CAMBRIA

RO327

April 13, 2004

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

Re: **Site Assessment Work Plan**
Credit World Auto Sales
2345 International Boulevard (formerly E. 14th Street)
Oakland, California
ACHCS Case No. RO0000327
Cambria Project No. 513-1000

Dear Mr. Gholami:

On behalf of Mr. Stanley Wong, Cambria Environmental Technology, Inc. (Cambria) has prepared this *Site Assessment Work Plan* for the above-referenced site.

If you have any questions or comments regarding this work plan, please call me at (510) 420-3305.

Sincerely,
Cambria Environmental Technology, Inc.

Gretchen Hellmann

Gretchen Hellmann
Project Engineer

Attachment: Site Assessment Work Plan

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

H:\Wong (Credit Auto), Oakland\Site Assessment Work Plan\Site Assessment Work Plan.doc

Cambria Environmental Technology, Inc.

5900 Hollis Street
Suite A
Emeryville, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

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SITE ASSESSMENT WORK PLAN

Credit World Auto Sales
2345 International Boulevard
(Formerly E. 14th Street)
Oakland, California 94601
ACHCS Case No. RO0000327
Cambria Project No. 513-1000

April 13, 2004

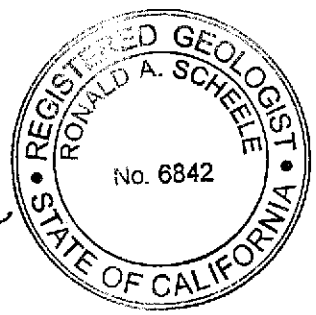
Prepared for:

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

Prepared by:

Cambria Environmental Technology, Inc.
5900 Hollis Street, Suite A
Emeryville, California 94608

Written by:



Gretchen Hellmann
Project Engineer

Ron Scheele, R.G.
Senior Geologist

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SITE ASSESSMENT WORK PLAN
Credit World Auto Sales
2345 International Boulevard
(Formerly E. 14th Street)
Oakland, California

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SITE ASSESSMENT WORK PLAN

Credit World Auto Sales
2345 International Boulevard
(Formerly E. 14th Street)
Oakland, California

April 13, 2004

1.0 INTRODUCTION

On behalf of Mr. Stanley Wong, Cambria Environmental Technology, Inc. (Cambria) has prepared this *Site Assessment Work Plan* (Work Plan) for the above-referenced site. In a letter dated February 25, 2004, Mr. Amir Gholami of the Alameda County Health Care Services Agency (ACHCSA) approved the recommendations proposed in Cambria's *Site Summary Report* including a work plan to further delineate the extent of hydrocarbons and abandon all improperly constructed wells (Appendix A). The site background, previous investigations and remediation, proposed scope of work, reporting, and schedule are described below.

2.0 SITE BACKGROUND

2.1 Site Description

The site 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 is used as an office and automotive service bay. The remainder of the site is a paved parking area (Figure 2).

The site is located in a mixed commercial and residential area and is bound by International Boulevard to the northeast, Miller Avenue to the southeast, a car repair shop to the southwest, and a restaurant with second floor apartments to the northwest. Adjacent to the restaurant is a hotel and a residential dwelling.

2.2 Regional and Local 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, and permeable, fine sand, silt, and clayey silt with thin beds of coarse sand.

Previous investigations at the site encountered low to moderate permeability clays and silts with interbedded higher permeability sand and gravel layers to the total depth explored of 36 feet below ground surface (bgs). Approximately one-foot of asphalt and aggregate base material (fill) is underlain by a clay layer extending to approximately 11 to 17 feet bgs. This clay layer is underlain by a moderately permeable layer of silty to clayey sand to approximately 27 feet bgs and a gravelly clay layer to approximately 36.0 feet bgs. A highly permeable sand and/or gravel layer is sometimes present at depths ranging from 30.5 to 35.0 feet bgs.

2.3 Regional and Local Hydrogeology

Major water-bearing zones beneath the Bay Plain Basin occur at depths ranging from 50 feet to more than 1,000 feet bgs. Groundwater from these zones is presently used largely for irrigation and industrial purposes. Regionally, groundwater flow is generally 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.

Two water-bearing zones are present beneath the site. The upper water-bearing zone exists from approximately 17 to 23 feet bgs (up to 27 feet bgs in well MW-1), and the lower water-bearing zone exists from approximately 30.5 to 35 feet bgs. The upper water-bearing zone appears to be under semi-confined or confined conditions and the two water-bearing zones are possibly hydraulically connected. Since 1991, the depth to groundwater beneath the site has ranged from approximately 6.6 to 17.8 feet bgs, but typically fluctuates between approximately 10 to 15 feet bgs. Historically, the groundwater flow direction has varied significantly, with groundwater appearing to flow to the northwest or radially outward from the center of the site. The apparent radial groundwater flow direction may be explained by water mounding within the underground storage tank (UST) cavity (from August 1993 to September 1994) and within the UST excavation (after December 1994). The apparent radial groundwater flow direction may also be explained by

wells (MW-1, MW-3, and TMW-4) that are screened across two water-bearing zones. Well completion and groundwater level data are summarized on Table 1.

