA BACKFILLED

-N-

0 20

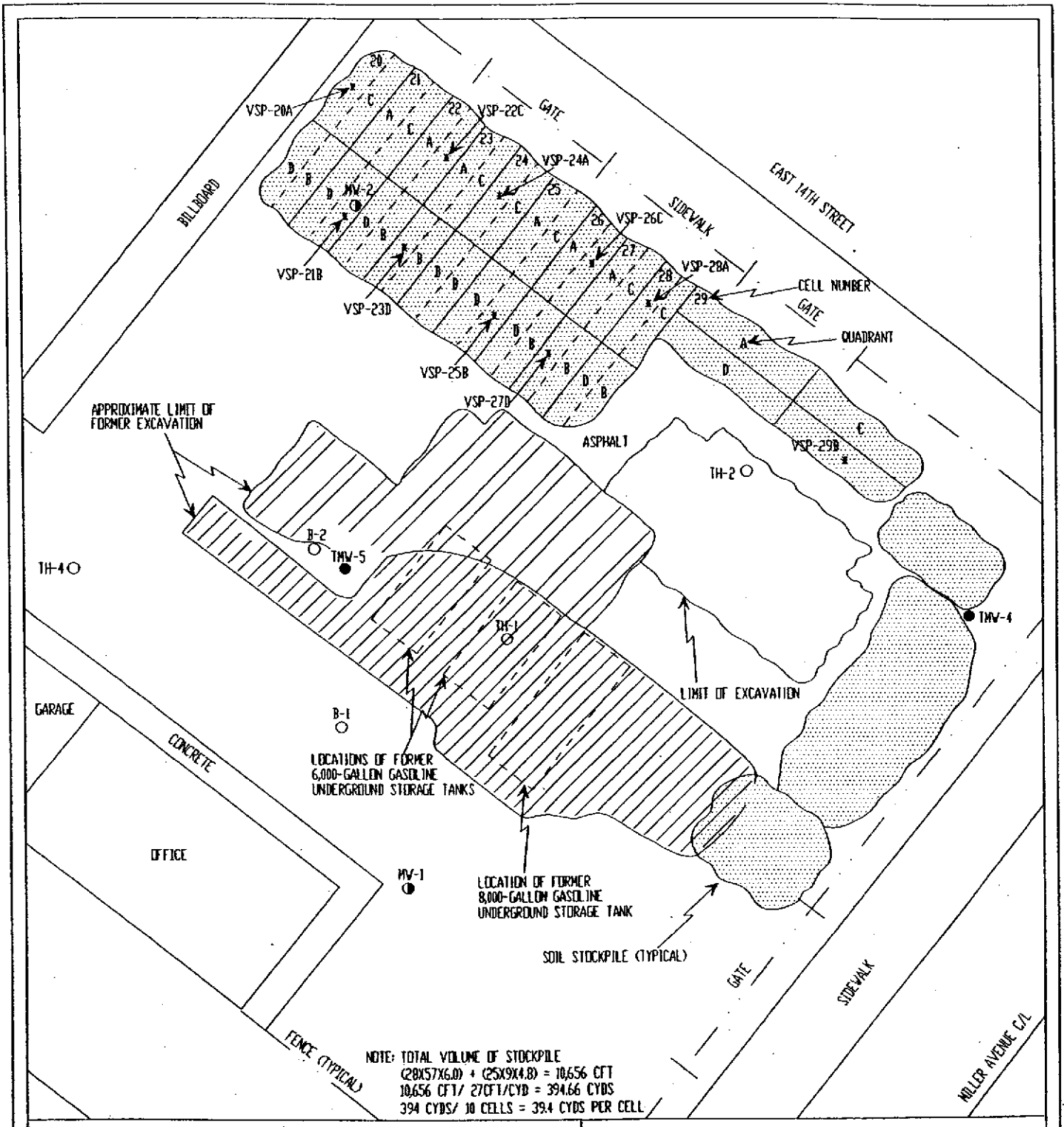
APPROXIMATE SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN:
EXCAVATION (5/29 AND 5/30/96)

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	12/11/96
FIGURE	11
FILE #	267-11N
DRAWN BY	VK
CHECKED BY	LNH



LEGEND

- TMW-4 ● NAME AND LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY TPE
- MW-1 ◑ NAME AND LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY OTHERS
- B-1 ○ NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS
- VSP-20A ⧗ NAME AND LOCATION OF SOIL SAMPLE
- AREA BACKFILLED

-N-

0 20

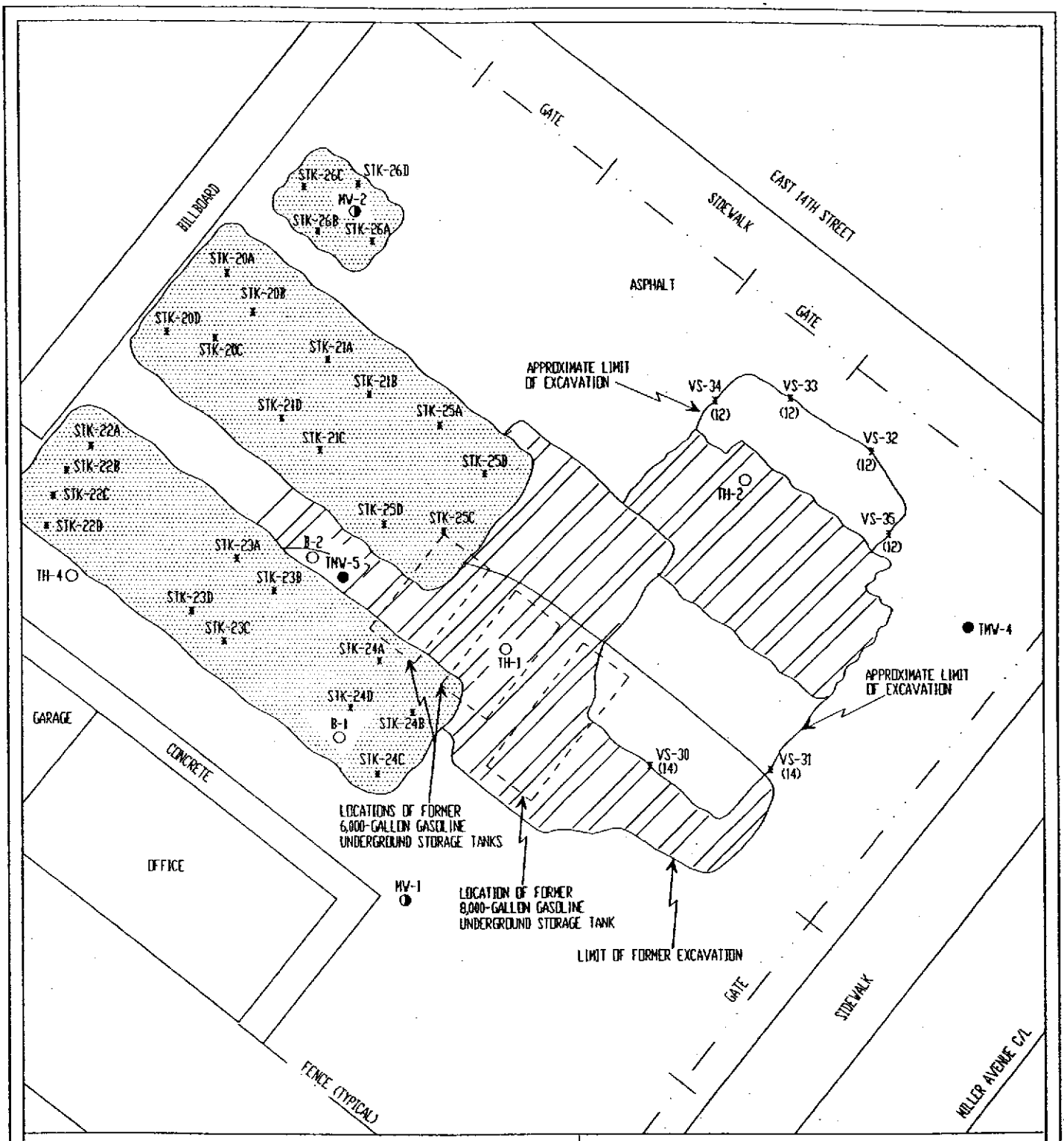
APPROXIMATE SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN:
STOCKPILE SOIL SAMPLING (7/30/96)

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	12/11/96
FIGURE	12
FILE #	267-12N
DRAWN BY	VK
CHECKED BY	LNH



LEGEND

VS-33 (12) NAME, DEPTH, AND LOCATION OF SOIL SAMPLE

TMW-4 NAME AND LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY TPE

MW-1 NAME AND LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY OTHERS

B-1 NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS

AREA BACKFILLED

-N-

0 20

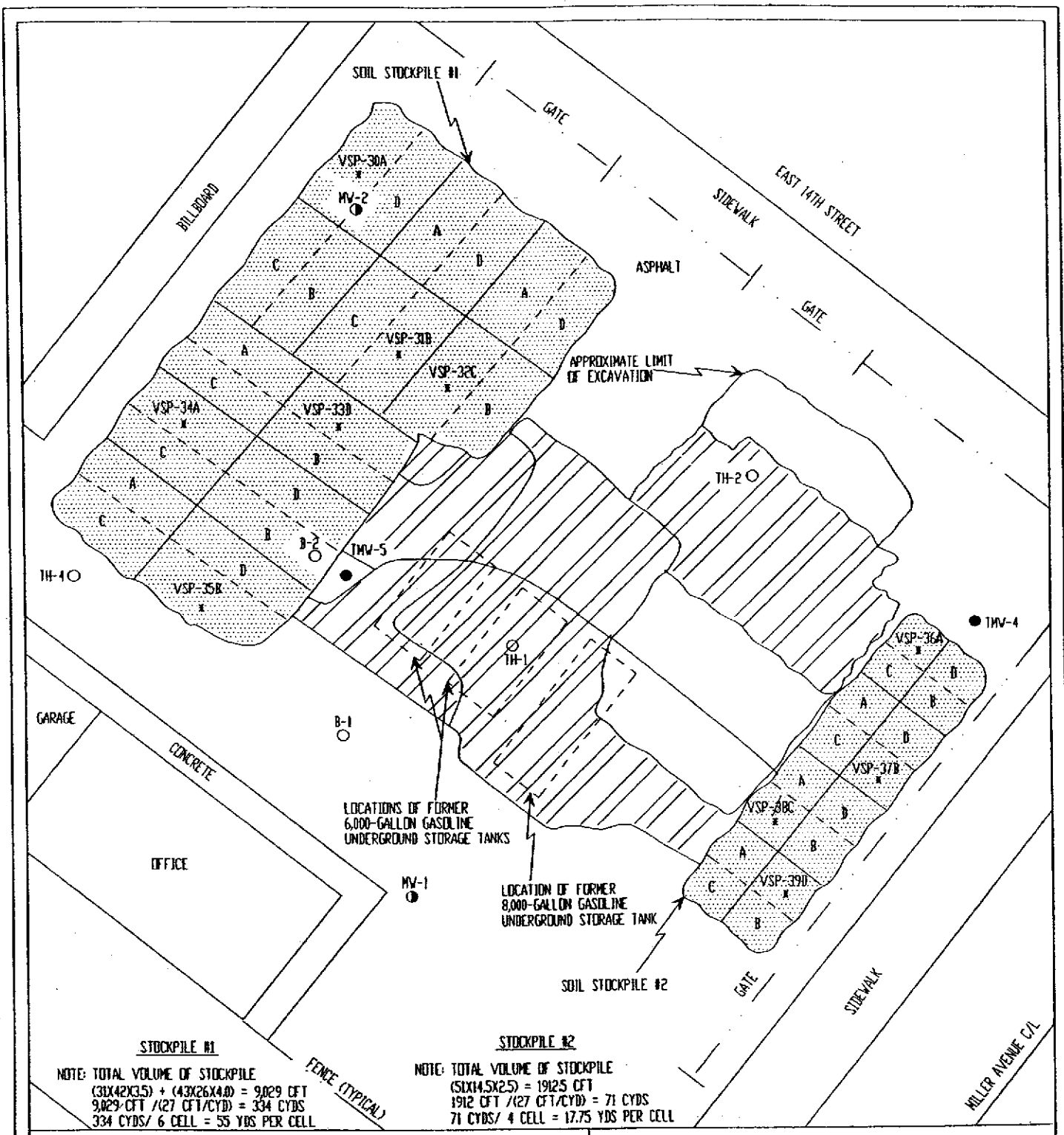
APPROXIMATE SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN:
EXCAVATION (9/16/96 AND 9/17/96)

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	12/11/96
FIGURE	13
FILE #	267-13N
DRAWN BY	VK
CHECKED BY	LNH



STOCKPILE #1

NOTE: TOTAL VOLUME OF STOCKPILE
(31X42X3.5) + (43X26X4.0) = 9,029 CFT
9,029 CFT /(27 CFT/CYD) = 334 CYDS
334 CYDS/ 6 CELL = 55 YDS PER CELL

STOCKPILE #2

NOTE: TOTAL VOLUME OF STOCKPILE
(51X14.5X2.5) = 19125 CFT
1912 CFT /(27 CFT/CYD) = 71 CYDS
71 CYDS/ 4 CELL = 17.75 YDS PER CELL

LEGEND

- VSP30-A ✕ NAME AND APPROXIMATE LOCATION OF SOIL SAMPLE
- TMW-4 ● NAME AND LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY TPE
- MW-1 ◑ NAME AND LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY OTHERS
- B-1 ○ NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS
- AREA BACKFILLED

-N-

0 20

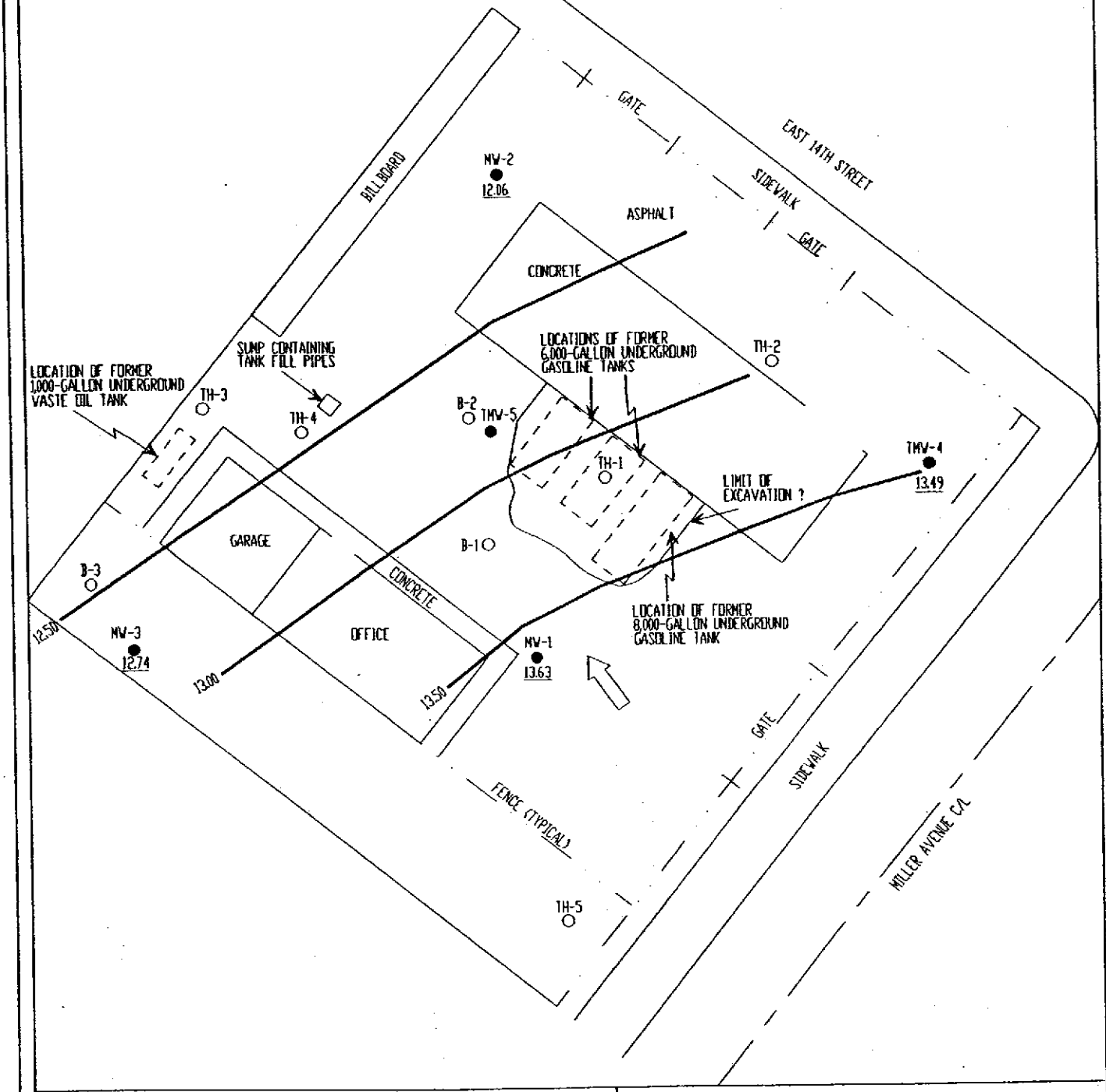
APPROXIMATE SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN:
VERIFICATION STOCKPILE SAMPLING (10/4/96)

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	12/11/96
FIGURE	14
FILE #	267-14N
DRAWN BY	VK
CHECKED BY	LNH



LEGEND

TMW-4 ●	NAME AND LOCATION OF MONITORING WELL INSTALLED BY TPE
MW-1 ●	NAME AND LOCATION OF MONITORING WELL INSTALLED BY OTHERS
B-1 ○	NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS
12.74	POTENTIOMETRIC ELEVATION
12.50	POTENTIOMETRIC CONTOUR
⇦	GROUNDWATER FLOW DIRECTION

-N-

0 30

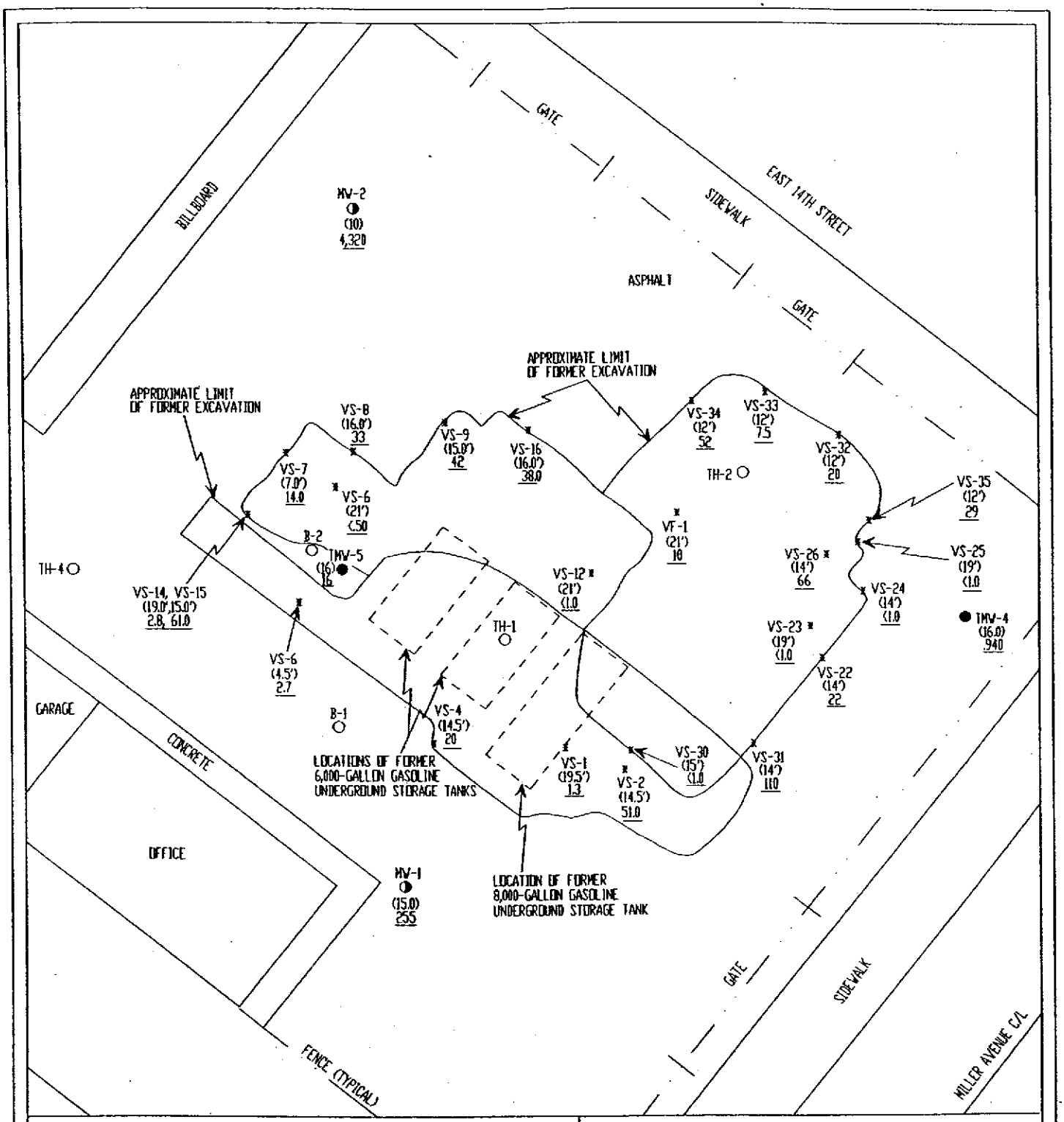
SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN:
GROUNDWATER GRADIENT MAP (9/24 AND 9/30//96)