2.4 Sensitive Receptors

The Alameda Harbor to the San Francisco Bay is located approximately 1.5 miles west of the site and the closest body of surface water is the Brooklyn Basin Tidal Canal is located ½ mile to the west of the site. A well survey has not been completed for the site.

3.0 PREVIOUS INVESTIGATIONS

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

August 1988: On August 5, 1988, one 8,000-gallon gasoline UST, two 6,000-gallon gasoline USTs, one 1,000-gallon waste oil UST, two dispenser islands, and associated piping were removed from the site by West Coast Tank Company of Campbell, California (Figure 2). Soil samples from the fuel UST cavity were impacted by total petroleum hydrocarbons as gasoline (TPHg) and benzene (Table 2). Soil samples from the used oil excavation area were impacted by total petroleum hydrocarbons as diesel (TPHd) and total oil and gas (TOG). The excavations were backfilled "with the stockpiled spoils and imported fill, compacted, graded to surface contours and capped with concrete" (see the *Phase I Soil and Groundwater Assessment Report* dated December 23, 1991 by Earth Systems Environmental Inc.)

November 1988: California Environmental Consultants (CEC) advanced three soil borings (B-1 to B-3) to assess the extent of 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) concentrations were detected in soil and groundwater samples from both borings (Tables 2 and 3). Soil and groundwater samples from boring B-3, located near the former used oil UST location, were impacted by BTEX and TOG.

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 concentrations were detected in the soil and groundwater

(Tables 2 and 3). Soil and groundwater samples from boring B-3, located near the former used oil UST location, were impacted by TOG and BTEX. Groundwater was encountered at 19 feet 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. The groundwater flow direction beneath the site was inferred to be north-northeast to west-southwest with an average gradient of 0.029 ft/ft. Tank Protect concluded that unconfined and confined 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 water-bearing 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 concentrations were detected in soil and water samples from boring SB-5 and benzene concentration were detected in boring SB-2 (Tables 2 and 3). Benzene and methyl tert-butyl ether (MTBE) concentrations 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 the northern and southern extent of the hydrocarbon plume was 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 any soil samples (Table 2). 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 (Table 4). MTBE was not detected in any groundwater samples. Sequoia reported groundwater flow to the west-southwest during this assessment.

May 2003: Cambria completed a conduit study to evaluate the potential for subsurface utility conduits to serve as preferential pathways for hydrocarbon migration. The depth to nearby utilities ranged from approximately 3 to 18 feet bgs. Site groundwater has historically fluctuated between approximately 6.5 and 17 feet bgs.

Groundwater Monitoring: Groundwater monitoring of site wells was conducted on a quarterly basis between August 1991 and December 1999, and only once in 2001 and 2002. Quarterly

monitoring events were initiated again in March of 2003. Groundwater elevation and analytical data is summarized in Table 2 and presented in Figure 3.

4.0 PREVIOUS 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 the USTs were removed.

4.1 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 soil excavation was conducted around the UST area in the center of the site. The depth of the soil excavation ranged from 12 feet to 19 feet bgs. A total of 1,550 cubic yards (cy) of soil was removed. 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 disposal facility. The final verification soil sampling indicated a maximum TPHg concentration of 110 milligrams per kilogram (mg/kg) from the UST sidewall, and 66 mg/kg from the excavation bottom.

4.2 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 has been conducted by Cambria since October 2002 (Table 4).

4.3 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 levels.

4.4 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.

5.0 PROPOSED SCOPE OF WORK

5.1 Objective

The primary objective of the proposed scope of work is to define the extent of the SPH and dissolved-phase hydrocarbon plumes. A *Feasibility Test Work Plan* will be prepared following the submittal of this *Site Assessment Work Plan.*

Cambria is proposing the reconstruction of three existing wells (MW-1, MW-3, and TMW-4) because they are screened across two water-bearing zones. Each well will be over-drilled and replaced with a shallower well with an appropriate screen interval within the same boring. The reconstructed wells (MW-1a, MW-3a, and TMW-4a) will assist with site assessment and feasibility testing (Figure 4).

Cambria is also proposing the installation of six offsite monitoring wells. Two monitoring wells will be installed in Miller Avenue to delineate the plume to the south and east and to determine if the storm drain is influencing plume migration. Two monitoring wells will be installed along

International Boulevard to delineate the plume to the north and northeast. And two monitoring wells will be installed on neighboring properties to delineate the plume to the northwest and west. See Figure 4 for the proposed monitoring well locations.

5.2 Site Health and Safety Plan

A comprehensive site safety plan will be prepared to protect site workers. The plan will be kept onsite during all field activities and signed by each site worker.

5.3 Permits

Drilling permits will be obtained from the Alameda County Public Works Agency, and an encroachment permit will be obtained from the City of Oakland Community and Economic Development Agency, as needed.

5.4 Off-Site Access

Off-site access agreements will be obtained, as necessary, prior to the installation of the monitoring wells proposed offsite to the west and northwest.

5.5 Utility Clearance

The proposed drilling locations will be marked and Underground Service Alert will be notified of Cambria's activities. A private subsurface utility locating contractor will be used to identify any conflicting subsurface utilities and each location will be cleared by hand auger or air knife prior to drilling.

5.6 Soil Sampling and Analysis

During drilling, soil samples will be collected at 5-foot intervals to the total depth of approximately 26 feet bgs (15 feet below first-encountered groundwater). Soil samples may be collected continuously from 15 to 25 feet bgs to assist with determining the top of the upper water-bearing zone. Field screening of hydrocarbons and volatile organic compounds will include visual and olfactory observations, and/or photo-ionization detector (PID) readings. See Appendix B for Cambria's standard procedures for soil sampling. Select soil samples will be analyzed for TPHg by modified EPA Method 8015, and benzene, toluene, ethylbenzene, and toluene (BTEX) and MTBE by EPA method 8021B. Samples will be submitted to a California-certified analytical

laboratory for analysis. Soil samples will not be collected during the reconstruction of wells MW-1, MW-3, and TMW-4.

5.7 Monitoring Well Reconstruction / Installation

Cambria will reconstruct the three onsite monitoring wells (MW-1, MW-3, and TMW-4) by over-drilling the 2-inch diameter wells with 10-inch diameter hollow-stem augers. Over-drilling will be conducted by inserting a pilot drill bit down the center of the well to help guide the augers as they drill out the well. After the total depth of the well is removed, the bottom 5 to 10 feet will be filled with bentonite chips, and new 4-inch diameter, 0.010-inch slotted, PVC well casing will be installed. The reconstructed wells will be screened from approximately 12 to 27 feet. A filter pack consisting of No. 2/12 sand will be installed to 6 inches above the top of the well screen, overlain by one foot of bentonite, and the remaining annulus filled with bentonite-cement grout to the surface. Each well will be protected by a traffic-rated vault and a locking well cap. Cambria's *Standard Field Procedures for Soil Borings and Monitoring Wells* is included as Appendix B.

Cambria will install the proposed offsite monitoring wells using 10-inch diameter, hollow-stem augers. The borings will be converted to monitoring wells, constructed of 4-inch diameter 0.010-inch slotted PVC casing. The groundwater monitoring wells will be screened across the upper water-bearing zone (approximately 17 to 27 feet bgs). The well depth and screen interval may vary based on field observations. A filter pack consisting of No. 2/12 sand will be installed to 6 inches above the top of the well screen, overlain by one foot of bentonite, and the remaining annulus filled with bentonite-cement grout to the surface. Each well will be protected by a traffic-rated vault and a locking well cap. Cambria's *Standard Field Procedures for Soil Borings and Monitoring Wells* is included as Appendix B.

5.8 Well Development

Cambria will develop the wells by surge block agitation and evacuation. Groundwater evacuation will continue until approximately ten well-casing volumes of water have been removed or the turbidity of water has been significantly reduced.

5.10 Monitoring Well Sampling and Analysis

Following well development activities, Cambria will monitor and sample all site wells, including the newly installed wells as part of a quarterly groundwater monitoring event. See Appendix B for Cambria's standard procedures for groundwater sampling. Groundwater samples will be analyzed for TPHg by modified EPA Method 8015, and BTEX by EPA method 8021B, with confirmation analysis for any MTBE concentrations by EPA Method 8260. Groundwater samples will be submitted to a California-certified analytical laboratory for analysis.

5.11 Investigation Derived Waste (IDW)

Investigation derived waste (IDW) generated during field activities will be temporarily stored onsite. Following review of analytical results and disposal profiling, the IDW will be transported to an appropriate facility for disposal/recycling.

6.0 REPORTING

Cambria will prepare and submit a *Site Assessment Report* to the ACHCSA detailing the findings of the above investigation phases. At a minimum, this report will contain:

- The findings and conclusions of the plume delineation activities;
- Descriptions of the soil boring/monitoring well installation methods;
- Descriptions of the soil and groundwater sampling methods;
- Figures depicting the lateral extent of the hydrocarbon plume and groundwater flow direction;
- Tabulated soil and groundwater analytical results;
- Boring logs and well construction diagrams for the soil borings and monitoring wells;
- Updated hydrogeological cross sections;
- Analytical reports and chain-of-custody forms; and
- Soil and groundwater disposal methods.

7.0 SCHEDULE

Upon receiving written work plan approval from the ACHCSA, Cambria will prepare a project budget and obtain client approval of the proposed activities. Cambria anticipates completing the planned investigation and report within approximately 12 to 14 weeks, however, off-site access agreements could delay the proposed activities.