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	12/11/96
FIGURE	15
FILE #	267-15N
DRAWN BY	VK
CHECKED BY	LMH



LEGEND

- ○ NAME LOCATION OF MONITORING WELL (DEPTH OF SAMPLE COLLECTED DURING INSTALLATION)
- 100 CONCENTRATION TPHG (ppm)
- VS-27 (18') NAME, DEPTH, AND LOCATION OF SOIL SAMPLE
- AREA BACKFILLED

-N-

0 20

APPROXIMATE SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN: LOCATION OF FINAL VERIFICATION SOIL SAMPLING

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	12/11/96
FIGURE	16
FILE #	267-16N
DRAWN BY	VK
CHECKED BY	LNH

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
(ppm[1])

Sample ID Name	Date	Depth (Feet)	TPHG	Methyl t-Butyl Ether	Benzene	Toluene	Ethyl-benzene	Xylenes
B-1	10/03/88	15.0	3.4	NA[4]	.310	<0.1	<0.1	.140
B-2	10/03/88	15.0	83	NA	1.6	1.1	1.8	9.6
B-3	10/03/88	15.0	NA	NA	.360	.650	.470	.850
MW-1	05/22/91	10.0	150	NA	.460	.365	.305	.960
MW-1	05/22/91	15.0	255	NA	1.505	4.255	4.015	4.270
TH-1	08/21/91	15.0	2,775	NA	1.235	1.060	1.625	5.280
TH-2	08/21/91	10.0	360	NA	<0.005	<0.005	<0.005	0.770
TH-2	08/21/91	30.0	50	NA	<0.005	<0.005	<0.005	<0.005
MW-2	08/21/91	10.0	4,320	NA	7.275	6.620	3.470	13.815
MW-2	08/21/91	15.0	160	NA	<0.005	<0.005	<0.005	<0.005
TH-3[2]	08/22/91	10.0	10	NA	<0.005	<0.005	<0.005	<0.005
TH-3[2]	08/22/91	19.0	10	NA	<0.005	<0.005	<0.005	<0.005
TH-4[2]	08/22/91	10.0	25	NA	<0.005	<0.005	<0.005	0.175
TH-4[2]	08/22/91	20.0	450	NA	<0.005	<0.005	<0.005	<0.005
MW-3[2]	08/22/91	10.0	50	NA	<0.005	<0.005	<0.005	<0.005
MW-3[2]	08/22/91	15.0	25	NA	<0.005	<0.005	<0.005	<0.005
TH-5	08/22/91	10.0	10	NA	<0.005	<0.005	<0.005	<0.005
TH-5	08/22/91	18.0	<5	NA	<0.005	<0.005	<0.005	<0.005
TMW-4	07/22/93	5.5-6.0	<.500	NA	<0.005	<0.005	<0.005	<.015
TMW-4	07/22/93	10.5-11.0	<.500	NA	<0.005	<0.005	<0.005	<.015
TMW-4	07/22/93	15.5-16.0	.940	NA	<0.005	<0.005	<0.005	<.015
TMW-5	07/23/93	5.5-6.0	2.4	NA	.026	<0.005	<0.005	.053
TMW-5	07/23/93	10.5-11.0	14	NA	.900	<0.005	1.6	<.140
TMW-5	07/23/93	15.5-16.0	16	NA	.840	<0.005	.690	1.3
VS-1	12/06/94	19.5	1.3	NA	.010	.061	.027	.190
VS-2	12/06/94	14.5	51	NA	.61	.100	1.3	.940
VS-3	12/06/94	16.5	210	NA	1.1	.300	4.5	140

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
(ppm[1])

Sample ID Name	Date	Depth (Feet)	TPHG	Methyl t-Butyl Ether	Benzene	Toluene	Ethyl-benzene	Xylenes
VS-4	12/06/94	14.5	20	NA	1.2	.094	.470	2.4
VS-5	12/06/94	13.5	100	NA	.440	<.150	2.2	8.5
VS-6	12/06/94	4.0	2.7	NA	.046	<0.005	<0.005	<0.015
STK1-A,B,C,D	12/06/94	2.0-2.5	5.3	NA	<.014	<.014	.023	.12
STK2-A,B,C,D	12/06/94	2.0-2.5	9.2	NA	.015	<.014	.084	.300
STK3-A,B,C,D	12/06/94	3.5-4.0	45	NA	<.140	.180	.710	4.4
STK4-A,B,C,D	12/06/94	3.0-3.5	40	NA	.380	.140	.750	2.5
STK5-A,B,C,D	12/06/94	4.0-4.5	78	NA	.200	.780	1.2	8.1
STK6-A,B	12/06/94	2.0-2.5	9.8	NA	.052	<0.015	.046	.240
VSP-1A	05/12/95	1.0-1.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP-2B	05/12/95	2.0-2.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP-3C	05/12/95	3.5-4.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP-4D	05/12/95	1.0-1.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP-5A	05/12/95	2.0-2.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP-6B	05/12/95	3.5-4.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP-7C	05/12/95	1.0-1.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP-8D	05/12/95	2.0-2.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP-9A	05/12/95	3.5-4.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP-10B	05/12/95	1.0-1.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VS-6	06/30/95	21.0	<0.5	NA	<0.005	<0.005	<0.005	<0.015
VS-7	06/30/95	14.0	50	NA	.370	.070	.990	3.3
STK7(1-4)	07/03/95	3.0-3.5	290	NA	.560	.970	3.0	11.0
STK8(1-4)	07/03/95	2.0-2.5	49	NA	.100	.100	.550	1.8
STK9(1-4)	07/03/95	2.0-2.5	78	NA	.052	.036	.520	1.6
STK10(1,2,3,4)	07/03/95	3.0-3.5	22	NA	.012	.012	.032	.089
STK11(1,2,3,4)[3]	07/03/95	3.0-3.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VS-8	07/03/95	16.0	33	NA	.036	.022	.066	.099

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
(ppm[1])

Sample ID Name	Date	Depth (Feet)	TPHG	Methyl t-Butyl Ether	Benzene	Toluene	Ethyl-benzene	Xylenes
VS-9	07/05/95	15.0	42	NA	.060	.036	.089	.120
VS-10	07/05/95	15.0	130	NA	.180	.085	.250	.370
VS-11	07/05/95	16.0	81	NA	.073	.086	.160	.210
VS-12	07/05/95	21.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VS-13	07/05/95	16.0	75	NA	.048	.040	.078	.180
VSP 1A	07/12/95	1.0-1.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 2B	07/12/95	2.0-2.5	4.0	NA	<0.005	.017	.026	.099
VSP 3C	07/12/95	3.5-4.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 4D	07/12/95	1.0-1.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 5A	07/12/95	2.0-2.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 6B	07/12/95	3.5-4.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 7C	07/12/95	1.0-1.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 8D	07/12/95	2.0-2.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VS-14	07/28/95	19.0	2.8	NA	.300	.016	.094	.140
VS-15	07/28/95	15.0	61	NA	.470	.042	1.2	.730
VS-16	07/28/95	16.0	38	NA	.400	.043	.420	.590
VS-17	07/28/95	19.0	14	NA	.120	.018	.150	.110
VS-18	07/28/95	14.0	590	NA	3.1	2.4	10	52
STK12(A-D)	07/28/95	2.0-2.5	87	NA	.260	.140	1.6	3
STK13(A-D)	07/28/95	3.0-3.5	58	NA	.210	.097	.630	2.3
VSP 11A	10/03/95	1.5-2.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 12B	10/03/95	2.0-2.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 13C	10/03/95	3.0-3.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 14D	10/03/95	1.5-2.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 15A	10/03/95	2.0-2.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 16B	10/03/95	3.0-3.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 17C	10/03/95	1.5-2.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
(ppm[1])

Sample ID Name	Date	Depth (Feet)	TPHG	Methyl t-Butyl Ether	Benzene	Toluene	Ethyl-benzene	Xylenes
VSP 18D	10/03/95	2.0-2.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 19A	10/03/95	3.0-3.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 20B	10/03/95	1.5-2.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 21C	10/03/95	2.0-2.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
STK-1 A,B,C,D	05/24/96	2.0-3.0	170	<0.005	.110	.160	.710	2.6
VS-2D	05/24/96	18.0	140	<0.005	.170	.210	.280	1.5
VF-1	05/24/96	21.0	10	<0.005	<0.005	.0074	.0095	.037
STK-2 A,B,C,D	05/24/96	2.0-3.0	320	<0.005	.100	.095	1.2	2.1
STK-1,A,B,C,D	05/29/96	2.5-3.0	1.7	<0.005	<0.005	<0.005	.005	.017
STK-2A,B,C,D	05/29/96	2.5-3.0	140	<0.005	.013	.026	.047	.094
VS-22	05/29/96	14.0	22	<0.005	.0065	<0.005	.020	.031
VS-23	05/29/96	19.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VS-24	05/29/96	14.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VS-25	05/29/96	19.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VS-26	05/29/96	14.0	66	<0.005	.0063	.022	.024	.130
VS-27	05/29/96	18.0	3.9	<0.005	<0.005	<0.005	<0.005	.033
VS-28	05/29/96	12.5	450	<0.005	.170	.120	.280	.390
STK-3A,B,C,D	05/30/96	2.5-3.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
STK-4A,B,C,D	05/30/96	2.5-3.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
STK-5A,B,C,D	05/30/96	2.5-3.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
STK-6A,B,C,D	05/30/96	2.5-3.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VS-29	05/30/96	12.5	470	<0.005	.049	.085	.250	.760
VSP-20A	07/30/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-21B	07/30/96	2.5-3.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-22C	07/30/96	3.5-4.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-23D	07/30/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-24A	07/30/96	2.5-3.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
(ppm[1])

Sample ID Name	Date	Depth (Feet)	TPHG	Methyl t-Butyl Ether	Benzene	Toluene	Ethyl-benzene	Xylenes
VSP-25B	07/30/96	3.5-4.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-26C	07/30/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-27D	07/30/96	2.5-3.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-28A	07/30/96	3.5-4.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-29B	07/30/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
STK-20A,B,C,D	09/16/96	2.0-2.5	44	<0.005	.075	.090	.110	.170
STK-22A,B,C,D	09/16/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
STK-23A,B,C,D	09/16/96	1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VS-30	09/16/96	15	8.2	<0.005	.040	.054	.250	.210
VS-31	09/16/96	14	110	<0.005	.280	.210	.460	.490
STK-25A,B,C,D	09/17/96	1.0	210	<0.005	.180	.098	.120	.240
STK-26A,B,C,D	09/17/96	1.0	31	<0.005	.050	.063	.084	.250
VS-32	09/17/96	12	20	<0.005	.120	.120	.130	.280
VS-33	09/17/96	12	7.5	<0.005	.019	.034	.060	.200
VS-34	09/17/96	12	52	<0.005	.190	.140	.630	.660
VS-35	09/17/96	12	29	<0.005	.023	.130	.072	.500
STK-21A,B,C,D	09/17/96	1.0	90	<0.005	.120	.084	.190	.320
STK-24A,B,C,D	09/17/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-30A	10/04/96	1.0-1.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-31B	10/04/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-32C	10/04/96	2.0-2.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-33D	10/04/96	1.0-1.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-34A	10/04/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-35B	10/04/96	2.0-2.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-36A	10/04/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-37B	10/04/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-38C	10/04/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
(ppm[1])

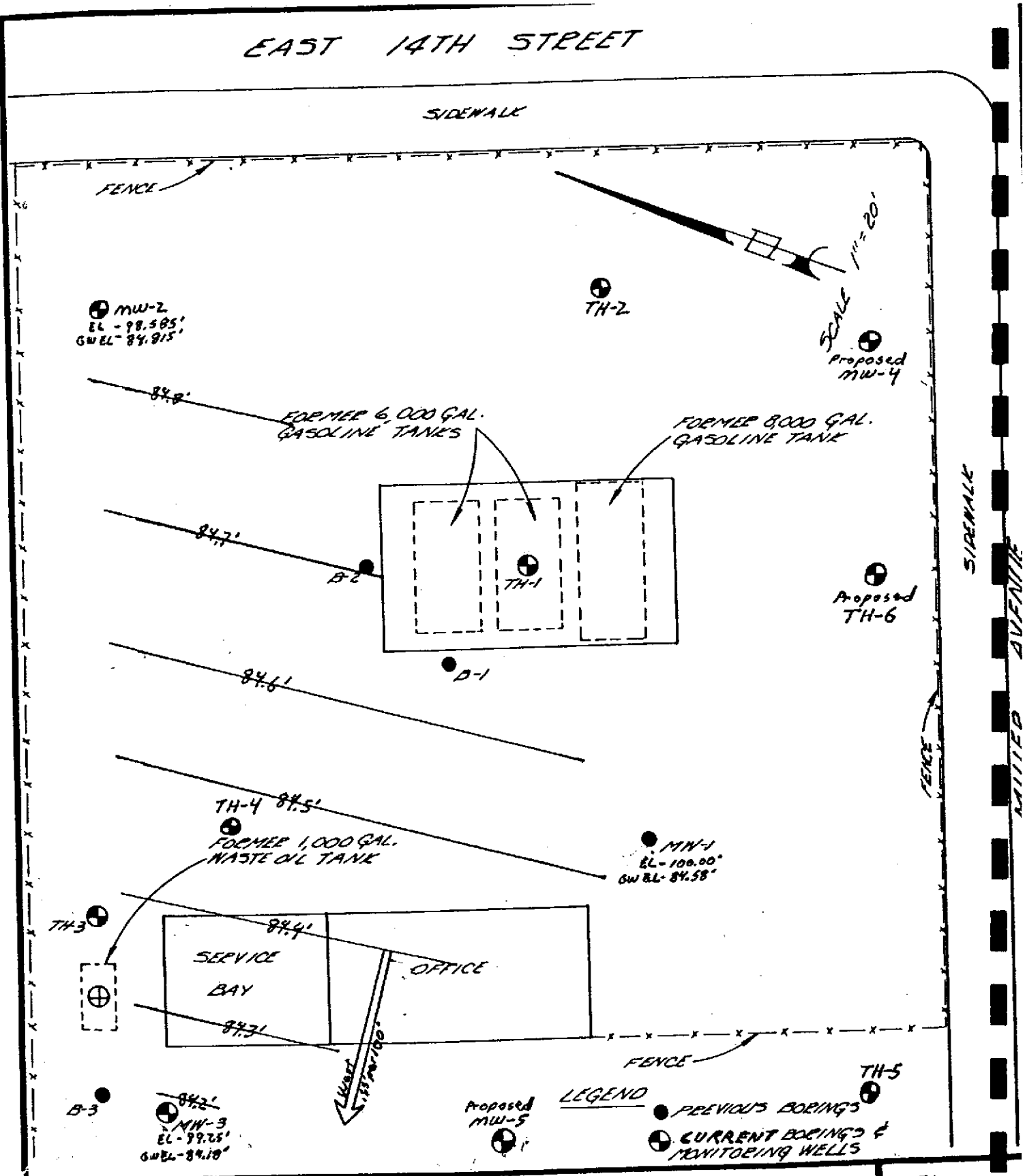
Sample ID Name	Date	Depth (Feet)	TPHG	Methyl t-Butyl Ether	Benzene	Toluene	Ethyl-benzene	Xylenes
VSP-39D	10/04/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005

[1] PARTS PER MILLION.
[2] ALSO ANALYZED FOR TOTAL RECOVERABLE HYDROCARBONS BY ESE; SEE ESE 12/23/91 REPORT FOR ANALYTICAL RESULTS.
[3] ALSO ANALYZED FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL: ALL ANALYTICAL RESULTS WERE NONDECTABLE.
[4] NOT ANALYZED.

TABLE 2
SUMMARY OF EXCAVATION GROUNDWATER SAMPLE ANALYTICAL RESULTS
(ppb[1])

Sample ID Name	Date	TPHG	Benzene	Toluene	Ethyl-benzene	Xylenes
GB-1[2]	05/12/95	<50.0	<0.5	<0.5	<0.5	<0.5

[1] PARTS PER BILLION.
[2] EXCAVATION SAMPLE



Earth Systems Environmental, Inc.
A Member of The Earth Systems Group
6701 McDivitt Drive, Suite B
Bakersfield, CA 93313
(805) 836-0901
FAX (805) 836-0911

TITLE

WONG'S TAXI TAXI

2314 EAST 14TH STREET
OAKLAND, CALIFORNIA

SITE MAP

Figure 2

8/21/91

JOB NO. EB-800

APPENDIX A

BORING LOGS

WELL CONSTRUCTION	CHEMICAL ANALYSES Laboratory TPH (mg/Kg)	CHEMICAL ANALYSES Field PID (ppm)	BLOW COUNT	DEPTH (Feet)	SAMPLE INTERVAL	SAMPLE NUMBER	U.S.C.S. DESIGN.	SOIL DESCRIPTION
				0				
		20	4/6/7	5			ML/SM	Sand, silt to silty sand with minor clay, dark grey with gray, loose, dry, no stain, very slight odor
							▽?	Ground water in boat filled pit @ 9'
		ND		10			ML/CL	Clayey silt to silty clay, dark grey with gray, wet, loose, no stain, no odor
	2775	ND		15		80143	ML/CL	Same as above TD 16'

Geologist: ESE - Mark Magargee, R.G.

Driller: SBJS

Wong's Taxi

LOG of BORING

TH-1

PLATE

Project Number: ES-8014-1

8/21/91

Page 1 of 1

WELL CONSTRUCTION	CHEMICAL ANALYSES Laboratory TPH (mg/kg)	CHEMICAL ANALYSES Field PID (ppm)	BLOW COUNT	DEPTH (feet)	SAMPLE INTERVAL	SAMPLE NUMBER	U.S.C.S. DESIGN.	SOIL DESCRIPTION
				0				
		30	4/9/14	5			CL/ML	Silty Clay with trace fine sand, dark greenish gray, slightly moist, medium dense, good plasticity, no stain, trace hydrocarbon like odor
	360	1050	6/11/16	10		8014-4	SM/ML	Silty Sand with minor clay, light grayish green, slightly moist, loose, no stain, strong odor
		200	7/9/12	15			CL	Fat Clay, minor silt, grayish brown, moist, good plasticity, no stain, moderate odor
							SM/CL	Gravelly Sand, significant clay and silt, yellowish brown, slightly moist, no stain, very slight odor
							▽?	
		100	14/20/24	20			CL	Fat Clay, minor silt, grayish brown, moist, good plasticity, no stain, trace odor
		20	9/13/20	25			CL	Same as above, moist, no odor
	50	50	7/10/17	30		8014-5	CL ▽	Same as above TD 31'

Geologist: ESE - Mark Magargee, R.G.

Driller: SB/S

Wong's Taxi

LOG of BORING

TH-2

PLATE

Project Number: 89-8014-1

8/2/91

Page 1 of 1

WELL CONSTRUCTION	CHEMICAL ANALYSES Laboratory TPH (mg/Kg)	Field PID (ppm)	BLOW COUNT	DEPTH (feet)	SAMPLE Interval	SAMPLE NUMBER	U.S.C.S. DESIGN.	SOIL DESCRIPTION
				0				
		ND	4, 8, 11	5			CL/ML	Clay, trace sandy silt, yellowish brown/ dark greenish gray,
	10	ND	6, 9, 14	10		8014-8	OL	Organic Clay, dark greenish gray, slightly moist, good plasticity, no sta[illegible] no odor
		70	15, 18, 35	15			CL	Fat Clay, minor silt, light green, moist, medium dense, good plasticity, no stain, minor hydrocarbon like odor
	10	70	12, 20, 20	20		8014-9	CL ?	Same as above, light brownish yellow, slight odor
		ND	7, 11, 15	25			CL	Same as above, very moist, no odo[r]
		ND	11, 10, 15	30			SM/CL	Silty Gravelly Sand, significant clay, light yellowish brown, very moist, medium dense, no stain, no odor TD 31'

Geologist: ESE - Mark Magargee, R.G.

Driller: SB&S

Wong's Taxi

Project Number: ES-8014-1

8/21/91

LOG of BORING

TH-3

PLATE

Page 1 of 1

WELL CONSTRUCTION	CHEMICAL ANALYSES Laboratory: TPH (mg/kg)	CHEMICAL ANALYSES Field: PID (ppm)	BLOW COUNT	DEPTH (feet)	SAMPLE INTERVAL	SAMPLE NUMBER	U.S.C.S. DESIGN.	SOIL DESCRIPTION
				0				
		80	4/6/10	5			CL	Clay, dark greenish gray, slightly moist, medium dense, good plasticity, no stain
	25	140	4/9/9	10		8014-10	SM/CL	Gravelly Clayey Sand, dark gray to black, slightly moist, slightly dense, dark stain, moderate hydrocarbon like odor
		20	4/13/9	15			CL	Fat Clay, minor silt, light greenish gray, moist, medium dense, good plasticity, no stain, slight odor
	450	20	6/6/12	20		8014-11	SM	Clayey Silty Sand, light greenish gray, saturated, medium dense, no stain, moderate odor TD 21'

Geologist: ESE - Mark Magargee, R.G.