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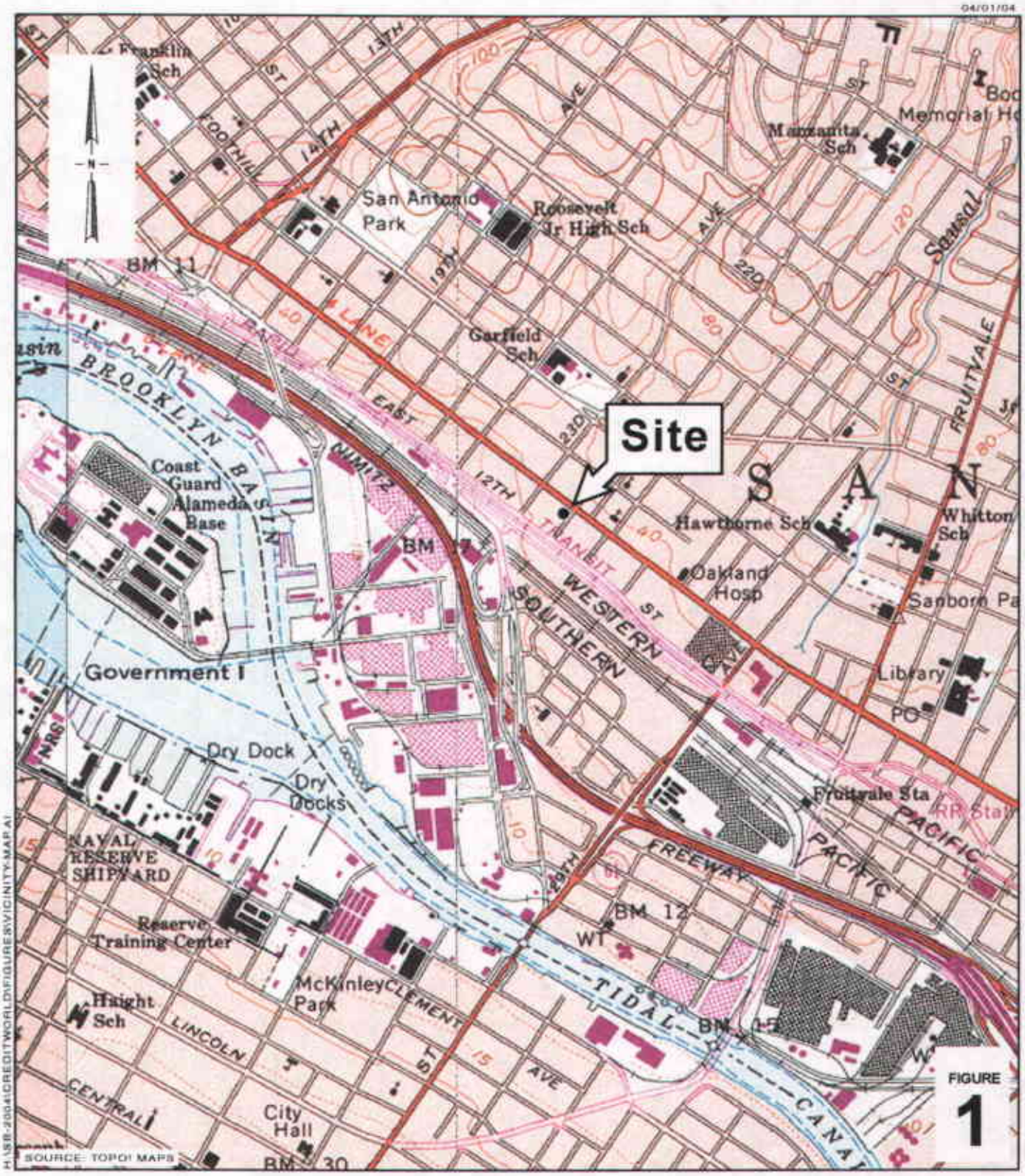
Figures



Credit World Auto Sales

2345 E. 14th Street

Oakland, California

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Vicinity Map

Site Plan

EXPLANATION

- MW-1 — Monitoring Well Location
- SB-1 (2001) — Soil Boring Location and year of installation in parenthesis
- Approximate limits of excavation

building
lot
Hotel
ALLEY
Restaurant with Second Floor Apartments
Residence
INTERNATIONAL BOULEVARD
SB-4 (1997)
SB-3 (1997)
SB-1 (2001)
SB-2 (2001)
gate
SB-5 (1997)
MW-2
billboard
SB-3 (2001)
asphalt
grass
gate
former waste oil UST
TH-3
TH-4
TMW-5
former USTs
TH-2
SB-6 (2001)
B-2
TH-1
TMW-4
Fire Hydrant
SB-4 (2001)
B-3
garage
B-1
asphalt
Paved Parking
asphalt
office
MW-3
MW-1
SB-5 (2001)
SB-2 (1997)
SB-7/MW-6
gate
building
MILLER AVENUE
fenceline
TH-5
SB-1 (1997)
gate
Auto Repair Shop

N

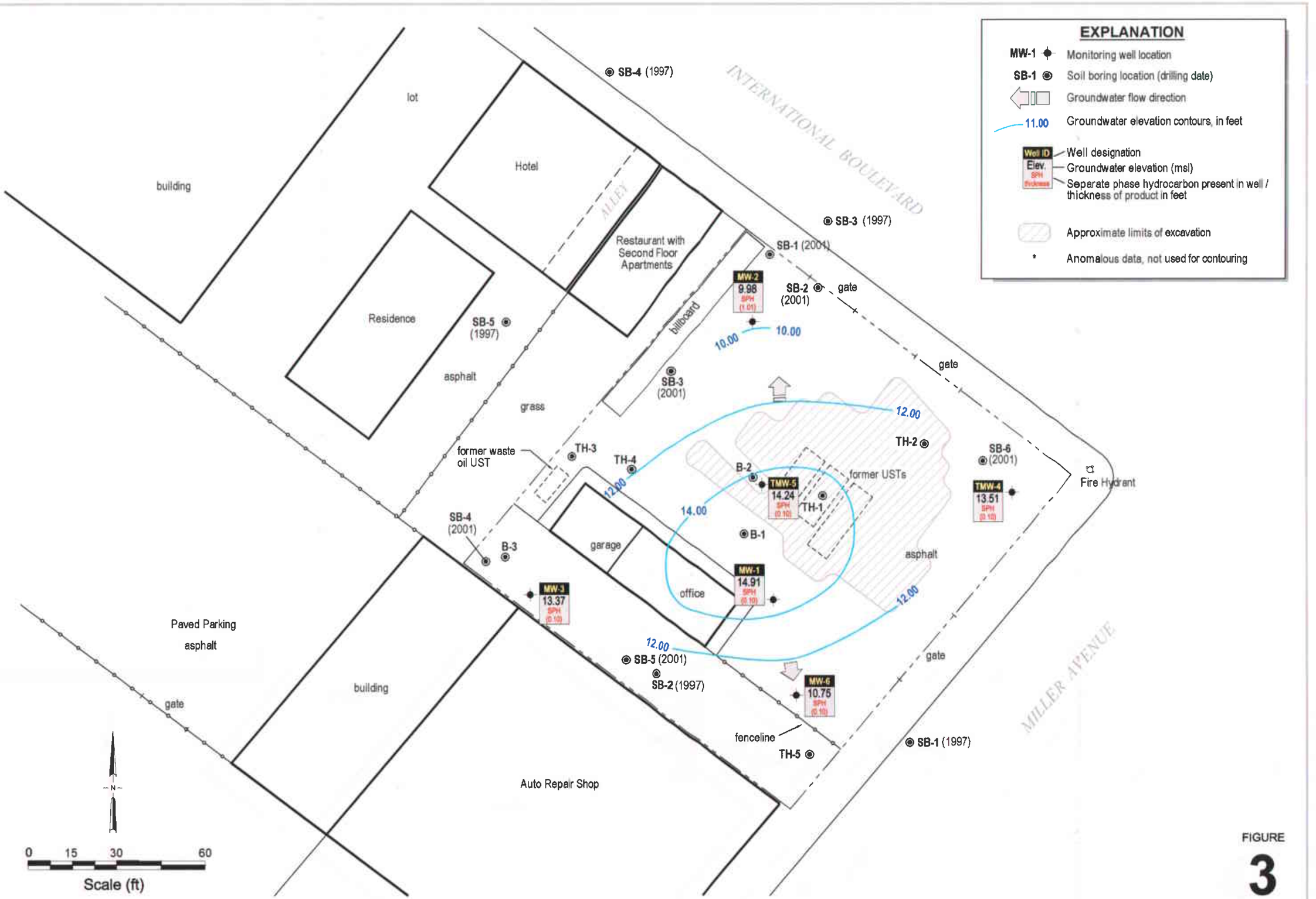
0 15 30 60
Scale (ft)

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

FIGURE
2

Credit World Auto Sales
2345 International Boulevard
Oakland, California

CAMBRIA



Groundwater Elevation Contour and SPH Thickness Map
December 4, 2003

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Credit World Auto Sales
2345 International Boulevard
Oakland, California

FIGURE
3

H:\WORK\CREDIT WORLD\FIGURES\MOD-CNTOUR.DWG

Proposed Well Location
Utility Conduit Map

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Credit World Auto Sales
2345 International Boulevard
Oakland, California

FIGURE
4

EXPLANATION

- Proposed monitoring well location
- 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
- Paved Parking

N

0 15 30 60
Scale (ft)

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Tables

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Table 1. **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)	First Encountered GW Depth (feet bgs)	Static GW Depth (feet bgs/date)
MW-1	5/22/1991	8	2	0.010	35	0-12	12-35	15-35	17.5	15.42 (8/23/91)
MW-2	8/21/1991	8	2	0.010	35	0-12	12-35	15-35	17.5	13.77 (8/23/91)
MW-3	8/22/1991	8	2	0.010	35	0-12	12-35	15-35	19.0	15.07 (8/23/91)
TMW-4	7/22/1993	8	2	0.010	36	0-12	12-34	14-34	~17	13.26 (8/17/93)
TMW-5	7/23/1993	8	2	0.010	27	0-15	15-24	17-24	~18	12.98 (8/17/93)
MW-6	5/22/2001	6.75	4	0.020	20	0-13	13-20	15-20	~20	12.47 (5/23/01)

bgs = below ground surface
GW = groundwater

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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)
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	--	--	--