Driller: SBJS

Wong's Taxi

LOG of BORING

TH-4

PLATE

Project Number: 69-8014-1

8/21/91

Page 1 of 1

WELL CONSTRUCTION	CHEMICAL ANALYSES Laboratory TPH (mg/Kg)	Field PID (ppm)	BLOW COUNT	DEPTH (Feet)	SAMPLE INTERVAL	SAMPLE NUMBER	U.S.C.S. DESIGN.	SOIL DESCRIPTION
				0				
		20	3 5 7	5	■		CL	Fat Clay, minor fine sand, dark greenish gray, slightly moist, medium dense, good plasticity, no stain, no odor
	10	20	7 10 20	10	■	8014-14	CL/ML	Clay with silty sand, dark greenish gray, slightly moist, no stain, no odor
		20	13 17 32	15	■		CL/SM	Fine grained Sandy Clay, light green, moist, medium dense, no stain, no odor
							▽	
	ND	10	7 9 14	20	■	8014-15	SM	Silty Clayey Sand, light yellowish green, saturated, medium dense, no stain, no odor TO 21'

Geologist: ESE - Mark Magargee, R.G.

Driller: SB/S

Wong's Taxi

Project Number: ES-8014-1 8/2/91

PLATE

LOG of BORING

TH-5

Page 1 of 1

WELL CONSTRUCTION	CHEMICAL ANALYSIS Laboratory TPH (mg/Kg)	Field PID (ppm)	BLOW COUNT	DEPTH (Feet)	INTERVAL	NUMBER	U.S.C.S. DESIGN.	SOIL DESCRIPTION
Well cap; Cover; 2" PVC Blank; Neat Cement				0				
		5	5 / 5 / 6	5	■		OL	Organic Clay, trace silt, sand & gravel, dark gray to black, very slightly moist, medium dense, good plasticity, no staining, no odor
Bentonite	150	35	5 / 10 / 17	10	■	8014-1	OL	Same as above, minor silt, shell fragments, moderate hydrocarbon like odor
#2/12 Lonestar Sand; 2" 0.010" PVC Slot	255	45	9 / 13 / 27	15	■	8014-2	CL	Fat Clay, trace silt, grayish brown, moist, medium dense, good plasticity, gray staining, strong odor
							▽	
		12	5 / 7 / 9	20	■		SM	Silty Gravelly Sand, gray, saturated, loose, gray staining, moderate odor
				25	■		SM	Same as above, brown, no staining, no odor
				30	■		CL	Fat clay, minor sand, brown, saturated, medium dense, good plasticity, no staining, no odor
							SW	well graded Sand
Cap				35	■		GW	well graded Gravel
								TD 35'

Geologist: ESE - Mark Magargee, R.G.

Driller: Consolidated Testing

Wong's Taxi

LOG of BORING
MW-1

PLATE

Page 1 of 1

Project Number: ES-8014-1

5/22/91

LOG of BORING MW-2

WELL CONSTRUCTION — Well casing; 2" PVC Blank (0–~15 ft) with Neat Cement (0–~9 ft); Bentonite (~9–~11 ft); 2" 0.010" PVC Slot (~15–35 ft) with #2/12 Lonestar Sand; Cap at 35 ft.

CHEMICAL ANALYSES Laboratory TPH (mg/Kg)	Field PID (ppm)	BLOW COUNT	DEPTH (feet)	SAMPLE NUMBER	U.S.C.S. DESIGN.	SOIL DESCRIPTION
			0			
	90	5 / 13 / 16	5		CL/SM	Silty Clay with minor gravelly sand, dark greenish gray, slightly moist, medium dense, good plasticity, no stain, very slight hydrocarbon like odor
4320	360	7 / 13 / 23	10	8014-6	SM	Silty Sand, slightly moist, dark gray, loose, gray stain, strong odor
160	250	7 / 13 / 20	15	8014-7	SM/CL	Silty Clayey Sand with minor gravel, light greenish gray, moist, medium dense, no stain, very slight odor
			20		SM/CL	Same as above, saturated, no odor
			25		CL	Fat Clay, greenish brown, saturated, medium dense, good plasticity, no stain, no odor
			30		CL	Same as above
			35		CL	Same as above TD 35'

Geologist: ESE - Mark Magargee, R.G.

Driller: S B / S

Wong's Taxi

Project Number: ES-8014-1 8/2/91

PLATE

Page 1 of 1

WELL CONSTRUCTION	CHEMICAL ANALYSES Laboratory TPH (mg/Kg)	Field PID (ppm)	BLOW COUNT	DEPTH (Feet)	INTERVAL	NUMBER	U.S.C.S. DESIGN.	SOIL DESCRIPTION
Well cover; SAP; 2" PVC Blank; Neat Cement				0				
		70	2 3 6	5	■		CL/SM	Fat Clay, trace gravelly silty Sand, dark greenish gray, slightly moist, medium dense, good plasticity, no staining, no odor
Bentonite	50	nd	4 8 12	10	■	8014-12	OL	Organic Clay, greenish brown, moist, medium dense, good plasticity, no staining, no odor
2" PVC .010" slot; #2/12 Lonestar Sand	25	70	5 8 12	15	■	8014-13	SM	silty sand, dark gray, moist, loose, no staining, no odor
				20			▽ SM/CL	Silty Clayey Sand, gray, saturated, medium dense, no stain, no odor
				25			CL	Fat Clay, greenish brown, saturated, medium dense, good plasticity, no stain, no odor
				30			CL	Same as above
SAP				35			SM	silty Sand, light green, saturated, loose, no staining, no odor; TD 35'

Geologist: ESE - Mark Magargee, R.G.

Driller: SB/S

Wong's Taxi

LOG of BORING

MW-3

PLATE

Page 1 of 1

Project Number: ES-8014-1

8/21/91

APPENDIX B

ANALYTICAL REPORTS AND CHAIN OF CUSTODY

Nevada

Mobile Labs Inc.

Arizona

5327 Wingfoot Drive
Bakersfield, CA 93306
(805) 872-4750

Laboratory Results For :
Wong's Taxi Taxi
2345 East 14th Street
Oakland, CA

Date Received : 5/24/91
Date Analyzed : 5/27/91
Analyst : J.S. Johnson
Lab No. 910069

Sample Matrix ; Soils

	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	Tot Pet Hyds mg/kg
MW-1@10'	.460	.365	.305	.960	150
MW-1@15'	1.505	4.255	4.015	4.270	255
QA/QC Sample % Recovery	86	79	97	102	86 Gasoline

All Results Reported in Milligrams per Kilogram
ND = Non Detectable ; EPA 8020 (.005 mg/kg)
EPA 8015 Modified for Gasoline (5 mg/kg)
Analysis of Volatile Aromatics ; EPA 8020
*Analysis of Total Petroleum Hydrocarbons ; EPA 8015 MOdified for Gasoline
*The TPH Method for Gasoline is the Calif DOHS Recommended Procedure

Certificate Number : E739

Jeff Johnson, Chemist

Mobile Labs Inc.

5327 WINGFOOT DRIVE
BAKERSFIELD, CALIFORNIA 93306
(805) 872-4750

CALIFORNIA • NEVADA • ARIZONA

CERTIFIED FULL SERVICE ON SITE ANALYTICAL LABORATORIES

PROJECT NO.:	SITE NAME:
EB-8014-1	Wong's Taxi
SAMPLERS (SIGNATURE):	SITE ADDRESS
Mark R Maguigee	2345 East 14th Street, Oakland

SAMPLE ID. NO.	DATE	TIME	COMP	GRAB	SAMPLE MATRIX	SAMPLE LOCATION DESIGNATION	NO. OF CONTAINERS	BTEX/MTBE (Gas)	EPA 8020 (BTEX)					REMARKS
8014-1	5-22-91	11:45AM	N	N	Soil	MW-1@10'	1	✓	✓					
8014-2	5-22-91	12:00PM	N	N	Soil	MW-1@15'	1	✓	✓					

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY (SIGNATURE)	DATE	TIME	REMARKS:	
Mark R Maguigee	5-24-91	5:30PM		5/24/91	1730		

Nevada

Mobile Labs Inc.

Arizona

5327 Wingfoot Drive
Bakersfield, CA 93306
(805) 872-4750

Laboratory Results For :
Wong's Taxi Taxi
2345 East 14th Street
Oakland, CA

Date Received : 8/23/91
Date Analyzed : 8/24/91
Analyst : J.S. Johnson
Lab No. 910124

Sample Matrix ; Soils

	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	Tot Pet Hyds mg/kg
TH-1@15'	1.235	1.060	1.625	5.280	2775
TH-2@10'	ND	ND	ND	.770	360
TH-2@30'	ND	ND	ND	ND	50
MW-2@10'	7.275	6.620	3.470	13.815	4320
MW-2@15'	ND	ND	ND	ND	160
TH-3@10'	ND	ND	ND	ND	10
TH-3@19'	ND	ND	ND	ND	10
TH-4@10'	ND	ND	ND	.175	25
TH-4@20'	ND	ND	ND	ND	450
MW-3@10'	ND	ND	ND	ND	50
MW-3@15'	ND	ND	ND	ND	25
TH-5@10'	ND	ND	ND	ND	10
TH-5@18'	ND	ND	ND	ND	ND

All Results Reported in Milligrams per Kilogram
ND = Non Detectable ; EPA 8020 (.005 mg/kg)
EPA 8015 Modified for Gasoline (5 mg/kg)
Analysis of Volatile Aromatics ; EPA 8020
*Analysis of Total Petroleum Hydrocarbons ; EPA 8015 Modified for Gasoline
*The TPH Method for Gasoline is the Calif DOHS Recommended Procedure

Certificate Number : E739

Jeff Johnson, Chemist

Nevada

Mobile Labs Inc.

Arizon

5327 Wingfoot Drive
Bakersfield, CA 93306
(805) 872-4750

Laboratory Results For :
Wong's Taxi Taxi
2345 East 14th Street
Oakland, CA

Date Received : 8/23/91
Date Analyzed : 8/24/91
Analyst : J.S. Johnson
Lab No. 910124

Sample Matrix Soil and Water

	Benzene ug/L	Toluene ug/L	Ethylbenzene ug/L	Xylenes ug/L	Tot Pet Hyds ug/L
MW-1 (Water)	2150	9345	2145	23,150	2,090,000
MW-2 (Water)	ND	ND	ND	ND	10,000
MW-3 (Water)	ND	ND	ND	ND	ND

Sample I.D.	Total Recoverable Hydrocarbons mg/kg
TH-3@10'	60
TH-3@19'	20
TH-4@10'	40
TH-4@20'	1600
MW-3@10'	90
MW-3@15'	40

All Results Reported in Milligrams per Kilogram or Micrograms per Liter
ND = Non Detectable ; EPA 602 (5 ug/L)
EPA 8015 Modified for Gasoline (5000 ug/L)
EPA 418.1 (10 mg/kg)
Analysis of Volatile Aromatics ; EPA 602
Analysis of Total Recoverable Hydrocarbons ; EPA 418.1
*Analysis of Total Petroleum Hydrocarbons ; EPA 8015 Modified for Gasoline
*The TPH Method for Gasoline is the Calif DOHS Recommended Procedure

Certificate Number : E739

Jeff Johnson, Chemist

Mobile Labs Inc.

5327 WINGFOOT DRIVE
BAKERSFIELD, CALIFORNIA 93306
(805) 872-4750

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CERTIFIED FULL SERVICE ON SITE ANALYTICAL LABORATORIES

PROJECT NO.: 58-8014-1
SITE NAME: Wong's Taki
SAMPLERS (SIGNATURE): Mark Magargee
SITE ADDRESS: 2345 East 14th Street

SAMPLE ID. NO.	DATE	TIME	COMP	GRAB	SAMPLE MATRIX	SAMPLE LOCATION DESIGNATION	NO. OF CONTAINERS	8015 (Gas)	8020 (BTEX)	418.1				REMARKS
8014-3	8/23/91	10:45AM			soil	TH-1 @ 15'	1	V	V	TPH				Gas Tank Only
8014-4		11:15AM				TH-2 @ 10'		V	V	TPH				Gas Tank Only
8014-5		12:30PM				TH-2 @ 30'		V	V	TPH				Gas Tank Only
8014-6		2:00PM				MW-2 @ 10'		V	V	TPH				Gas Tank Only
8014-7		2:10PM				MW-2 @ 15'		V	V	TPH				Gas Tank Only
8014-8	8/24/91	7:30AM				TH-3 @ 10'		V	V	V				Gas and waste oil tanks
8014-9		8:00AM				TH-3 @ 19'		V	V	V				Gas and waste oil tanks
8014-10		9:55AM				TH-4 @ 10'		V	V	V				Gas and waste oil tanks
8014-11		10:15AM				TH-4 @ 20'		V	V	V				Gas and waste oil tanks
8014-12		11:35AM				MW-3 @ 10'		V	V	V				Gas and waste oil tanks
8014-13		11:50AM				MW-3 @ 15'		V	V	V				Gas and waste oil tanks
8014-14		2:00PM				TH-5 @ 10'		V	V	TPH				Gas Tank Only
8014-15		2:25PM				TH-5 @ 18'		V	V	TPH				Gas Tank Only

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY (SIGNATURE)	DATE	TIME	REMARKS:	
Mark R Magargee	8/23/91	5:30PM		8/23/91	1735		

Mobile Labs Inc.

5327 WINGFOOT DRIVE
BAKERSFIELD, CALIFORNIA 93306
(805) 872-4750

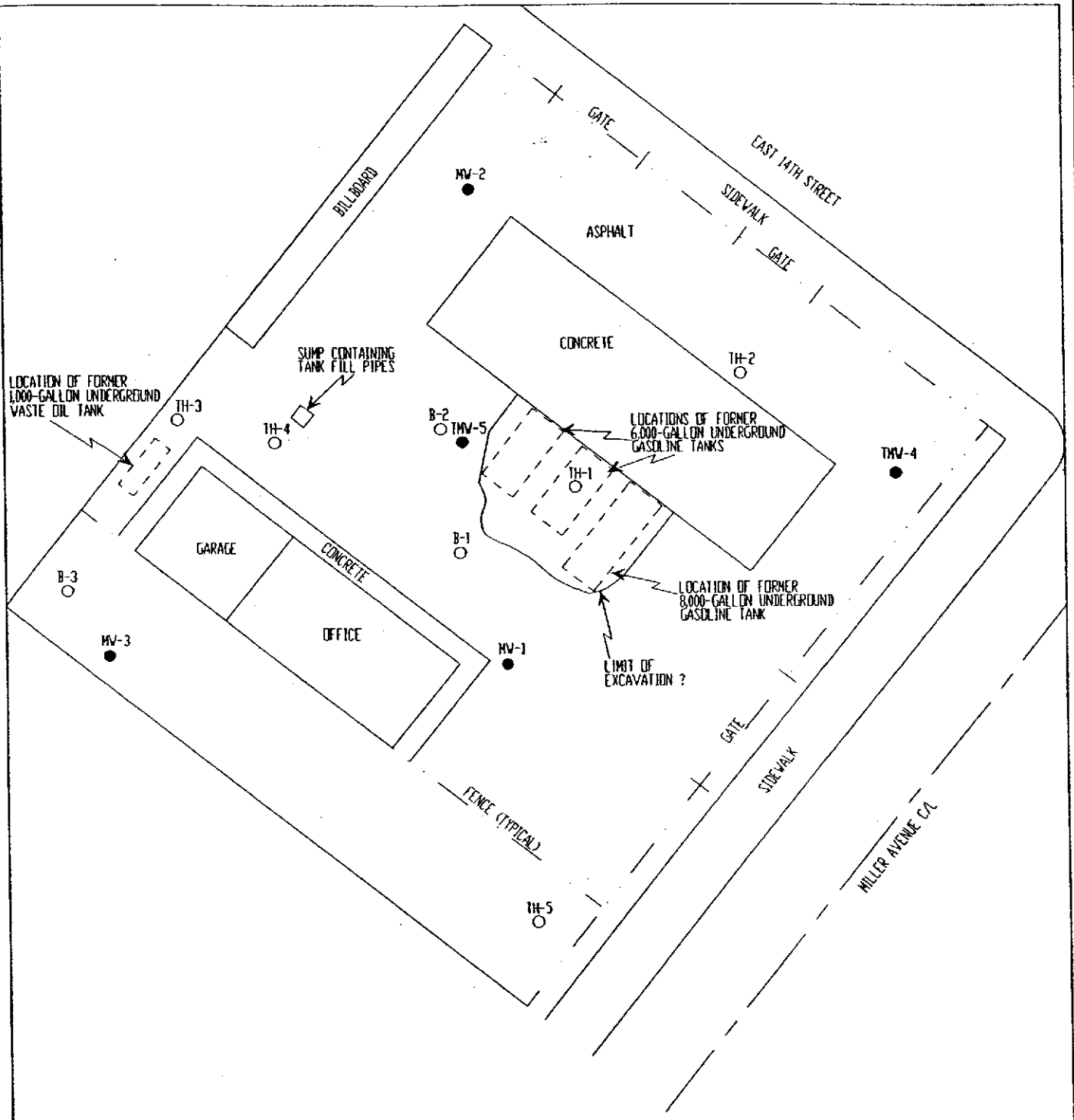
CALIFORNIA • NEVADA • ARIZONA

CERTIFIED FULL SERVICE ON SITE ANALYTICAL LABORATORIES

PROJECT NO.:	SITE NAME:
EB-8014-1	Wong's Taxi
SAMPLERS (SIGNATURE):	SITE ADDRESS
Mark Magnuson	2345 East 14th Street

SAMPLE ID. NO.	DATE	TIME	COMP	GRAB	SAMPLE MATRIX	SAMPLE LOCATION DESIGNATION	NO. OF CONTAINERS	8015 (Gas)	8020 (BTEX)	418.1	REMARKS
MW-2	8/23/91	9:30AM			water	MW-2	4	V	V	V	
MW-3	8/23/91	10:30AM			"	MW-3	1	V	V	V	
MW-1	8/23/91	11:20AM			"	MW-1	1	V	V	V	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY (SIGNATURE)	DATE	TIME	REMARKS:	
Mark Magnuson	8/23/91	5:35PM		8/23/91	1835		



LEGEND

TMW-4 ● NAME AND LOCATION OF MONITORING WELL INSTALLED BY TPE

MW-1 ● NAME AND LOCATION OF MONITORING WELL INSTALLED BY OTHERS

B-1 ○ NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS

-N-

0 30

SCALE IN FEET

TANK PROTECT ENGINEERING

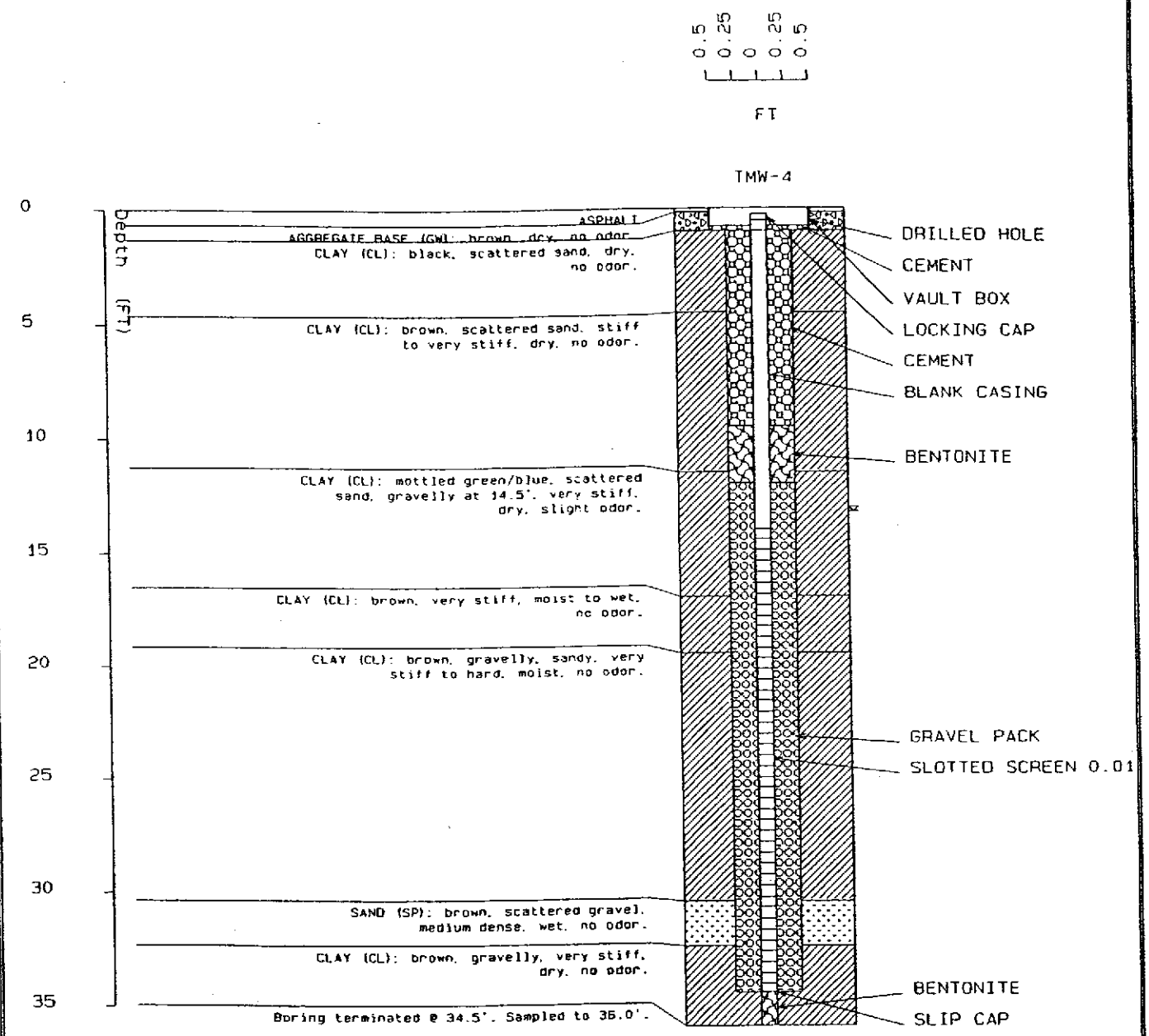
SITE PLAN

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	10/4/93
FIGURE	2
FILE #	267-2
DRAWN BY	AK
CHECKED BY	JVM