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)
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	--	--
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	--	--

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)

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 Elevation and Analytical Data - Credit World Auto Sales, 2345 International Boulevard, Oakland, California

Well ID *TOC*	Date Sampled	Depth to GW (ft)	SPH Thickness (ft)	GW Elevation (ft)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-1	12/30/1997	10.96	0.17	16.51	61,000	4,300	1,800	1,600	6,900	1,400
100.000[a]	3/24/1998	9.33	0.00	18.00	24,000	1,000	1,000	1,300	4,300	2,000
27.33[b]	6/29/1998	12.20	0.00	15.13	130,000	3,800	370	1,200	4,200	3,300
	10/2/1998	13.46	0.00	13.87	22,000	66	21	26	140	<0.50
	12/10/1998	10.49	0.00	16.84	32,000	4,600	970	1,700	4,900	<250
	3/26/1999	9.44	0.00	17.89	230,000	370	290	280	720	<0.50
	6/11/1999	12.56	0.01	14.78	180,000	210	170	220	400	<0.50
	9/15/1999	14.85	1.00	13.28	21,000	3,800	280	590	2,200	<250
	12/28/1999	14.50	1.32	13.89	27,000	48	36	46	83	<0.5
	6/13/2001	15.83	4.36	12.03	--	--	--	--	--	--
	12/27/2002	8.31	0.16	16.19	--	--	--	--	--	--
	3/23/2003	10.65	0.05	16.72	--	--	--	--	--	--
	5/29/2003	12.11	0.28	15.44	--	--	--	--	--	--
	9/26/2003	12.84	0.29	14.72	--	--	--	--	--	--
	12/4/2003	**12.50**	**0.10**	**14.91**	--	--	--	--	--	--
MW-2	8/23/1991	13.77	0.00	84.82	10,000	<5	<5	<5	<5	--
98.585[a]	4/16/1992	15.38	2.81	12.79	--	--	--	--	--	--
25.92[b]	6/11/1993	13.19	0.00	12.74	--	--	--	--	--	--
	8/17/1993	14.04	0.01	11.89	49,000	94	240	250	980	--
	3/28/1994	13.61	0.54	12.74	14,000	4,200	<250	910	1,400	--
	6/27/1994	14.24	0.80	12.32	24,000	4,400	72	1,100	1,700	--
	9/16/1994	17.82	4.46	11.67	40,000	2,300	250	2,000	4,100	--
	3/31/1995	16.72	7.44	15.15	28,000	4,000	<120	1,100	1,400	--
	6/28/1995	13.50	0.73	13.00	40,000	2,700	130	1,700	2,900	--
	9/28/1995	14.63	0.54	11.72	7,500	420	14	250	190	<62
	12/26/1995	12.58	0.90	14.06	22,000	1,300	88	950	1,800	<250
	3/22/1996	11.46	0.15	14.58	9,800	2,200	<120	400	<380	<1,200
	6/20/1996	13.08	0.37	13.14	35,000	770	<0.50	240	<0.50	550
	9/30/1996	16.67	3.75	12.25	58,000	1,600	230	2,200	4,000	<5.0
	12/27/1996	15.74	7.57	16.24	29,000	2,100	<0.50	1,200	1,800	<5.0
	3/7/1997	12.55	0.00	13.37	13,000	1,300	37	290	180	<5.0
	6/28/1997	11.98	0.04	13.97	12,000	840	<0.50	640	360	<5.0
	9/18/1997	13.44	0.00	12.48	12,000	680	<0.50	320	84	<5.0
	12/30/1997	11.31	0.00	14.61	13,000	1,100	40	350	220	<5.0
	3/25/1998	10.02	0.00	15.90	8,100	1,300	51	410	230	670
	6/29/1998	11.96	0.00	13.96	12,000	880	13	180	72	430