APPENDIX F

CERTIFIED ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION



WELL ID : TMW-4

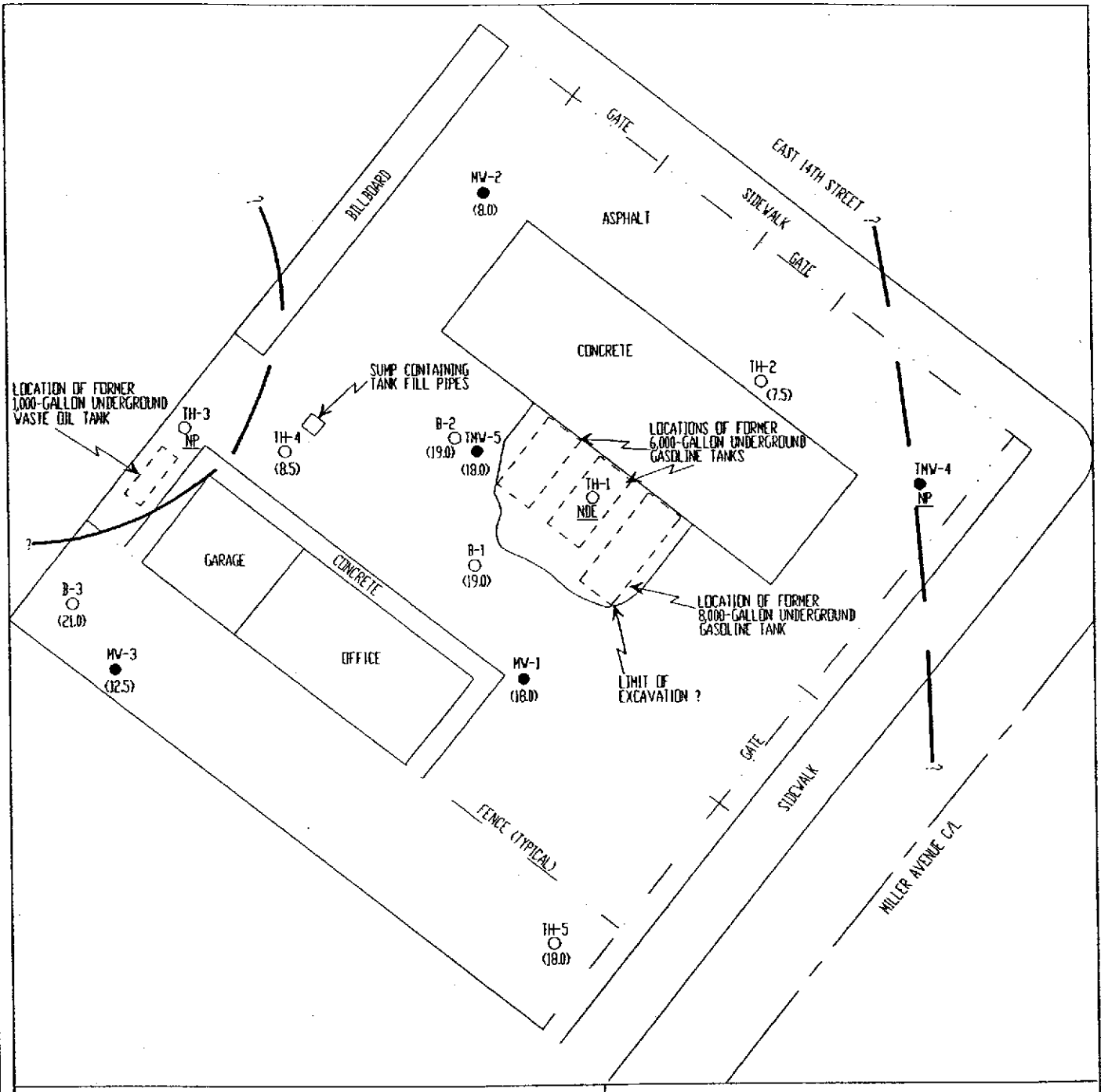
2345 EAST 14TH STREET, OAKLAND, CA

TANK PROTECT ENGINEERING

Figure :

APPENDIX E

LOGS OF EXPLORATORY BORINGS AND WELL COMPLETION DETAILS



LEGEND

- MW-4 ● — NAME AND LOCATION OF MONITORING WELL INSTALLED BY TPE
- (12.5) — DEPTH TO UPPER SAND MEMBER
- NP — UPPER SAND MEMBER NOT PRESENT
- NDE — BORING NOT DEEP ENOUGH
- MW-1 ● — NAME AND LOCATION OF MONITORING WELL INSTALLED BY OTHERS
- B-1 ○ — NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS
- UPPER SAND MEMBER BOUNDARY

-N-

0 30

SCALE IN FEET

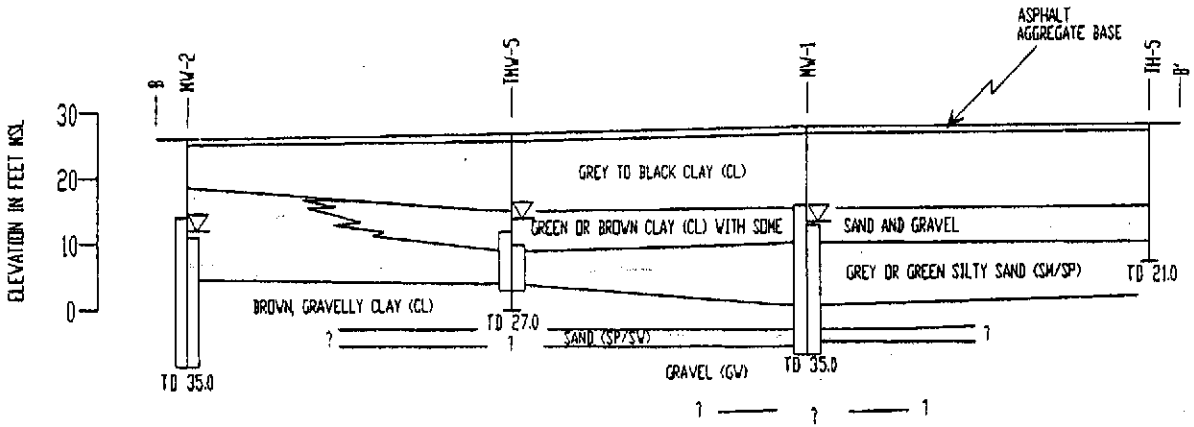
TANK PROTECT ENGINEERING

SITE PLAN

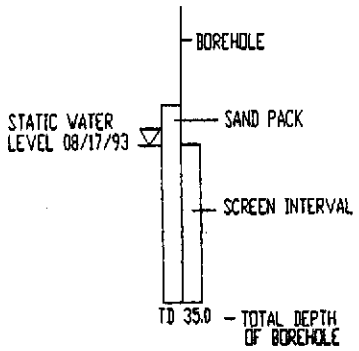
HORIZONTAL LIMITS OF UPPER SAND MEMBER

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	10/4/93
FIGURE	6
FILE #	267-9
DRAWN BY	LNH
CHECKED BY	JVM



LEGEND



NO VERTICAL EXAGGERATION

NOTE: SEE FIGURE 5 FOR LOCATION OF CROSS SECTION

TANK PROTECT ENGINEERING

GEOLOGIC CROSS SECTION B-B'

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	10/4/93
FIGURE	4
FILE #	267-7
DRAWN BY	LNH
CHECKED BY	JVM

Trace Analysis Laboratory, Inc.
3423 Investment Boulevard, #8 • Hayward, California 94545
Telephone (510) 783-6960
Facsimile (510) 783-1512

TAL

August 2, 1993

Mr. Marc Zomorodi
Tank Protect Engineering
2821 Whipple Road
Union City, California 94587

Dear Mr. Zomorodi:

Trace Analysis Laboratory received six soil samples on July 26, 1993 for your Project No. 267C072393, Credit Auto World (our custody log number 3465).

These samples were analyzed for Total Petroleum Hydrocarbons as Gasoline and Benzene, Toluene, Ethylbenzene, and Xylenes. Our analytical report and the completed chain of custody form are enclosed for your review.

Trace Analysis Laboratory is certified under the California Environmental Laboratory Accreditation Program. Our certification number is 1199.

If you should have any questions or require additional information, please call me.

Sincerely yours,

Scott T. Ferriman

Scott T. Ferriman
Project Specialist

Enclosures

Trace Analysis Laboratory, Inc.
3423 Investment Boulevard, #8 • Hayward, California 94545
Telephone (510) 783-6960
Facsimile (510) 783-1512

TAL

LOG NUMBER: 3465
DATE SAMPLED: 07/22/93
DATE RECEIVED: 07/26/93
DATE EXTRACTED: 07/26/93
DATE ANALYZED: 07/27/93
DATE REPORTED: 08/02/93

CUSTOMER: Tank Protect Engineering

REQUESTER: Marc Zomorodi

PROJECT: No. 267C072393, Credit Auto World, 2345 E. 14th Street

Sample Type: Soil

Method and Constituent:	Units	TMW-4, 4.5 Concentration	TMW-4, 4.5 Reporting Limit	TMW-4, 9.5 Concentration	TMW-4, 9.5 Reporting Limit	TMW-4, 14.5 Concentration	TMW-4, 14.5 Reporting Limit
DHS Method:							
Total Petroleum Hydrocarbons as Gasoline	ug/kg	ND	500	ND	500	940	500
Modified EPA Method 8020 for:							
Benzene	ug/kg	ND	5.0	ND	5.0	ND	5.0
Toluene	ug/kg	ND	5.0	ND	5.0	ND	5.0
Ethylbenzene	ug/kg	ND	5.0	ND	5.0	ND	5.0
Xylenes	ug/kg	ND	15	ND	15	ND	15

Concentrations reported as ND were not detected at or above the reporting limit.

PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

August 23, 1993 PEL # 9308082

TANK PROTECT ENGINEERING, INC.

Attn: Jeff
Re: Six water samples for Gasoline/BTEX analysis.

Project name: Credit World Auto Sales
Project location: 2345 E. 14th St.
Project number: 267081793

Date sampled: Aug 17, 1993
Date extracted: Aug 20-21, 1993
Date submitted: Aug 20, 1993
Date analyzed: Aug 20-21, 1993

RESULTS:

SAMPLE I.D.	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
MW-1	110000	270	690	730	3100
MW-2	49000	94	240	250	980
MW-3	9600	4.1	17	28	54
TMW-4	150	N.D.	0.8	1.4	3.7
TMW-5	120000	340	730	790	3600
TMW-6	N.D.	N.D.	N.D.	N.D.	N.D.
Blank	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	93.1%	84.2%	89.5%	92.0%	94.1%
Duplicate Spiked Recovery	87.8%	80.2%	81.6%	88.5%	93.0%
Detection limit	50	0.5	0.5	0.5	0.5
Method of Analysis	5030 / 8015	602	602	602	602

David Duong
Laboratory Director

1764 Houret Court Milpitas, CA. 95035 Tel: 408-946-9636 Fax: 408-946-9663

TANK PROTECT ENGINEERING
Of Northern California
Environmental Management

TANK PROTECT ENGINEERING
2821 WHIPPLE ROAD
UNION CITY, CA 94587
(415)429-8088
(800)523-8088
FAX(415)429-8089

PEL # 9308082

INV # 23922

LAB: Priority Env.
TURNAROUND: Normal
P.O. #: 684

PAGE 1 OF 1

CHAIN OF COUSTODY

PROJECT NO.: 267081793

SITE NAME & ADDRESS: Credit ~~Auto~~ World Auto Sales, 2345 E 14th St

SAMPLER NAME, ADDRESS AND TELEPHONE NUMBER: Lee Huckins, 2821 WHIPPLE ROAD, UNION CITY, CA 94587 (415) 429-8088

ID NO.	DATE	TIME	SOIL	WATER	SAMPLING LOCATION	(1) TYPE OF CONTAINER	TOTAL LIGHT HC	AROMATIC HC (BTX)	TOTAL HEAVY HC	OIL & GREASE	VOC SCAN (624's)	OTHER	REMARKS
MW-1	8/17	1530		x		2 40ml vials	X	X					
mw-2	8/17	1230		x		2-40ml vials	X	X					
mw-3	8/17	1640		x		2 40ml vials	X	X					
Tmw-4	8/17	1120		X		2 40ml vial	X	X					
Tmw-5	8/17	1410		x		2-40ml vials	X	X					
mw-6	8/17	1645		x		2 40ml vials	X	X					

Relinquished by : (Signature)	Date / Time	Received by : (Signature)	Relinquished by : (Signature)	Date / Time	Received by : (Signature)
Lee Huckins	8/20/93 9:00	Teri Mello	Teri Mello	8/20/93 9:20	
Relinquished by : (Signature)	Date / Time	Received by : (Signature)	Relinquished by : (Signature)	Date / Time	Received by : (Signature)
		[illegible signature]			
Relinquished by : (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
	8/20/93 9:20	PEL			

DATE: 8-20-93

Drilling will continue inside the conductor casing, with a drill bit of smaller diameter than the conductor casing. If additional known aquifers are to be fully penetrated, the procedure will be repeated with successively smaller diameter conductor casings.

The bottom of the well screen in a confined aquifer will be determined by presence or lack of a clay layer or aquitard as described above. The screened interval in a confined zone shall extend across the entire saturated zone of the aquifer or up to a length of 20 feet, which ever is less. The screened zone and filter pack will not cross-connect to another aquifer.

CONSTRUCTION MATERIALS

Casing and Screen Materials: Well casing and screen will be constructed of clean materials that have the least potential for affecting the quality of the sample. The most suitable material for a particular installation will depend upon the parameters to be monitored. Acceptable materials include PVC, stainless steel, or low carbon steel.

Casing Joints: Joints will be connected by flush threaded couplers. Organic bonding compounds and solvents will not be used on joints.

Well Screen Slots: Well screen will be factory slotted. The size of the slots will be selected to allow sufficient groundwater flow to the well for sampling, minimize the passage of formation materials into the well, and ensure sufficient structural integrity to prevent the collapse of the intake structure.

Casing Bottom Plug: The bottom of the well casing will be permanently plugged, either by flush threaded screw-on or friction cap. Friction caps will be secured with stainless steel set screws. No organic solvents or cements will be applied.

Filter Pack Material: Filter envelope materials will be durable, water worn, and washed clean of silt, dirt, and foreign matter. Sand size particles will be screened silica sand. Particles will be well rounded and graded to an appropriate size for retention of aquifer materials.

conditions or local regulations require. Drilling mud, when used, will be thinned prior to packplacement. The sand pack shall cover the entire screened interval and rise a minimum of 2 feet above the highest perforation.

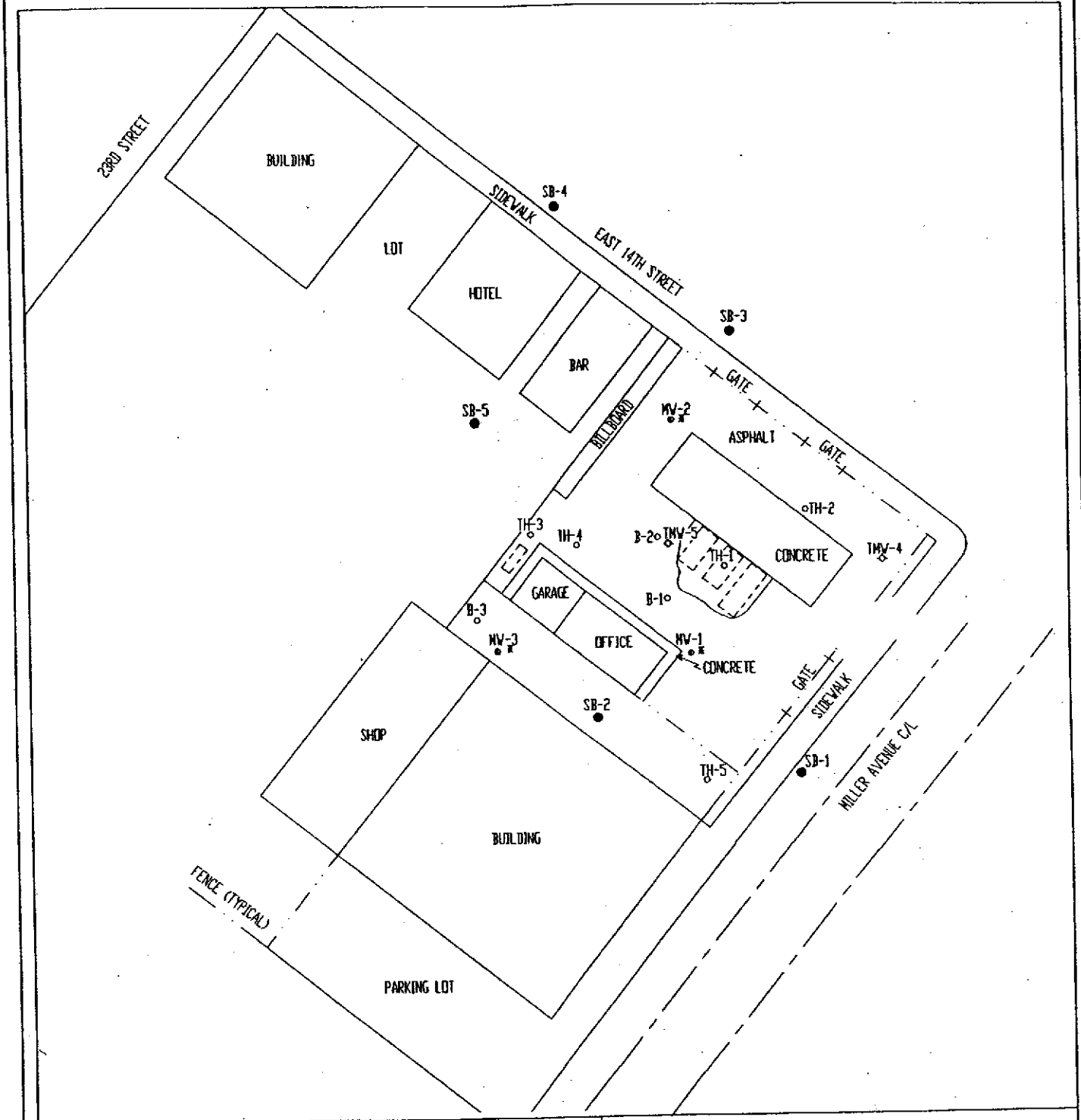
Bentonite Seal Placement: A bentonite seal will be placed above the sand pack by a method that prevents bridging. Bentonite pellets can be placed by free fall if proper sinking through annular water can be assured. Bentonite slurry will be placed by the tremie pipe method from the bottom upward. The bentonite seal will not be less than 1 foot in thickness.

Grout Seal Placement: The cement grout mixture will be hydrated with clean water and thoroughly mixed prior to placement. If substantial groundwater exists in the bore hole, the grout shall be placed by tremie pipe method from the bottom upward. In a dry borehole, the grout may be surface poured to a depth of 30 feet. Below a depth of 30 feet grout will be placed by tremie pipe. Grout will be placed in 1 continuous lift and will extend to the surface or to the well vault if the well head is completed below grade. A minimum of 5 feet of grout seal will be installed, unless impractical due to the shallow nature of the well.

Surface Completion: The well head will be protected from fluid entry, accidental damage, unauthorized access, and vandalism. A watertight, locking cap will be installed on the well casing. Access to the casing will be controlled by a keyed lock.

Well heads completed below grade will be completed in a concrete and/or steel vault, installed to drain surface runoff away from the vault.

Well Identification: Each well will be labeled to show well number, depth, hole and casing diameter, and screened interval.



LEGEND

- TMW-4 ◇ NAME AND LOCATION OF MONITORING WELL INSTALLED BY TPE
- MW-1 ◐ NAME AND LOCATION OF MONITORING WELL INSTALLED BY OTHERS
- B-1 ○ NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS
- SB-1 ● LOCATION OF SOIL BORING
- LOCATION OF FORMER UNDERGROUND STORAGE TANK

-N-

0 60

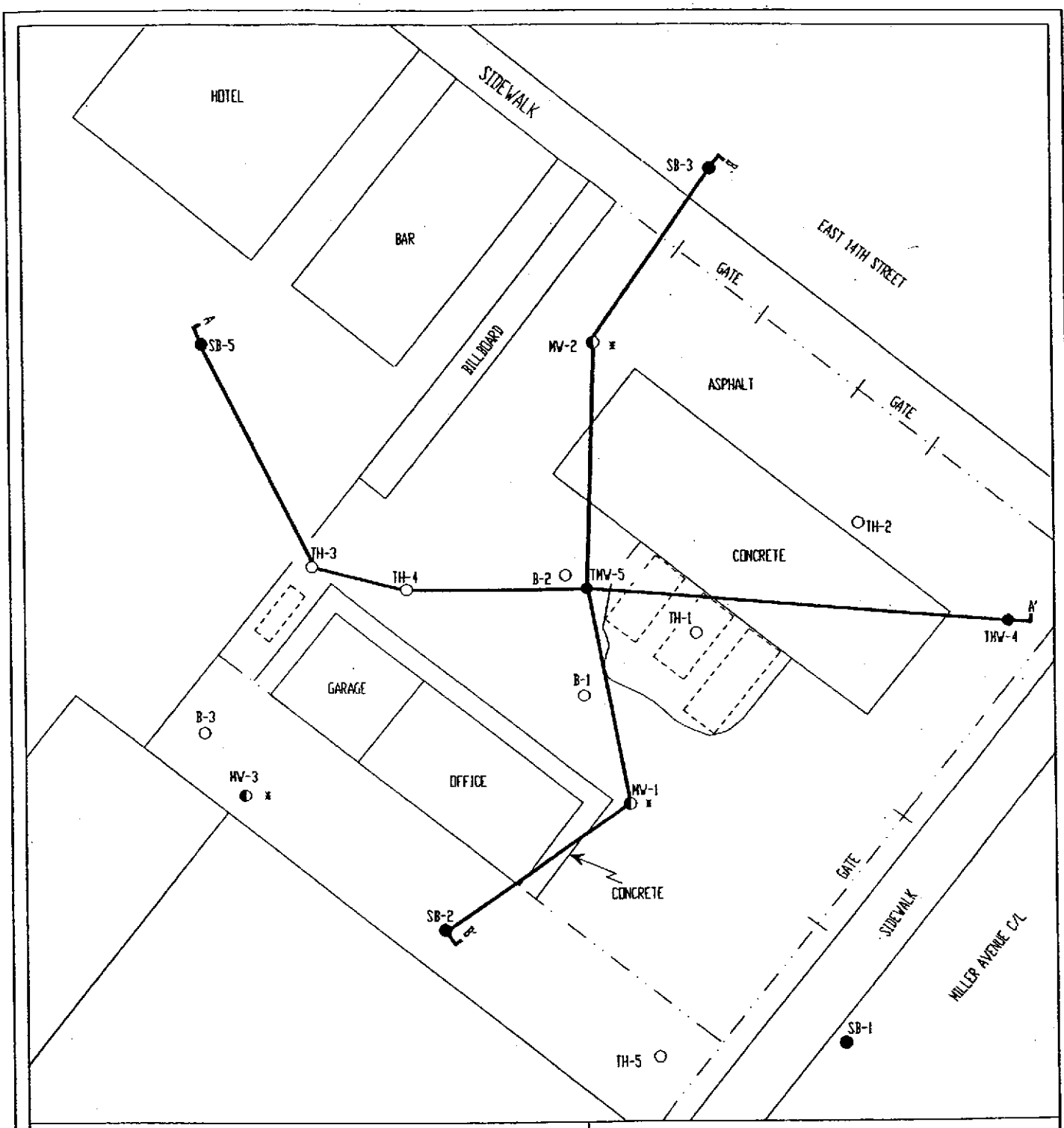
SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN:
LOCATION OF SOIL BORINGS

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	5/21/97
FIGURE	3
FILE #	267-27N
DRAWN BY	VK
CHECKED BY	LNH



LEGEND

- TMW-4 — NAME AND LOCATION OF MONITORING WELL INSTALLED BY TPE
- MV-1 — NAME AND LOCATION OF MONITORING WELL INSTALLED BY OTHERS
- B-1 — NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS
- A A' — LOCATION OF GEOLOGIC CROSS SECTION

-N-

0 30

SCALE IN FEET

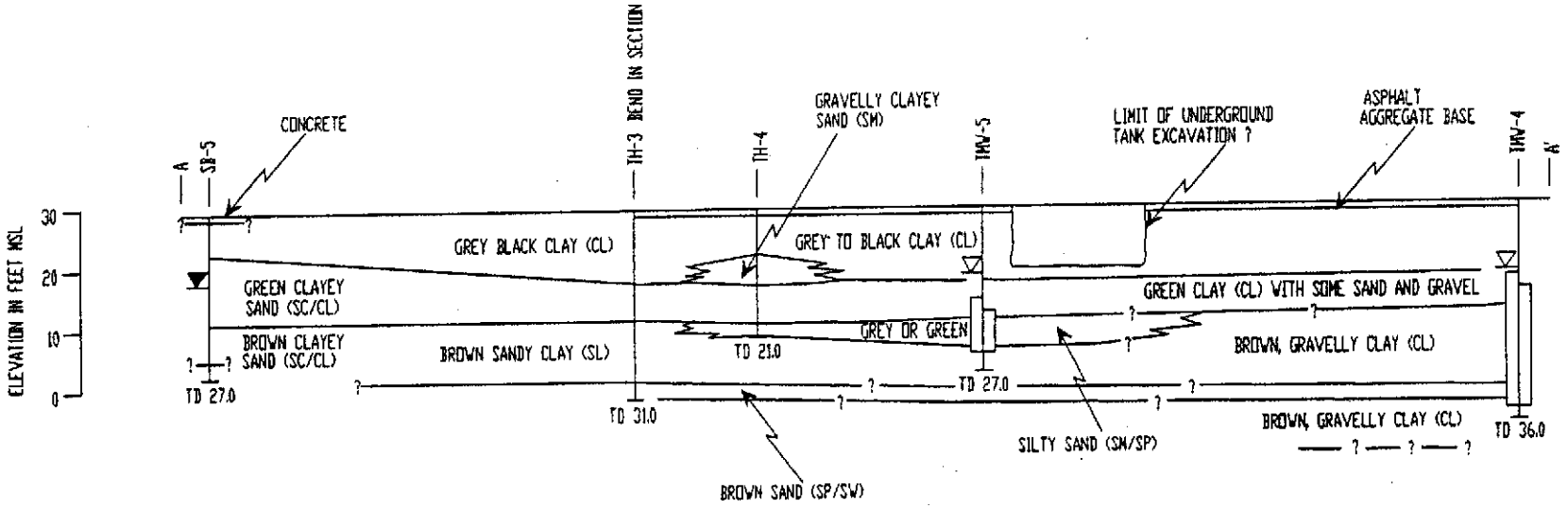
TANK PROTECT ENGINEERING

SITE PLAN

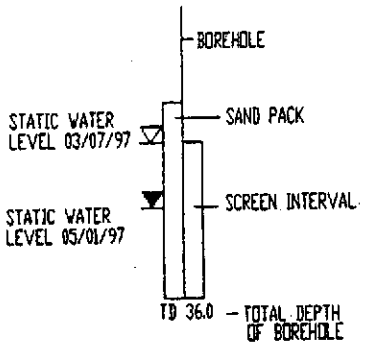
LOCATION OF GEOLOGIC CROSS SECTIONS A-A' AND B-B'

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	5/21/97
FIGURE	4
FILE #	267-3IN
DRAWN BY	VK
CHECKED BY	LNH



LEGEND



0 30
SCALE IN FEET

NO VERTICAL EXAGGERATION

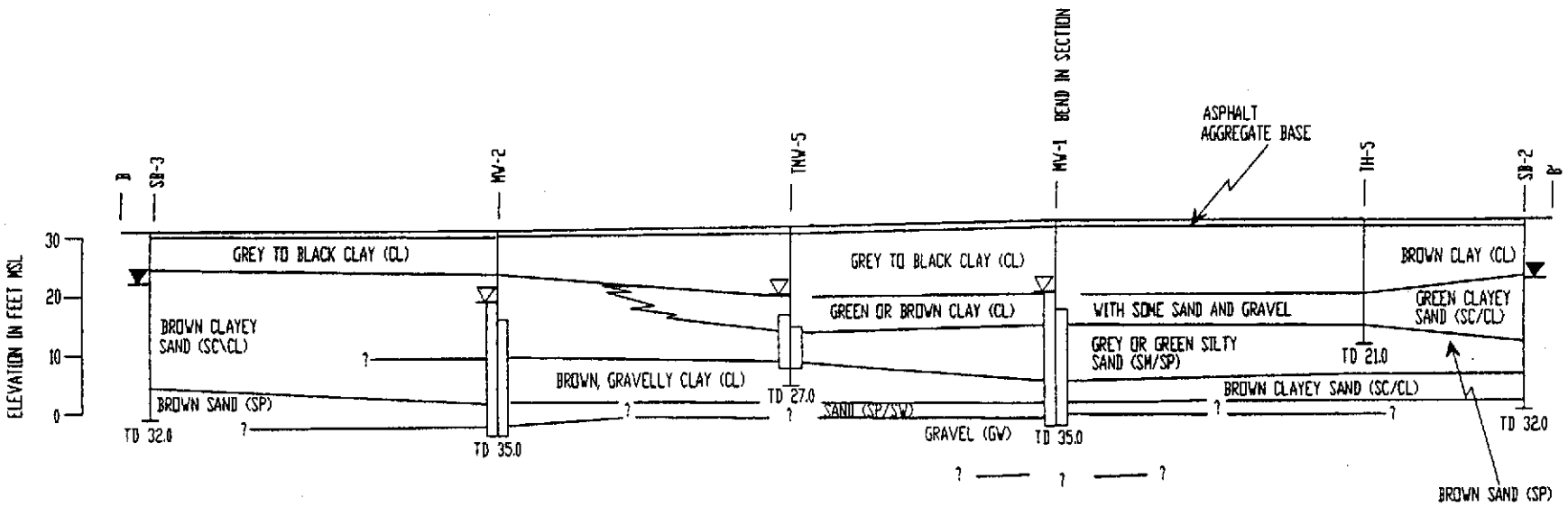
NOTE: SEE FIGURE 4 FOR LOCATION OF CROSS SECTION

TANK PROTECT ENGINEERING

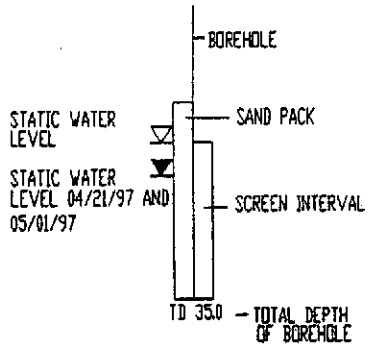
GEOLOGIC CROSS SECTION A-A'

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	5/21/97
FIGURE	5
FILE #	267-32
DRAWN BY	VK
CHECKED BY	LNH



LEGEND



NO VERTICAL EXAGGERATION

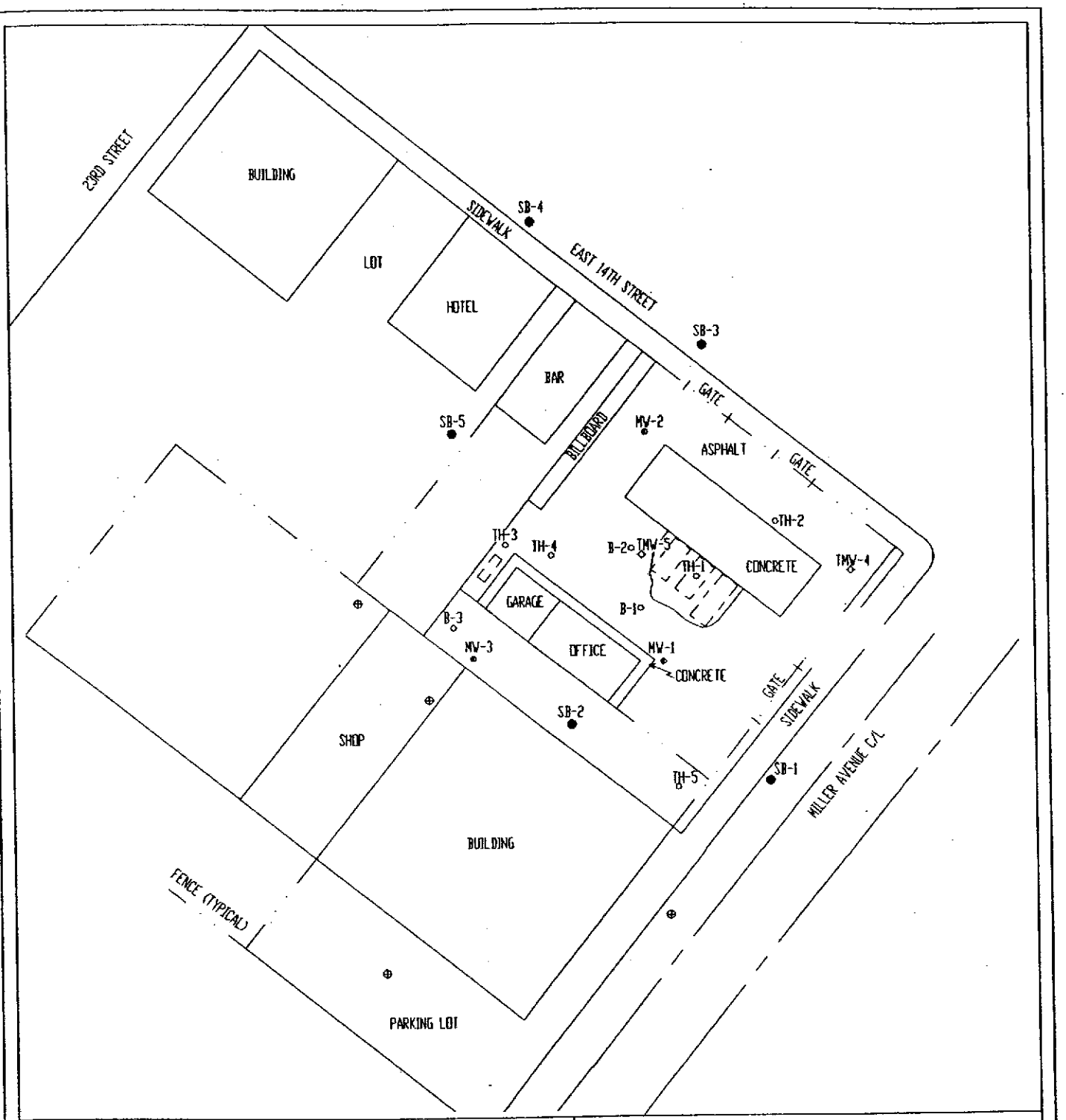
NOTE: SEE FIGURE 4 FOR LOCATION OF CROSS SECTION

TANK PROTECT ENGINEERING

GEOLOGIC CROSS SECTION B-B'

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	5/21/97
FIGURE	6
FILE #	267-33
DRAWN BY	VK
CHECKED BY	LNH



LEGEND

- TMW-4 ◇ NAME AND LOCATION OF MONITORING WELL INSTALLED BY TPE
- MW-1 ◐ NAME AND LOCATION OF MONITORING WELL INSTALLED BY OTHERS
- B-1 ○ NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS
- SB-1 ● NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY TPE
- ⊕ LOCATION OF PROPOSED SOIL BORING
- ⊏ ⊐ LOCATION OF FORMER UNDERGROUND STORAGE TANK

-N-

0 60

SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN:
LOCATION OF PROPOSED SOIL BORINGS

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	5/21/97
FIGURE	10
FILE #	267-34N
DRAWN BY	VK
CHECKED BY	LNH

LOG OF EXPLORATORY BORING

PROJECT NUMBER 267 — BORING NO. SB-1

PROJECT NAME 2345 E. 14th Street, Oakland CA — PAGE 1

BY LNH — DATE 4/21/97 — SURFACE ELEV. 27 FT

RECOVERY (FT/FT)	OVA (PPM)	PENETRATION (BLOWS/FT)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION
							ASPHALT
							AGGREGATE BASE (GW): Brown, dry, no odor.
							CLAY (CL): Black mottled green, scattered sand, silty, dry, no odor.
1.3/2.0	10	--		5			SAND (SP): Brown, fine-grained, moist to very moist, no odor.
.50/2.0	--	--		10			
1.5/2.0	10	--		15			
							CLAYEY SAND (SC/SP): Brown, medium-grained, dry to moist, no odor.
2.0/2.0	8	--		20			
1.5/2.0	--	--		25			
							Boring terminated at 32 feet. Boring sampled to 32 feet. No water level was obtained due to caving.
2.0/2.0	2	--		30			
				35			

REMARKS: Drilled using the "GeoProbe method", 2.0 inch diameter boreholes. Samples collected in 1.0-inch by 6.0-inch acetate tubes.

LOG OF EXPLORATORY BORING

PROJECT NUMBER 267 BORING NO. SB-2

PROJECT NAME 2345 E. 14th Street, Oakland CA PAGE 1

BY LNH DATE 4/21/97 SURFACE ELEV. 27 FT

RECOVERY (FT/FT)	OVA (PPM)	PENETRATION (BLOWS/FT)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION
							ASPHALT
							AGGREGRATE BASE (GW): Brown, dry, no odor.
							CLAY (CL): Brown, green at 11.5 feet, silty, stiff, dry to moist, hydrocarbon ordor at 11.5.
1.3/2.0	8	–		5			
2.0/2.0	46	--	▽	10			
							CLAYEY SAND (SC/CL): Green, fine to medium-grained, moist, hydrocarbon odor.
2.0/2.0	340	–		15			
2.0/2.0	8	–		20			
							SAND (SP): Brown, clayey, fine-grained, moist, no odor.
1.0/2.0	8	--		25			
							CLAYEY SAND (SC/SP): Brown, fine-grained, wet, no odor.
2.0/2.0	21	–		30			Boring terminated at 32.0 feet. Boring sampled to 32.0 feet.
				35			

REMARKS: Drilled using the "GeoProbe method", 2.0 inch diameter boreholes. Samples collected in 1.0-inch by 6.0-inch acetate tubes.

LOG OF EXPLORATORY BORING

PROJECT NUMBER 267 — BORING NO. SB-3

PROJECT NAME 2345 E. 14th Street, Oakland CA — PAGE 1

BY LNH — DATE 5/1/97 — SURFACE ELEV. 27 FT

RECOVERY (FT/FT)	OVA (PPM)	PENETRATION (BLOWS/FT)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION
							ASPHALT
							COBBLESTONE: Light brown, hard
							CONCRETE
1.0/2.0	39	--		5			CLAY (CL): Grey to black, sandy, stiff to very stiff, moist, no odor.
			▽				CLAYEY SAND (SC/CL): Brown, scattered gravel, medium-grained, dry to moist, no odor.
1.0/2.0	40	--		10			
1.5/2.0	16	--		15			
1.5/2.0	56	--		20			
1.5/2.0	29	--		25			
							SAND (SP): Brown, scattered gravel, fine-grained, moist to wet, no odor.
2.0/2.0	18	--		30			Boring terminated at 32.0 feet. Boring sampled to 32.0 feet.
				35			

REMARKS: Drilled using the "GeoProbe method", 2.0 inch diameter boreholes. Samples collected in 1.0-inch by 6.0-inch acetate tubes.

LOG OF EXPLORATORY BORING

PROJECT NUMBER 267 | BORING NO. SB-4

PROJECT NAME 2345 E. 14th Street, Oakland CA | PAGE 1

BY LNH | DATE 5/1/97 | SURFACE ELEV. 27 FT

RECOVERY (FT/FT)	OVA (PPM)	PENETRATION (BLOWS/FT)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION
							ASPHALT
							SANDY CLAY (CL/SC): Brown motteled green, stiff, dry, no odor.
2.0/2.0	12	–		5			
1.5/2.0	4	–		10			
							CLAYEY SAND (SC/CL): Brown, organics, fine to medium grained, dry to moist, no odor.
2.0/2.0	6	–		15			
1.5/2.0	14	–		20			
2.0/2.0	4	–		25			
							Boring terminated at 27.0 feet. Boring sampled to 27.0 feet.
				30			
				35			

REMARKS: Drilled using the "GeoProbe method", 2.0 inch diameter boreholes. Samples collected in 1.0-inch by 6.0-inch acetate tubes.