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

Well ID *TOC*	Date Sampled	Depth to GW (ft)	SPH Thickness (ft)	GW Elevation (ft)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-2	10/2/1998	13.74	0.00	12.18	47,000	140	100	110	200	<0.50
(cont'd)	12/10/1998	12.91	2.10	14.69	26,000	1,000	210	1,500	1,900	<1,000
	3/26/1999	9.06	0.20	17.02	110,000	190	150	120	380	<0.50
	6/11/1999	12.18	0.00	13.74	190,000	310	250	320	540	<0.50
	9/15/1999	15.59	3.00	12.73	25,000	720	<100	1,300	1,600	<1,000
	12/28/1999	16.81	4.50	12.71	75,000	130	98	130	230	<0.50
	6/13/2001	14.84	3.15	10.84	--	--	--	--	--	--
	6/20/2002	14.80	0.70	8.92	53,000	2,200	140	3,300	3,000	<1,000
	10/21/2002	16.98	0.24	6.37	--	--	--	--	--	--
	12/27/2002	13.58	0.43	9.92	--	--	--	--	--	--
	3/23/2003	15.49	0.29	10.66	--	--	--	--	--	--
	5/29/2003	16.08	0.44	10.19	--	--	--	--	--	--
	9/26/2003	17.14	0.87	9.48	--	--	--	--	--	--
	12/4/2003	**16.75**	**1.01**	**9.98**	--	--	--	--	--	--
MW-3	8/23/1991	15.07	0.00	84.18	<5,000	<5	<5	<5	<5	--
99.25[a]	4/16/1992	14.14	0.16	13.56	--	--	--	--	--	--
27.57[b]	6/11/1993	14.28	0.00	13.30						--
	8/17/1993	15.77	0.00	11.80	9,600	4.1	17	28	54	--
	3/28/1994	14.35	0.00	13.22	8,400	2,400	56	67	200	--
	6/27/1994	14.77	0.00	12.80	9,900	3,300	<22	<25	73	--
	9/16/1994	15.42	0.05	12.19	16,000	2,300	80	620	240	--
	3/31/1995	12.98	0.46	14.96	16,000	2,800	70	<25	920	--
	6/28/1995	14.20	0.05	13.41	11,000	2,300	32	81	240	--
	9/28/1995	15.17	0.00	12.40	6,300	1,900	<42	200	<120	<420
	12/26/1995	13.33	0.06	14.29	25,000	3,800	97	94	1,600	<250
	3/22/1995	12.81	0.04	14.79	16,000	3,100	75	69	350	250
	6/20/1996	13.95	0.07	13.68	8,500	1,400	28	140	15	220
	9/24/1996	14.86	0.04	12.74	12,000	2,400	87	340	110	<5.0
	12/27/1996	11.04	0.06	16.58	5,800	1,700	28	<0.50	42	240
	3/10/1997	13.80	0.00	13.77	9,000	1,700	<0.50	110	<0.50	<5.0
	6/28/1997	13.72	0.06	13.90	15,000	2,200	<0.50	160	190	<5.0
	9/18/1997	14.76	0.00	12.81	28,000	3,800	<0.50	100	<0.50	<5.0
	12/30/1997	12.97	0.00	14.60	21,000	2,200	<0.50	31	<0.50	300
	3/24/1998	11.75	0.00	15.82	2,300	870	7.2	20	<0.50	85
	6/29/1998	13.38	0.00	14.19	6,500	1,300	12	62	14	140
	10/2/1998	14.42	0.00	13.15	11,000	31	27	35	69	<0.50

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

Well ID *TOC*	Date Sampled	Depth to GW (ft)	SPH Thickness (ft)	GW Elevation (ft)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-3	12/10/1998	12.55	0.00	15.02	<2,500	2,800	68	42	55	<250
(cont'd)	3/26/1999	10.54	0.00	17.03	10,000	21	14	10	41	<0.50
	6/15/1999	13.91	0.00	13.66	87,000	90	71	92	180	<0.50
	9/15/1999	14.70	0.00	12.87	8,700	2,100	71	110	66	<100
	12/28/1999	15.16	0.25	12.61	4,300	7.7	5.2	7.2	13	<0.50
	6/13/2001	14.70	0.40	13.19	8,400	1,300	25	64	32	<20
	6/20/2002	14.68	0.02	12.91	7,800	1,100	23	66	15	<50
	12/27/2002	11.37	0.17	16.34	--	--	--	--	--	--
	3/23/2003	--	--	--	--	--	--	--	--	--
	5/29/2003	13.99	0.08	13.64	--	--	--	--	--	--
	9/26/2003	14.51	0.05	13.10	--	--	--	--	--	--
	12/4/2003	**14.28**	**0.10**	**13.37**	--	--	--	--	--	--
TMW-4	8/17/1993	13.26	0.00	13.24	150	<0.50	0.8	1.4	3.7	--
26.50[b]	3/28/1994	12.40	0.00	14.10	<50	<0.50	<0.50	<0.50	<1.5	--
	6/27/1994	12.84	0.00	13.66	<50	<0.50	<0.50	<0.50	<1.5	--
	9/16/1994	13.58	0.00	12.92	<50	<0.50	<0.50	<0.50	<1.5	--
	3/31/1995	10.23	0.00	16.27	<50	<0.50	<0.50	<0.50	<1.5	--
	6/28/1995	12.21	0.00	14.29	<50	<0.50	<0.50	<0.50	<1.5	--
	9/28/1995	13.38	0.00	13.12	<50	<0.50	<0.50	<0.50	<1.5	<5.0
	12/26/1995	11.32	0.00	15.18	<50	<0.50	<0.50	<0.50	<1.5	<5.0
	3/22/1996	10.54	0.00	15.96	<50	<0.50	<0.50	<0.50	<1.5	<5.0
	6/20/1996	12.14	0.00	14.36	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	9/24/1996	13.01	0.00	13.49	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	12/27/1996	9.51	0.00	16.99	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	3/10/1997	11.92	0.00	14.58	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	6/27/1997	10.70	0.00	15.80	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	9/18/1997	12.94	0.00	13.56	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	12/30/1997	10.92	0.00	15.58	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	3/25/1998	9.60	0.00	16.90	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	6/29/1998	11.32	0.00	15.18	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	10/2/1998	12.56	0.00	13.94	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	12/10/1998	10.44	0.00	16.06	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	3/26/1999	9.38	0.00	17.12	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	6/15/1999	11.58	0.00	14.92	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	9/15/1999	12.89	0.00	13.61	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	12/28/1999	12.92	0.00	13.58	<50	<0.50	<0.50	<0.50	<0.50	<0.50