LOG OF EXPLORATORY BORING

PROJECT NUMBER 267 — BORING NO. SB-5

PROJECT NAME 2345 E. 14th Street, Oakland CA — PAGE 1

BY LNH — DATE 5/1/97 — SURFACE ELEV. 27 FT

RECOVERY (FT/FT)	OVA (PPM)	PENETRATION (BLOWS/FT)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION
							CONCRETE
							AGGREGATE BASE (GW): Brown, dry, no odor.
							CLAY (CL): Grey to black, sandy, soft, no odor.
1.0/2.0	12	–		5			
							CLAYEY SAND (SC/CL): Green, fine-grained, dry, hydrocarbon odor.
2.0/2.0	67	–		10			
2.0/2.0	6	–		15			CLAYEY SAND (SC/CL): Brown, fine-grained, moist, no odor.
							SANDY CLAY (CL/SC): Brown, organics, stiff, dry no odor.
2.0/2.0	11	–		20			
							CLAYEY SAND (SC/CL): Brown, fine-grained, wet at 27.0 feet, no odor.
2.0/2.0	6	–		25			
							Boring terminated at 27.0 feet. Boring sampled to 27.0 feet. A hydrocarbon sheen on the groundwater was observed.
				30			
				35			

REMARKS: Drilled using the "GeoProbe method", 2.0 inch diameter boreholes. Samples collected in 1.0-inch by 6.0-inch acetate tubes.

Entech Analytical Labs, Inc.

CA ELAP# 1369

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Tank Protect Engineering
2821 Whipple Road
Union City, CA 94587
Attn: Lee Huckins

Date:	5/1/97
Date Received:	4/24/97
Date Analyzed:	4/25/97
Project #:	267042197
P.O. #:	1399
Sampled By:	Client

Certified Analytical Report

Soil Sample Analysis:

Test	*SB-1 26.5-27.0*	*SB-2 16.5-17.0*	*Units*	*PQL*	*EPA Method #*
Sample Matrix	Soil	Soil			
Sample Date	4/21/97	4/21/97			
Sample Time	1345	1000			
Lab #	D7160	D7161			
DF-Gas/BTEX	1	1			
TPH-Gas	**ND**	**3.7**	mg/kg	1.0 mg/kg	8015M
MTBE	**ND**	**ND**	mg/kg	0.05 mg/kg	8020
Benzene	**ND**	**0.012**	mg/kg	0.005 mg/kg	8020
Toluene	**ND**	**0.0071**	mg/kg	0.005 mg/kg	8020
Ethyl Benzene	**ND**	**0.042**	mg/kg	0.005 mg/kg	8020
Xylenes	**ND**	**ND**	mg/kg	0.005 mg/kg	8020

1. DLR=DF x PQL
2. Analysis performed by Entech Analytical Labs, Inc. (CAELAP #2224)

Michael N. Golden, Lab Director

DF=Dilution Factor
DLR=Detection Reporting Limit

PQL=Practical Quantitation Limit
ND=None Detected at or above DLR

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 1369

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Tank Protect Engineering
2821 Whipple Road
Union City, CA 94587
Attn: Lee Huckins

Date:	5/1/97
Date Received:	4/24/97
Date Analyzed:	4/25-4/28/97
Project #:	267042197
P.O. #:	1399
Sampled By:	Client

Certified Analytical Report

Water Sample Analysis:

Test	*SB-1W*	*SB-2W*	*Units*	*PQL*	*EPA Method #*
Sample Matrix	Water	Water			
Sample Date	4/21/97	4/21/97			
Sample Time	1540	1103			
Lab #	D7162	D7163			
DF-Gas/BTEX	1	20			
TPH-Gas	**ND**	**6,100**	µg/liter	50.0 µg/l	8015M
MTBE	**ND**	**ND**	µg/liter	5.0 µg/l	8020
Benzene	**ND**	**870**	µg/liter	0.5 µg/l	8020
Toluene	**ND**	**35**	µg/liter	0.5 µg/l	8020
Ethyl Benzene	**ND**	**17**	µg/liter	0.5 µg/l	8020
Xylenes	**ND**	**28**	µg/liter	0.5 µg/l	8020

1. DLR=DF x PQL
2. Analysis performed by Entech Analytical Labs, Inc. (CAELAP #2224)

Michael N. Golden, Lab Director

DF=Dilution Factor
DLR=Detection Reporting Limit

PQL=Practical Quantitation Limit
ND=None Detected at or above DLR

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: GBG4970425
Matrix: Soil
Units: ug/kg

Date Analyzed: 04/25/97
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB ug/kg	SA ug/kg	SR ug/kg	SP ug/kg	SP % R	SPD ug/kg	SPD %R	RPD	QC LIMITS (ADVISORY) RPD	QC LIMITS (ADVISORY) %R
Benzene	8020	<5.0	80	ND	104	130	98	123	5.9	25	50-150
Toluene	8020	<5.0	80	ND	103	129	95	119	8.1	25	50-150
Ethyl Benzene	8020	<5.0	80	ND	105	131	97	121	7.9	25	50-150
Xylenes	8020	<5.0	240	ND	313	130	289	120	8.0	25	50-150
Gasoline*	8015	<1000.00	1000	0.0	940	94	890	89	5.5	25	50-150

*LCS and LCSD were analyzed for this parameter

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- NC: Not Calculated

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: GBG2970425
Matrix: Soil
Units: ug/kg

Date Analyzed: 04/25/97
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB ug/kg	SA ug/kg	SR ug/kg	SP ug/kg	SP % R	SPD ug/kg	SPD %R	RPD	QC LIMITS (ADVISORY) RPD	QC LIMITS (ADVISORY) %R
Benzene	8020	<5.0	80	0.0	79	99	76	95	3.9	25	50-150
Toluene	8020	<5.0	80	0.0	77	96	74	93	4.0	25	50-150
Ethyl Benzene	8020	<5.0	80	0.0	77	96	75	94	2.6	25	50-150
Xylenes	8020	<5.0	240	0.0	232	97	223	93	4.0	25	50-150
Gasoline*	8015	<1000.00	1000	0.0	990	99	1020	102	3.0	25	50-150

*LCS and LCSD were analyzed for this parameter.

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- NC: Not Calculated

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: GBG2970428
Matrix: Soil
Units: ug/kg

Date Analyzed: 04/28/97
Quality Control Sample: D7377

PARAMETER	Method #	MB ug/kg	SA ug/kg	SR ug/kg	SP ug/kg	SP % R	SPD ug/kg	SPD %R	RPD	QC LIMITS (ADVISORY) RPD	QC LIMITS (ADVISORY) %R
Benzene	8020	<5.0	80	ND	78	98	76	95	2.6	25	50-150
Toluene	8020	<5.0	80	ND	77	96	75	94	2.6	25	50-150
Ethyl Benzene	8020	<5.0	80	ND	76	95	74	93	2.7	25	50-150
Xylenes	8020	<5.0	240	ND	228	95	225	94	1.3	25	50-150
Gasoline*	8015	<1000.00	1000	0.0	960	96	1000	100	4.1	25	50-150

*LCS and LCSD were analyzed for this parameter.

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- NC: Not Calculated

TANK PROTECT ENGINEERING
of Northern California, Inc.
2821 Whipple Rd., Union City, CA 94587-1233
(510) 429-8088 ■ (800) 523-8088 ■ Fax (510) 429-8089

LAB: Entech
TURNAROUND: 15 day
P.O. #: 1399

PAGE 1 OF 1

CHAIN OF CUSTODY

PROJECT NO.: Z67042197
SITE NAME & ADDRESS: Cwas 2345 E 14th St
SAMPLER NAME, ADDRESS AND TELEPHONE NUMBER: Lee Huckins, 2821 WHIPPLE ROAD, UNION CITY, CA 94587 (415) 429-8088

ID NO.	DATE	TIME	SOIL	WATER	SAMPLING LOCATION	(1) TYPE OF CONTAINER	ANALYTES REQUESTED: TOTAL LIGHT HC	AROMATIC HC (BTX)	TOTAL HEAVY HC	OIL & GREASE	VOC SCAN (624's)	OTHER	REMARKS
SB-1 26.5-27.0	4/21	1340	X		26.5-27.0	1 tube	X	X					D7160
SB-2 16.5-17.0	4/21	1000	X		16.5-17.0	1 tube	X	X					D7161
SB-1W	4/21	1510	X	X	X	3 40ml	X	X					D7162
SB-2W	4/21	1103	X	X		2 40ml	X	X					D7163

Relinquished by : (Signature)	Date / Time	Received by : (Signature)	Relinquished by : (Signature)	Date / Time	Received by : (Signature)
Lee Huckins	4/24/91 0850	J Ellinger			
Relinquished by : (Signature)	Date / Time	Received by : (Signature)	Relinquished by : (Signature)	Date / Time	Received by : (Signature)
Relinquished by : (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	

DATE: _____

Entech Analytical Labs, Inc.

CA ELAP# 1369

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Tank Protect Engineering
2821 Whipple Road
Union City, CA 94587
Attn: Lee Huckins

Date:	5/6/97
Date Received:	5/2/97
Date Analyzed:	5/5/97
Project #:	267050297
P.O. #:	1404
Sampled By:	Client

Certified Analytical Report

Soil Sample Analysis:

Test	*SB-3 21.5-22*	*SB-4 21.5-22*	*SB-5 11.5-12.0*	*Units*	*PQL*	*EPA Method #*
Sample Matrix	Soil	Soil	Soil			
Sample Date	5/1/97	5/1/97	5/1/97			
Sample Time	11:23	13:52	9:10			
Lab #	D7700	D7701	D7702			
DF-Gas/BTEX	1	1	62			
TPH-Gas	**ND**	**ND**	**91[2]**	mg/kg	1.0 mg/kg	8015M
MTBE	**ND**	**ND**	**ND**	mg/kg	0.05 mg/kg	8020
Benzene	**ND**	**ND**	**ND**	mg/kg	0.005 mg/kg	8020
Toluene	**ND**	**ND**	**ND**	mg/kg	0.005 mg/kg	8020
Ethyl Benzene	**ND**	**ND**	**ND**	mg/kg	0.005 mg/kg	8020
Xylenes	**ND**	**ND**	**ND**	mg/kg	0.005 mg/kg	8020

1. DLR=DF x PQL
2. TPH-Gas chromatogram for Lab #D7702, although within the reporting range, does not match the typical Gas pattern
3. Analysis performed by Entech Analytical Labs, Inc. (CAELAP #2224)

Michael N. Golden, Lab Director

DF=Dilution Factor
DLR=Detection Reporting Limit

PQL=Practical Quantitation Limit
ND=None Detected at or above DLR

Entech Analytical Labs, Inc.

CA ELAP# 1369

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Tank Protect Engineering
2821 Whipple Road
Union City, CA 94587
Attn: Lee Huckins

Date:	5/6/97
Date Received:	5/2/97
Date Analyzed:	5/5/97
Project #:	267050297
P.O. #:	1404
Sampled By:	Client

Certified Analytical Report

Water Sample Analysis:

Test	*SB-3W*	*SB-4W*	*SB-5W*	*Units*	*PQL*	*EPA Method #*
Sample Matrix	Water	Water	Water			
Sample Date	5/1/97	5/1/97	5/1/97			
Sample Time	12:20	14:00	10:25			
Lab #	D7703	D7704	D7705			
DF-Gas/BTEX	1	1	2			
TPH-Gas	**ND**	**ND**	**890**	µg/liter	50.0 µg/l	8015M
MTBE	**ND**	**ND**	**12**	µg/liter	5.0 µg/l	8020
Benzene	**ND**	**ND**	**5.4**	µg/liter	0.5 µg/l	8020
Toluene	**ND**	**ND**	**ND**	µg/liter	0.5 µg/l	8020
Ethyl Benzene	**ND**	**ND**	**1.4**	µg/liter	0.5 µg/l	8020
Xylenes	**ND**	**ND**	**ND**	µg/liter	0.5 µg/l	8020

1. DLR=DF x PQL
2. Analysis performed by Entech Analytical Labs, Inc. (CAELAP #2224)

Michael N. Golden, Lab Director

DF=Dilution Factor
DLR=Detection Reporting Limit

PQL=Practical Quantitation Limit
ND=None Detected at or above DLR

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: GBG4970505
Matrix: Soil
Units: ug/kg

Date Analyzed: 05/05/97
Quality Control Sample: D7720

PARAMETER	Method #	MB ug/kg	SA ug/kg	SR ug/kg	SP ug/kg	SP % R	SPD ug/kg	SPD %R	RPD	QC LIMITS (ADVISORY) RPD	QC LIMITS (ADVISORY) %R
Benzene	8020	<5.0	80	ND	102	128	98	123	4.0	25	50-150
Toluene	8020	<5.0	80	ND	100	125	96	120	4.1	25	50-150
Ethyl Benzene	8020	<5.0	80	ND	101	126	97	121	4.0	25	50-150
Xylenes	8020	<5.0	240	ND	302	126	292	122	3.4	25	50-150
Gasoline*	8015	<1000.00	1000	0.0	1000	100	980	98	2.0	25	50-150

*LCS and LCSD were analyzed for this parameter

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- NC: Not Calculated

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: GBG5970505
Matrix: Water
Units: µg/L

Date Analyzed: 05/05/97
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/L	SA µg/L	SR µg/L	SP µg/L	SP % R	SPD µg/L	SPD %R	RPD	QC LIMITS (ADVISORY) RPD	QC LIMITS (ADVISORY) %R
Benzene	8020	<0.5	25	0.0	22	**88**	23	**92**	4.4	25	50-150
Toluene	8020	<0.5	25	0.0	24	**96**	24	**96**	0.0	25	50-150
Ethyl Benzene	8020	<0.5	25	0.0	25	**100**	25	**100**	0.0	25	50-150
Xylenes	8020	<0.5	75	0.0	69	**92**	69	**92**	0.0	25	50-150
Gasoline	8015	<50.0	625	0	636	**102**	656	**105**	3.1	25	50-150

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- NC: Not Calculated

TANK PROTECT ENGINEERING
of Northern California, Inc.
2821 Whipple Rd., Union City, CA 94587-1233
(510) 429-8088 ■ (800) 523-8088 ■ Fax (510) 429-8089

LAB: Entech
TURNAROUND: 48 hr
P.O. #: 1404

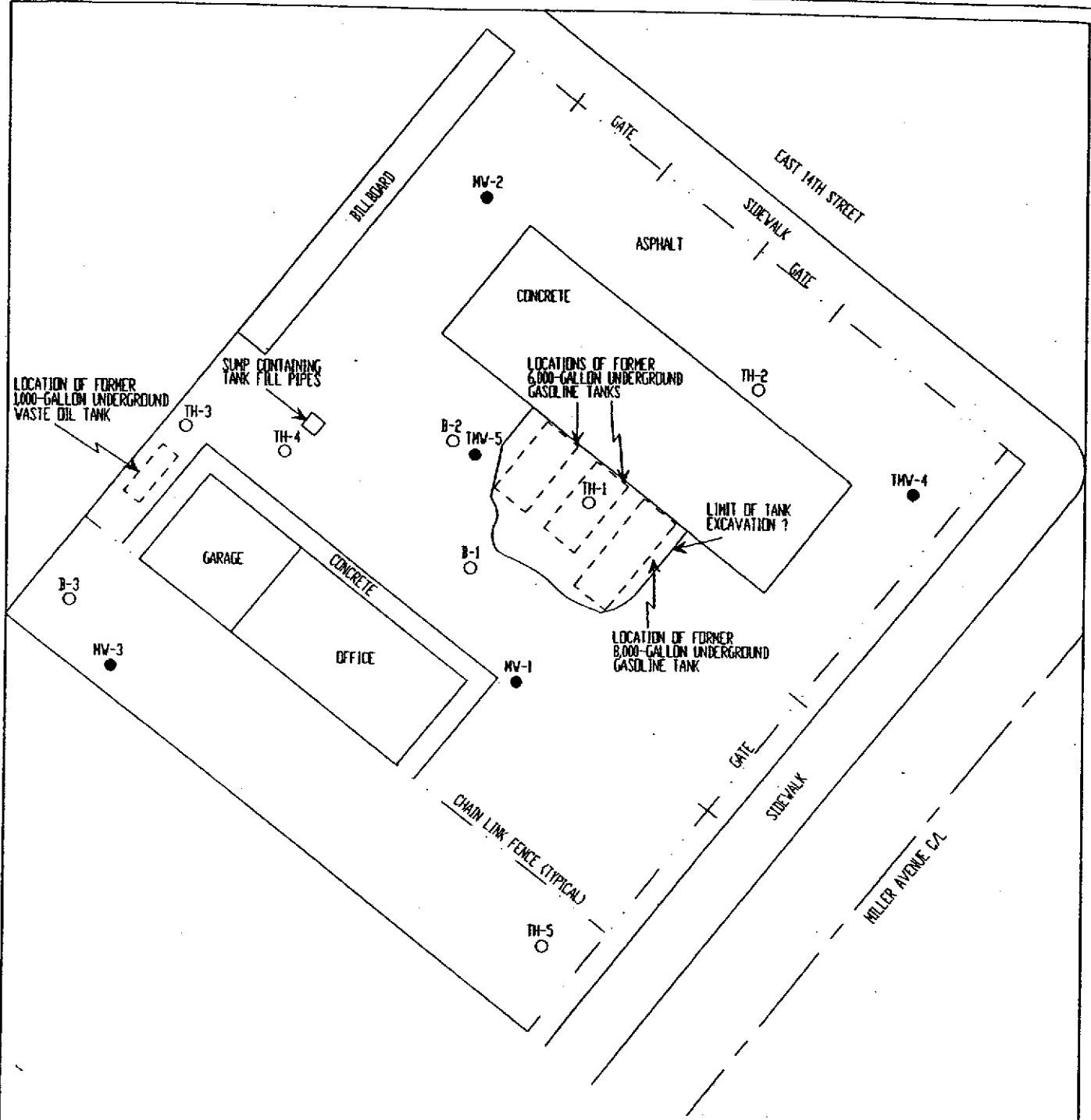
CHAIN OF CUSTODY

PROJECT NO.: 267050297
SITE NAME & ADDRESS: CWAS 2345 E 14th Street Oakland
SAMPLER NAME, ADDRESS AND TELEPHONE NUMBER: Lee Hutchins, 2821 WHIPPLE ROAD, UNION CITY, CA 94587 (415) 429-8088

ID NO.	DATE	TIME	SOIL	WATER	SAMPLING LOCATION	(1) TYPE OF CON-TAINER	ANALYTES REQUESTED: TOTAL LIGHT HC	AROMATIC HC (BTX)	TOTAL HEAVY HC	OIL & GREASE	VOC SCAN (624's)	OTHER	REMARKS	
SB-3 21.5-22	5/1	1123	X		21.5-22	1 tube	X	X					need MTBE	D7700
SB-4 21.5-22	5/1	1352	X		21.5-22	1 tube	X	X					" "	D7701
SB-5 11.5-12.0	5/1	910	X		11.5-12.0	1 tube	X	X					" "	D7702
SB-3W	5/1	1220	X	✓		2-40ml	X	X					" "	D7703
SB-4W	5/1	1430	X	✓		2-40ml	X	X					" "	D7704
SB-5W	5/1	1025	X	✓		3-40ml	X	X					" "	D7705

Relinquished by : (Signature)	Date / Time	Received by : (Signature)	Relinquished by : (Signature)	Date / Time	Received by : (Signature)
Lee Hutchins	5/2/97 1:20				
Relinquished by : (Signature)	Date / Time	Received by : (Signature)	Relinquished by : (Signature)	Date / Time	Received by : (Signature)
Relinquished by : (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	

DATE: _____



LEGEND

TMW-4 ● NAME AND LOCATION OF MONITORING WELL INSTALLED BY TPE

MW-1 ● NAME AND LOCATION OF MONITORING WELL INSTALLED BY OTHERS

B-1 ○ NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS

-N-

0 30

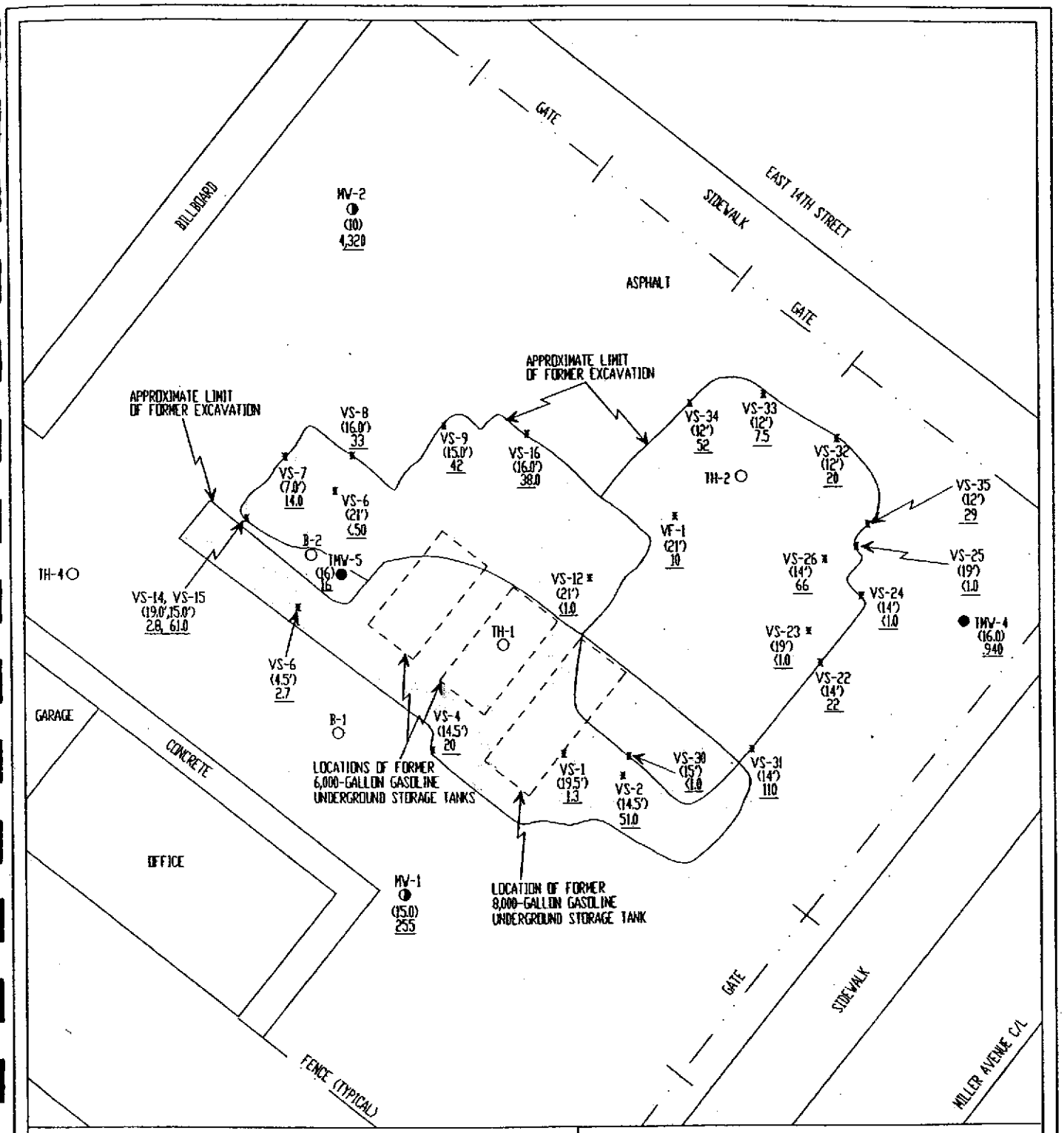
SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	10/20/97
FIGURE	2
FILE #	267-2N
DRAWN BY	VK
CHECKED BY	LNH



LEGEND

○ NAME LOCATION OF MONITORING WELL (DEPTH OF SAMPLE COLLECTED DURING INSTALLATION)

100 CONCENTRATION TPHG (ppm)

VS-27 (18') NAME, DEPTH, AND LOCATION OF SOIL SAMPLE

-N-

0 20

APPROXIMATE SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN: LOCATION OF FINAL VERIFICATION SOIL SAMPLING

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	10/20/97
FIGURE	7
FILE #	267-16N
DRAWN BY	VK
CHECKED BY	LMH

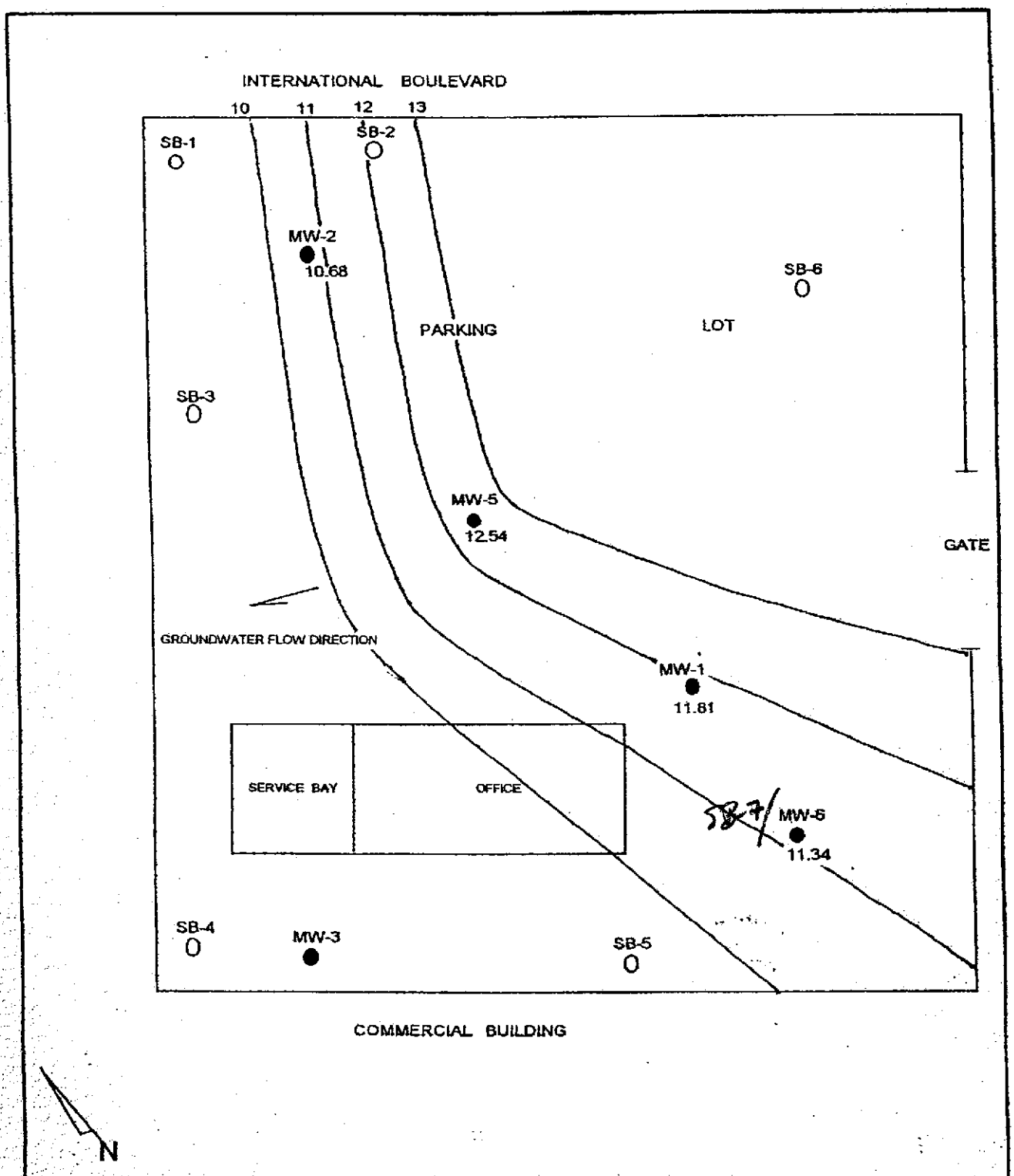


FIGURE 5

MAP TYPE: SITE PLAN (GROUNDWATER FLOW DIRECTION JUNE 13, 2001)	● MONITORING WELL LOCATION	
SITE ADDRESS:2345 INTERNATIONAL BOULEVARD, OAKLAND, CALIFORNIA	DATE: JULY 10, 2001	SCALE: 1" : 25'

SEQUOIA ENVIRONMENTAL 1111 Aladdin Avenue, Suite B, San Leandro, CA 94577 (510) 614-1900

BORING & MONITORING WELL LOG

BORING/ WELL # SB-1

CLEINT: Stanley Wong — PROJECT NAME: Oakland

PROJECT ADDRESS: 2345 International Boulevard, Oakland, California — DATE DRILLED: May 22, 2001

DRILLING METHOD: Hollow Stem Auger — SAMPLER TYPE: CA Split Spoon Sampler

TOTAL DEPTH OF BORING: 15 Feet — WIDTH OF BORING: 6 3/4 - Inches

DEPTH TO GROUNDWATER AT THE TIME OF DRILLING: N/A — STATIC WATER LEVEL: N/A

CASING DIAMETER: N/A — CASING LENGTH: N/A — SCREEN DIAMETER: N/A

SCREEN LENGTH: N/A — SLOT SIZE: N/A

DRILLING COMPANY: Bay Area Exploration — DRILLING LIC.: C57-522125

CORE SAMPLE CONDITION LEGEND: ▩ Undisturbed ☒ Disturbed ☐ No Recovery

LOGGED BY: Chris Wabuzoh — REVIEWED BY: Ola Balogun

DEPTH	SOIL TYPE	PID (ppm)	RECOVERY	CONSTRUCTION: SEAL	CASING	SCREEN
ASPHALT covering						
SANDY CLAY: Brown; about 40% coarse, coarse to fine, hard angular to rounded sand; about 60% clay, moderate plasticity; dry to moist; no hydrocarbon odor; no reaction with hydrochloric acid (HCL).	CL	0	2,3,5 ▩			
5						
SANDY CLAY: Greenish; about 40% coarse to fine, hard subangular to rounded sand; about 60% clay, moderate to high plasticity, moist; has hydrocarbon odor; no reaction with HCL.	CL	264	5,11,17 ▩			
10						
CLAYEY SAND: Brown; about 40% clay, moderate to high plasticity; about 50% coasre to fine, hard rounded sand; about 10% gravel size about 1/4 inch; moist to saturated; no hydrocarbon odor; Groundwater water encountered.	CL	4	5,11,13 ▩			
15						
20						
25						

BORING & MONITORING WELL LOG

BORING/ WELL # SB-2

CLEINT: Stanley Wong — PROJECT NAME: Oakland

PROJECT ADDRESS: 2345 International Boulevard, Oakland, California — DATE DRILLED: May 22, 2001

DRILLING METHOD: Hollow Stem Auger — SAMPLER TYPE: CA Split Spoon Sampler

TOTAL DEPTH OF BORING: 20 Feet — WIDTH OF BORING: 6 3/4 - inches

DEPTH TO GROUNDWATER AT THE TIME OF DRILLING: N/A — STATIC WATER LEVEL: N/A

CASING DIAMETER: N/A — CASING LENGTH: N/A — SCREEN DIAMETER: N/A

SCREEN LENGTH: N/A — SLOT SIZE: N/A

DRILLING COMPANY: Bay Area Exploration — DRILLING LIC.: C57-522125

CORE SAMPLE CONDITION LEGEND: ▩ Undisturbed ☒ Disturbed ☐ No Recovery

LOGGED BY: Chris Wabuzoh — REVIEWED BY: Ofa Balogun

DEPTH	SOIL TYPE	PID (ppm)	RECOVERY	CONSTRUCTION: SEAL	CASING	SCREEN
ASPHALT covering						
SANDY CLAY: Brown; about 40% coarse to fine, hard angular to subrounded sand; about 60% clay, moderate plasticity; dry to moist; no hydrocarbon odor; no reaction with hydrochloric acid (HCL).	CL	0	4,6,9			
5						
SANDY CLAY: Gray with iron staining; about 40% coarse to fine, hard subangular to rounded sand; about 60% clay, moderate to high plasticity, moist; has hydrocarbon odor; no reaction with HCL.	CL	270	4,10,12			
10						
CLAYEY SAND: Brown; about 30% clay, moderate to high plasticity; about 60% coasre to fine, hard rounded sand; about 10% gravel size about 1/4 inch; moist; no hydrocarbon odor; no reaction with HCL.	SC	1	8,11,15			
15						
SANDY CLAY: Brown; about 30% coarse to very fine, hard rounded sand; about 70% clay moderate to high plasticity; moist to saturated; no hydrocarbon odor; no reaction with HCL.	SC	0	5,10,15			
20						
25						

BORING & MONITORING WELL LOG

BORING/WELL # SB-3

CLEINT: Stanley Wong — PROJECT NAME: Oakland

PROJECT ADDRESS: 2345 International Boulevard, Oakland, California — DATE DRILLED: May 22, 2001

DRILLING METHOD: Hollow Stem Auger — SAMPLER TYPE: CA Split Spoon Sampler

TOTAL DEPTH OF BORING: 20 Feet — WIDTH OF BORING: 6 3/4 - Inches

DEPTH TO GROUNDWATER AT THE TIME OF DRILLING: N/A — STATIC WATER LEVEL: N/A

CASING DIAMETER: N/A — CASING LENGTH: N/A — SCREEN DIAMETER: N/A

SCREEN LENGTH: N/A — SLOT SIZE: N/A

DRILLING COMPANY: Bay Area Exploration — DRILLING LIC.: C57-522125

CORE SAMPLE CONDITION LEGEND: ■ Undisturbed ☒ Disturbed ☐ No Recovery

LOGGED BY: Chris Wabuzoh — REVIEWED BY: Ola Balogun

DEPTH	SOIL TYPE	PID (ppm)	RECOVERY	CONSTRUCTION: SEAL	CASING	SCREEN
ASPHALT covering						
NO RECOVERY		0	4,6,11 ☐			
5						
SANDY CLAY: Gray; about 30% coarse to fine, hard subangular to rounded sand; about 60% clay, moderate to high plasticity, moist; has hydrocarbon odor, no reaction with HCL.	CL	346	4,8,11 ■			
10						
CLAYEY SAND: Gray; about 30% clay, moderate to high plasticity; about 60% coarse to fine, hard rounded sand; about 10% gravel size about 1/4 inch; moist; has hydrocarbon odor, no reaction with HCL.	SC	400	7,11,18 ■			
15						
SANDY CLAY: Brown; about 35% coarse to very fine, hard rounded sand; about 60% clay moderate to high plasticity; about 5% gravel size about 1/4 inch; moist to saturated; no hydrocarbon odor; no reaction with HCL.	SC	5	4,18,14 ■			
20						
25						

BORING & MONITORING WELL LOG

BORING / WELL # SB-2

CLIENT: Stanley Wong — PROJECT NAME: Oakland

PROJECT ADDRESS: 2345 International Boulevard, Oakland, California — DATE DRILLED: May 22, 2001

DRILLING METHOD: Hollow Stem Auger — SAMPLER TYPE: CA Split Spoon Sampler

TOTAL DEPTH OF BORING: 20 Feet — WIDTH OF BORING: 6 3/4 - Inches

DEPTH TO GROUNDWATER AT THE TIME OF DRILLING: N/A — STATIC WATER LEVEL: N/A

CASING DIAMETER: N/A — CASING LENGTH: N/A — SCREEN DIAMETER: N/A

SCREEN LENGTH: N/A — SLOT SIZE: N/A

DRILLING COMPANY: Bay Area Exploration — DRILLING LIC.: C57-522125

CORE SAMPLE CONDITION LEGEND: ■ Undisturbed ☒ Disturbed ☐ No Recovery

LOGGED BY: Chris Wabuzoh — REVIEWED BY: Ola Balogun

	DEPTH	SOIL TYPE	PID (ppm)	RECOVERY	CONSTRUCTION: SEAL	CASING	SCREEN
ASPHALT covering							
SANDY CLAY: Dark brown; about 40% coarse to fine, hard, angular to subrounded sand; about 60% clay, moderate plasticity; moist; no hydrocarbon odor; no reaction with HCL.	5	CL	0	2,2,3 ■			
SANDY CLAY: Dark gray; about 30% coarse to fine, hard subangular to rounded sand; about 70% clay, moderate to high plasticity, moist; has slight hydrocarbon odor; no no reaction with HCL.	10	CL	100	4,8,10 ■			
CLAYEY SAND: Greenish gray; about 40% coarse to fine, hard subangular to rounded sand; about 60% clay; moderate to high plasticity; moist; has hydrocarbon odor; no reaction with HCL.	15	SC	169	8,12,15 ■			
CLAYEY SAND: Light brown; about 40% coarse to very fine, hard rounded sand; about 60% clay, moderate to high plasticity; some gravel size about 1/4 inch; moist to saturated; groundwater encountered; no hydrocarbon odor; no reaction with HCL.	20	SC	0	3,6,8 ■			
	25						

BORING & MONITORING WELL LOG — WELL #SB-5

CLIENT: Stanley Wong — PROJECT NAME: Oakland

PROJECT ADDRESS: 2345 International Boulevard, Oakland, California — DATE DRILLED: May 22, 2001

DRILLING METHOD: Hollow Stem Auger — SAMPLER TYPE: CA Split Spoon Sampler

TOTAL DEPTH OF BORING: 20 Feet — WIDTH OF BORING: 6 3/4 - inches

DEPTH TO GROUNDWATER AT THE TIME OF DRILLING: N/A — STATIC WATER LEVEL: N/A

CASING DIAMETER: N/A — CASING LENGTH: N/A — SCREEN DIAMETER: N/A

SCREEN LENGTH: N/A — SLOT SIZE: N/A

DRILLING COMPANY: Bay Area Exploration — DRILLING LIC.: C57-522125

CORE SAMPLE CONDITION LEGEND: ■ Undisturbed ☒ Disturbed ☐ No Recovery

LOGGED BY: Chris Waburzoh — REVIEWED BY: Ola Balogun

DEPTH	SOIL TYPE	PID (ppm)	RECOVERY	CONSTRUCTION: SEAL	CASING	SCREEN
ASPHALT covering						
SANDY CLAY: Dark brown; about 40% coarse to fine, hard, angular to subrounded sand; about 60% clay, moderate plasticity; moist; no hydrocarbon odor; no reaction with HCL.	CL	0	2,3,5			
5						
SANDY CLAY: Dark brown; about 30% coarse to fine, hard subangular to rounded sand; about 70% clay, moderate to high plasticity, moist; no hydrocarbon odor; no reaction with HCL.	CL	0	4,5,10			
10						
CLAYEY SAND: Greenish; about 30% coarse to fine, hard subangular to rounded sand; 70% clay; moderate to high plasticity; some gravel; moist; has hydrocarbon odor; no reaction with HCL.	SC	40	5,13,16			
15						
GRAVELLY SANDY CLAY: Brown; about 30% coarse to very fine, hard rounded sand; 50% clay, moderate to high plasticity; about 20% gravel size about 1/4 inch; moist to saturated; groundwater encountered; no hydrocarbon odor; no reaction with HCL.	CL	7	4,9,11			
20						
25						

BORING & MONITORING WELL LOG

BORING: WELL/SB-8

CLEINT: Stanley Wong

PROJECT NAME: Oakland

PROJECT ADDRESS: 2345 International Boulevard, Oakland, California

DATE DRILLED: May 22, 2001

DRILLING METHOD: Hollow Stem Auger

SAMPLER TYPE: CA Spill Spoon Sampler

TOTAL DEPTH OF BORING: 10 Feet

WIDTH OF BORING: 6 3/4 - inches

DEPTH TO GROUNDWATER AT THE TIME OF DRILLING: N/A

STATIC WATER LEVEL: N/A

CASING DIAMETER: N/A

CASING LENGTH: N/A

SCREEN DIAMETER: N/A

SCREEN LENGTH: N/A

SLOT SIZE: N/A

DRILLING COMPANY: Bay Area Exploration

DRILLING LIC.: C57-522125

CORE SAMPLE CONDITION LEGEND: ■ Undisturbed ☒ Disturbed ☐ No Recovery

LOGGED BY: Chris Wabuzoh REVIEWED BY: Ola Balogun

DEPTH	SOIL TYPE	PID (ppm)	RECOVERY	CONSTRUCTION: BEAL	CASING	SCREEN
ASPHALT covering						
SANDY CLAY: Dark brown; about 40% coarse to fine, hard, angular to subrounded sand; about 60% clay, moderate plasticity; moist; no hydrocarbon odor; no reaction with HCL.	CL	0	2,2,2 ■			
5						
SANDY CLAY: Dark brown; about 30% coarse to fine, hard subangular to rounded sand; about 70% clay, moderate to high plasticity, moist; no hydrocarbon odor; no reaction with HCL.	CL	0	1,2,2 ■			
10						
15						
20						
25						

BORING & MONITORING WELL LOG

MW-6/SB-7

CLIENT: Stanley Wong — PROJECT NAME: Oakland

PROJECT ADDRESS: 2345 International Boulevard, Oakland, California — DATE DRILLED: May 22, 2001

DRILLING METHOD: Hollow Stem Auger — SAMPLER TYPE: CA Split Spoon Sampler

TOTAL DEPTH OF BORING: 20 Feet — WIDTH OF BORING: 6 3/4 - inches

DEPTH TO GROUNDWATER AT THE TIME OF DRILLING: N/A — STATIC WATER LEVEL: N/A

CASING DIAMETER: 4 inches — CASING LENGTH: 15 feet — SCREEN DIAMETER: 4 inches

SCREEN LENGTH: 5 feet — SLOT SIZE: 0.02 inch

DRILLING COMPANY: Bay Area Exploration — DRILLING LIC.: C57-522125

CORE SAMPLE CONDITION LEGEND: ■ Undisturbed ☒ Disturbed ☐ No Recovery

LOGGED BY: Chris Wabuzoh — REVIEWED BY: Ola Bafogun

DEPTH	SOIL TYPE	PID (ppm)	RECOVERY	CONSTRUCTION: SEAL	CONSTRUCTION: CASING	CONSTRUCTION: SCREEN
ASPHALT covering						
SANDY CLAY: Dark brown; about 40% coarse to fine; hard angular to subrounded sand; about 60% clay, moderate plasticity; moist; no hydrocarbon odor; no reaction with HCL.	CL	3	2,2,3	CEMENT GROUT		
5						
SANDY CLAY: Gray; about 30% coarse to fine, hard subangular to rounded sand; about 60% clay, moderate to high plasticity; moist; has hydrocarbon odor; no reaction with HCL.	CL	36	4,5,8		CASING	
10						
CLAYEY SAND: Gray; about 30% clay, moderate to high plasticity; about 60% coarse to fine, hard rounded sand; about 10% gravel size about 1/4 inch; moist; has hydrocarbon odor; no reaction with HCL.	SC	370	6,10,12			
15						
SANDY CLAY: Brown; about 35% coarse to very fine, hard rounded sand; about 60% clay moderate to high plasticity; about 5% gravel size about 1/4 inch; moist to saturated; no hydrocarbon odor; no reaction with HCL.	CL	2	5,7,8			
20						
25						

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http://www.mccampbell.com E-mail: main@mccampbell.com

Sequoia Environmental 1111 Aladdin Ave., Suite B San Leandro, CA 94577	Client Project ID: #SW-02; Oakland	Date Sampled: 05/22/01
		Date Received: 05/23/01
	Client Contact: Chris 'Wabuzoh	Date Extracted: 05/23-05/25/01
	Client P.O:	Date Analyzed: 05/23-05/25/01

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)*	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes	% Recovery Surrogate
68163	SB1-10'	S	240,b,j	ND<0.20	ND<0.04	0.19	0.19	0.45	---#
68164	SB1-15'	S	3.0,b,j	ND	ND	0.005	0.009	0.013	113
68165	SB2-10'	S	89,b,j	ND<0.10	ND	ND	0.033	0.25	---#
68166	SB2-15'	S	ND	ND	ND	ND	ND	ND	108
68167	SB2-20'	S	ND	ND	ND	ND	ND	ND	107
68168	SB3-10'	S	300,b,j	ND<0.20	ND<0.01	ND<0.01	0.76	1.2	---#
68169	SB3-15'	S	1800,a	ND<2.0	3.3	5.5	48	53	---#
68170	SB3-20'	S	8.5,a	ND	0.009	0.023	0.10	0.12	---#
68171	SB4-10'	S	ND	ND	ND	ND	ND	ND	103
68172	SB4-15'	S	230,b,j	ND<0.10	0.23	ND	1.5	1.1	---#
68173	SB4-20'	S	ND	ND	ND	ND	ND	ND	99
68174	SB5-15'	S	25,a	ND	0.035	ND	0.10	0.11	---#
68175	SB5-20'	S	1.9,c	ND	0.62	ND	ND	ND	102
68176	SB6-10'	S	ND	ND	ND	ND	ND	ND	96
68177	SB7-10'	S	18,j	ND	ND	ND	0.056	0.11	100
68178	SB7-15'	S	68,a	ND<0.10	0.28	0.25	0.36	0.35	---#
68179	SB7-20'	S	ND	ND	ND	ND	ND	ND	104
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	5.0	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L

cluttered chromatogram; sample peak coelutes with surrogate peak

*The following descriptions of the TPH chromatogram are cursory in nature and McCampbell 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 (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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QC REPORT

Date: 05/23/01 Matrix: Soil

Extraction: TTLC

Compound	Concentration: mg/kg				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 52201					Instrument:		GC-12
Surrogate1	0.000	95.000	102.000	100.00	95	102	7.1
Xylenes	0.000	0.306	0.316	0.30	102	105	3.2
Ethyl Benzene	0.000	0.100	0.104	0.10	100	104	3.9
Toluene	0.000	0.100	0.107	0.10	100	107	6.8
Benzene	0.000	0.099	0.106	0.10	99	106	6.8
MTBE	0.000	0.107	0.115	0.10	107	115	7.2
GAS	0.000	0.746	0.748	1.00	75	75	0.3
SampleID: 51701					Instrument:		GC-11 A
Surrogate1	0.000	106.000	104.000	100.00	106	104	1.9
TPH (diesel)	0.000	316.000	293.000	300.00	105	98	7.8

$$\%\,Recovery = \frac{(MS - Sample)}{Amount\,Spiked} \cdot 100$$

$$RPD = \frac{(MS - MSD)}{} \cdot 2100$$

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CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAY

Report To: Chris Wabuzoh Bill To: SAME
Company: Sequoia Environmental
1111 Maddin Avenue, Suite B
San Leandro, CA 94577
Tele: (510) 614-1900 Fax: (510) 614-2923
Project #: SW-02 Project Name:
Project Location: Oakland
Sampler Signature: Chris Wabuzoh

SAMPLE ID	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX: Water	Soil	Air	Sludge	Other	METHOD PRESERVED: Ice	HCl	HNO_3	Other	BTEX & TPH as Gas (602/8020 + 8015) MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	pH	TSS	Specific Conductivity	
SB1-10'		5-23-01	pm	1			✓				✓				✓																	68163
SB1-15'			pm	1			✓				✓				✓																	68164
SB2-10'			pm	1			✓				✓				✓																	68165
SB2-15'			pm	1			✓				✓				✓																	68166
SB2-20'			pm	1			✓				✓				✓																	68167
SB3-10'			Am	1			✓				✓				✓																	68168
SB3-15'			Am	1			✓				✓				✓																	68169
SB2-20'			Am	1			✓				✓				✓																	68170
SB4-10'			Am	1			✓				✓				✓																	68171
SB4-15'			Am	1			✓				✓				✓																	68172
SB4-20			Am	1			✓				✓				✓																	68173
SB5-15'			Am	1			✓				✓				✓																	68174
SB5-20'			Am	1			✓				✓				✓																	68175
SB6-10'		↓	Am	1			✓				✓				✓																	68176
SB7-10'		5-23-01	pm	1			✓				✓				✓																	68177

Relinquished By:	Date:	Time:	Received By:
Chris Wabuzoh	5-23-01	1040	Maria Venegas
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	PRESERVATION: VOAS / O&G / METALS / OTHER

ICE/t°

Remarks: Normal TAT

McCAMPBELL ANALYTICAL INC.

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PACHECO, CA 94553-5560
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAY

Report To: Chris Wobuzoh Bill To: Same
Company: Sequoia Environmental
1111 Aladdin Avenue, Suite B
San Leandro, CA 94577
Tele: (510)-614-1900 Fax: (510)-614-2923
Project #: ~~Oakland~~ SW-02 Project Name:
Project Location: Oakland
Sampler Signature: Chris Wobuzoh

SAMPLE ID	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	BTEX & TPH as Gas (602/8020 + 8015)/ MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	pH	TSS	Specific Conductivity		Comments
SB7-15'		5-22-01	pm	1			✓				✓				✓																			68178
SB7-20'		5-22-01	pm	1			✓				✓				✓																			68179

	VOAS	O&G	METALS	OTHER
ICE/t° ✓ PRESERVATION				
GOOD CONDITION ✓ APPROPRIATE				
HEAD SPACE ABSENT ✓ CONTAINERS ✓				

Relinquished By:	Date:	Time:	Received By:
Chris Wobuzoh	5-23-01	1010	Maria Venegas
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

Remarks: Normal TAT

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Sequoia Environmental	Client Project ID: #SW-02; Oakland	Date Sampled: 05/22/01
1111 Aladdin Ave., Suite B		Date Received: 05/23/01
San Leandro, CA 94577	Client Contact: Chris 'Wabuzoh	Date Extracted: 05/23-05/30/01
	Client P.O:	Date Analyzed: 05/23-05/30/01

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)*	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes	% Recovery Surrogate
68157	SB-1	W	11,000,a	ND<20	8.1	23	81	7.1	...#
68158	SB-2	W	1200,b,j	ND	ND	3.5	5.5	ND	114
68159	SB-3	W	53,000,a,h	ND<200	790	110	2000	2000	102
68160	SB-4	W	170,000,a,h	ND<200	420	ND<45	1500	800	109
68161	SB-5	W	27,000,a	ND<500	8400	99	230	120	106
68162	SB-6	W	ND	ND	ND	ND	ND	ND	104
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	5.0	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L

cluttered chromatogram; sample peak coelutes with surrogate peak

*The following descriptions of the TPH chromatogram are cursory in nature and McCampbell 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 (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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QC REPORT

Date: 05/23/01 Matrix: Water

Extraction: TTLC

Compound	Concentration: ug/L				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 52201					Instrument:		GC-12
Surrogate1	0.000	92.0	93.0	100.00	92	93	1.1
Xylenes	0.000	28.2	28.1	30.00	94	94	0.4
Ethyl Benzene	0.000	9.3	9.3	10.00	93	93	0.0
Toluene	0.000	9.3	9.2	10.00	93	92	1.1
Benzene	0.000	9.2	9.1	10.00	92	91	1.1
MTBE	0.000	10.5	10.4	10.00	105	104	1.0
GAS	0.000	92.2	90.9	100.00	92	91	1.5
SampleID: 52101					Instrument:		GC-11 A
Surrogate1	0.000	114.0	114.0	100.00	114	114	0.0
TPH (diesel)	0.000	7875.0	7800.0	7500.00	105	104	1.0

$$\%\,Recovery = \frac{(MS - Sample)}{Amount\,Spiked} \cdot 100$$

$$RPD = \frac{(MS - MSD)}{(\quad)} \cdot 200$$

25971ZSQ10.doc

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

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAY

Report To: Chris Wabuzoh Bill To: Same

Company: Sequoia Environmental

111 Maddin Avenue Suite B

San Leandro, Ca 94577

Tele: (510) 614-1900 Fax: (510) 614-2923

Project #: 3W-02 Project Name:

Project Location: Oakland

Sampler Signature: Chris Wabuzoh

SAMPLE ID	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX: Water	Soil	Air	Sludge	Other	METHOD PRESERVED: Ice	HCl	HNO_3	Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015) MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	Other: pH	TSS	Specific Conductivity	Comments
SB-1		5-12-01	pm	2		✓					✓	✓			✓																	68157
SB-2			pm	2		✓					✓	✓			✓																	68158
SB-3			pm	2		✓					✓	✓			✓																	68159
SB-4			pm	2		✓					✓	✓			✓																	68160
SB-5			pm	2		✓					✓	✓			✓																	68161
SB-6		5-12-01	pm	2		✓					✓	✓			✓																	68162

ICE/t ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
PRESERVATION APPROPRIATE ✓
CONTAINERS ✓
VOAS | O&G | METALS | OTHER

Relinquished By:	Date:	Time:	Received By:
Chris Wabuzoh	5-13-01	1040	Maria Venegas
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

Remarks: Normal TAT

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

Sequoia Environmental 1111 Aladdin Ave., Suite B San Leandro, CA 94577	Client Project ID: #SW-02	Date Sampled: 06/13/01
		Date Received: 06/14/01
	Client Contact: Chris Wabuzoh	Date Extracted: 06/15/01
	Client P.O:	Date Analyzed: 06/15/01

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)^	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes	% Recovery Surrogate
69777	MW-3	W	8400,a	ND<20	1300	25	64	32	110
69778	MW-6	W	7600,a	ND<10	1400	42	19	14	---#
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	5.0	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L.

cluttered chromatogram; sample peak coelutes with surrogate peak

^The following descriptions of the TPH chromatogram are cursory in nature and McCampbell 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 (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

26307 ZSQA

McCAMPBELL ANALYTICAL INC.

1110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAY

Report To: Chris Mabuzoh Bill To:
Company: Sequoia Environmental
1111 Aladdin Avenue Suite B
San Leandro, CA 94577
Tele: (510-614-1900 Fax: (510-614-2923
Project #: SW-02 Project Name:
Project Location: Oakland
Sampler Signature: Chris Mabuzoh

SAMPLE ID	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX: Water	Soil	Air	Sludge	Other	METHOD PRESERVED: Ice	HCl	HNO3	Other	BTEX & TPH as Gas (602/8020 + 8015) MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	pH	TSS	Specific Conductivity	Other	Comments
MW-3		6-13-01	pm	2		✓					✓	✓			✓																		69777
MW-6		6-13-01	pm	2		✓					✓	✓			✓																		69778

Relinquished By:	Date:	Time:	Received By:
Chris Mabuzoh	6-14	1015	Wilma Venegas
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

Remarks:

McCAMPBELL ANALYTICAL INC.
110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAY

Report To: Chris Wabuzoh Bill To: SAME
Company: Sequoia Environmental
1111 Maddin Avenue, Suite B
San Leandro, CA 94577
Tele: (510) 614-1900 Fax: (510) 614-2923
Project #: SW-02 Project Name:
Project Location: Oakland
Sampler Signature: Chris Wabuzoh

SAMPLE ID	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX: Water	Soil	Air	Sludge	Other	METHOD PRESERVED: Ice	HCl	HNO_3	Other	BTEX & TPH as Gas (602/8020 + 8015) MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	pH	TSS	Specific Conductivity	
SB1-10'		5-23-01	pm	1			✓				✓				✓																	68163
SB1-15'			pm	1			✓				✓				✓																	68164
SB2-10'			pm	1			✓				✓				✓																	68165
SB2-15'			pm	1			✓				✓				✓																	68166
SB2-20'			pm	1			✓				✓				✓																	68167
SB3-10'			Am	1			✓				✓				✓																	68168
SB3-15'			Am	1			✓				✓				✓																	68169
SB2-20'			Am	1			✓				✓				✓																	68170
SB4-10'			Am	1			✓				✓				✓																	68171
SB4-15'			Am	1			✓				✓				✓																	68172
SB4-20			Am	1			✓				✓				✓																	68173
SB5-15'			Am	1			✓				✓				✓																	68174
SB5-20'			Am	1			✓				✓				✓																	68175
SB6-10'		↓	Am	1			✓				✓				✓																	68176
SB7-10'		5-23-01	pm	1			✓				✓				✓																	68177

Relinquished By:	Date:	Time:	Received By:
Chris Wabuzoh	5-23-01	1040	Maria Venegas
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	PRESERVATION: VOAS / O&G / METALS / OTHER

ICE/t°

Remarks: Normal TAT

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAY

Report To: Chris Wobuzoh Bill To: Same
Company: Sequoia Environmental
1111 Aladdin Avenue, Suite B
San Leandro, CA 94577
Tele: (510)-614-1900 Fax: (510)-614-2923
Project #: ~~Oakland~~ SW-02 Project Name:
Project Location: Oakland
Sampler Signature: Chris Wobuzoh

SAMPLE ID	LOCATION	Sampling Date	Sampling Time	# Containers	Type Containers	Matrix: Water	Matrix: Soil	Matrix: Air	Matrix: Sludge	Matrix: Other	Method Preserved: Ice	HCl	HNO_3	Other	BTEX & TPH as Gas (602/8020 + 8015)/ MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	pH	TSS	Specific Conductivity		Comments
SB7-15'		5-22-01	pm	1			✓				✓				✓																			68178
SB7-20'		5-22-01	pm	1			✓				✓				✓																			68179

ICE/t° ✓ GOOD CONDITION ✓ HEAD SPACE ABSENT ✓

PRESERVATION APPROPRIATE CONTAINERS ✓ — VOAS | O&G | METALS | OTHER

Relinquished By:	Date:	Time:	Received By:
Chris Wobuzoh	5-23-01	1010	Maria Venegas

Remarks: Normal TAT

25971ZSQ10.doc

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAY

Report To: Chris Wabuzoh Bill To: Same

Company: Sequoia Environmental

111 Maddin Avenue Suite B

San Leandro, Ca 94577

Tele: (510) 614-1900 Fax: (510) 614-2923

Project #: 3W-02 Project Name:

Project Location: Oakland

Sampler Signature: Chris Wabuzoh

SAMPLE ID	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX: Water	Soil	Air	Sludge	Other	METHOD PRESERVED: Ice	HCl	HNO_3	Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015) MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	Other: pH	TSS	Specific Conductivity	Comments
SB-1		5-12-01	pm	2		✓					✓	✓			✓																	68157
SB-2			pm	2		✓					✓	✓			✓																	68158
SB-3			pm	2		✓					✓	✓			✓																	68159
SB-4			pm	2		✓					✓	✓			✓																	68160
SB-5			pm	2		✓					✓	✓			✓																	68161
SB-6		5-12-01	pm	2		✓					✓	✓			✓																	68162

ICE/t ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
PRESERVATION APPROPRIATE ✓
CONTAINERS ✓
VOAS | O&G | METALS | OTHER

Relinquished By:	Date:	Time:	Received By:
Chris Wabuzoh	5-13-01	1040	Maria Venegas
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

Remarks: Normal TAT

26307 ZSQA

McCAMPBELL ANALYTICAL INC.

1110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAY

Report To: Chris Mabuzoh Bill To:
Company: Sequoia Environmental
1111 Aladdin Avenue Suite B
San Leandro, CA 94577
Tele: (510-614-1900 Fax: (510-614-2923
Project #: SW-02 Project Name:
Project Location: Oakland
Sampler Signature: Chris Mabuzoh

SAMPLE ID	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX: Water	Soil	Air	Sludge	Other	METHOD PRESERVED: Ice	HCl	HNO3	Other	BTEX & TPH as Gas (602/8020 + 8015) MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	pH	TSS	Specific Conductivity	Other	Comments
MW-3		6-13-01	pm	2		✓					✓	✓			✓																		69777
MW-6		6-13-01	pm	2		✓					✓	✓			✓																		69778

Relinquished By:	Date:	Time:	Received By:
Chris Mabuzoh	6-14	1015	Wilma Venegas
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

Remarks:

Appendix B

City of Oakland Subsurface Utility Map

E. 12TH
23RD AVE.
INTERNATIONAL (E. 14TH
AVE.
PUBLIC LIBRARY
24TH
AVE.
E. 15TH
BLEAU
DISTRICT NO. 2
STREET
RESUB. OF BLOCK 1 & OF 1
(FOOTHILL) (LISBON) (24TH) MILLER
KENN- 2
25TH STREET
ST.)
FOUNTAINE (FOUNTAINEBLEAU) AVENUE
A
B
TR.
FRUITVALE SANITARY
BOULEVARD
C
Open on Ground but not dedicated
Abandoned
THE KENNEDY TR. 3
(MILLER)
Inlets over conduit
LINE OF
EDY
TR. 4
R.
MILLER PL.
20' Reserve
REV. MAP EDEN 2
26TH AVE.
OF PARK
(E. 14TH
OA
12" RCP P-XD2587
72" R.C.P.
60:003:03
60:003:04
60:001:30
60:001:32
60:001:34
60:001:39
60:003:05
60:003:06
60:003:07
60:003:08
60:003:16
60:003:17
60:003:22
60:003:26
60:001:11
60:001:12
60:001:17
60:001:19
60:001:20
60:001:21
60:001:22
60:001:28
60:001:29
60:001:33
60:001:35
60:001:36
60:001:37
60:001:42
60:100:09
60:100:13
60:100:14
62:011:08
62:011:09

Appendix C

City of Oakland Bench Mark Data
from Renner Surveying & Engineering

RENNER SURVEYING & ENGINEERING

3270 MENDOCINO AVENUE, SUITE E-2
SANTA ROSA CA, 95403
PHONE 707-569-9757 FAX 707-569-9762
renengl@pacbell.net
(Home Office)

AND
228 LORTON AVENUE, SUITE 4
BURLINGAME, CA 94010
PHONE 650-685-8131 FAX 650-685-8313
(Survey Headquarters)

FAX TRANSMITTAL

To: Bob Clark Date: 03/18/03

Company: — FAX No: 1-510-420-9170

From: Ernie Renner Re: DATUM

Subject: City of Oakland

NUMBER OF PAGES TRANSMITTED INCLUDING TRANSMITTAL SHEET: 3
IF YOU DO NOT RECEIVE ALL THE PAGES, PLEASE CALL US @

RESPECTIVE HOME OR SURVEY OFFICE TELEPHONE NUMBER

ADDITIONAL COMMENTS AND/OR NOTES

NGVD 1929 is 3.0' higher - add three feet to our elevations.

Thank You

Ernie

RENNER SURVEYING & ENGINEERING

3270 MENDOCINO AVENUE, SUITE E-2
SANTA ROSA CA, 95403
PHONE 707-569-9757 FAX 707-569-9762
renengl@pacbell.net
(Home Office)

AND

228 LORTON AVENUE, SUITE 4
BURLINGAME, CA 94010
PHONE 650-685-8131 FAX 650-685-8313
(Survey Headquarters)

FAX TRANSMITTAL

To: Ernie Date: 3/17/03

Company: N/A FAX No: 510-525-1011

From: Robert Shellman Re: 1093-01

Subject: Datum

NUMBER OF PAGES TRANSMITTED INCLUDING TRANSMITTAL SHEET:2

Ernie; The current datum that the topo is on is a local Oakland city datum.

To convert to NGVD29' add 3ft to each elevation.

Robert

DATUM

562-11 (8/62)

CITY OF OAKLAND

BENCH MARK DATA

Standard Disc In _____

Tagged Pin In _____

Monument Pin _____

Other Cut square

Designation 1509 City of Oakland Datum

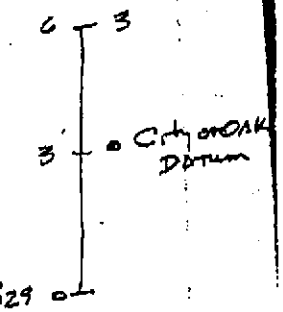
Elevation 33.705

Field Book BL 43 Page 45

Order III

LOCATION:

Square cut in conc. curb centerline return NW corner East 14th Street and 27th Avenue.



To Correct to
NGVD'29
NDD 3' Correct -

CARY FAUGHT
510-615-5597 407
710
ONEDGEWATER # NEAR HEGG

14 SW
No. 15SE

NGVD29

City Engineer's Office, Oakland Calif.