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

Well ID *TOC*	Date Sampled	Depth to GW (ft)	SPH Thickness (ft)	GW Elevation (ft)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
TMW-4	10/21/2002	12.70	0.00	13.80	--	--	--	--	--	--
(cont'd)	12/27/2002	9.07	0.12	17.53	--	--	--	--	--	--
	3/23/2003	10.73	0.03	15.79	--	--	--	--	--	--
	5/29/2003	12.50	0.02	14.02	--	--	--	--	--	--
	9/26/2003	13.27	0.06	13.28	--	--	--	--	--	--
	12/4/2003	**13.07**	**0.10**	**13.51**	--	--	--	--	--	--
TMW-5	8/17/1993	12.98	0.03	13.55	120,000	640	730	790	3,600	--
26.51[b]	3/28/1994	11.39	0.00	15.12	70,000	23,000	1,500	4,100	15,000	--
	6/28/1994	12.24	0.00	14.27	56,000	26,000	940	5,500	26,000	--
	9/16/1994	13.02	0.05	13.53	96,000	17,000	720	3,500	12,000	--
	3/31/1995	7.38	0.00	19.13	64,000	13,000	470	3,500	6,100	--
	6/28/1995	11.31	0.06	15.25	65,000	9,000	240	2,600	5,300	--
	9/28/1995	14.42	0.00	12.09	79,000	17,000	1,800	2,700	7,000	<1,200
	12/26/1995	10.16	0.05	16.39	110,000	11,000	800	2,300	4,500	<1,200
	3/22/1996	7.59	0.05	18.96	--	--	--	--	--	--
	6/26/1996[d]	7.12	0.00	--	30,000	4,000	180	1,500	2,500	830
	9/30/1996	7.42	0.00	--	6,900	1,600	79	130	370	<5.0
	12/27/1996	6.38	0.00	--	78,000	12,000	1,900	2,900	9,700	<5.0
	3/10/1997	11.12	0.00	--	84,000	9,900	1,100	2,600	8,800	<5.0
	8/17/1997	12.98	0.03	--	--	--	--	--	--	--
	9/18/1997	12.00	0.00	--	65,000	8,000	<0.5	2,000	4,700	<5.0
	12/30/1997	8.97	0.00	--	79,000	6,400	340	2,300	5,500	<5.0
	3/25/1998	7.32	0.00	--	20,000	6,000	260	2,700	5,800	2,400
	6/29/1998	11.50	0.00	--	--	--	--	--	--	--
	10/8/1998	12.56	0.00	--	46,000	120	98	120	240	<0.50
	12/8/1998	10.14	0.00	--	46,000	5,900	320	2,200	5,400	<1,200
	3/26/1999	7.08	0.00	--	35,000	69	61	37	120	<0.50
	6/11/1999	11.40	0.00	--	26,000	29	32	43	72	<0.50
	9/15/1999	12.52	0.00	--	37,000	7,300	400	2,400	6,000	<1,000
	12/28/1999	12.44	0.00	--	25,000	44	32	41	75	<0.50
	5/23/2001	11.31	0.00	12.54	--	--	--	--	--	--
	6/20/2002	11.29	0.05	12.60	51,000	5,100	290	2,300	5,800	<250
	10/21/2002	13.60	0.10	10.33	--	--	--	--	--	--
	12/27/2002	6.60	0.07	17.31	--	--	--	--	--	--
	3/23/2003	9.79	0.04	16.75	--	--	--	--	--	--

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

Well ID *TOC*	Date Sampled	Depth to GW (ft)	SPH Thickness (ft)	GW Elevation (ft)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
TMW-5	5/29/2003	11.29	0.04	15.25	--	--	--	--	--	--
(cont'd)	9/26/2003	12.47	0.07	14.10	--	--	--	--	--	--
	12/4/2003	**12.35**	**0.10**	**14.24**	--	--	--	--	--	--
MW-6	5/23/2001	12.47	0.00	11.34	--	--	--	--	--	--
23.81[c]	6/13/2001	12.47	0.00	11.34	7,600	1,400	42	19	14	<10
	6/20/2002	12.45	0.00	11.36	79	5.7	<0.5	<0.5	<0.5	<5.0
	12/27/2002	7.24	0.04	16.60	--	--	--	--	--	--
	3/23/2003	--	--	--	--	--	--	--	--	--
	5/29/2003	11.95	0.02	11.88	--	--	--	--	--	--
	9/26/2003	13.11	0.03	10.72	--	--	--	--	--	--
	12/4/2003	**13.14**	**0.10**	**10.75**	--	--	--	--	--	--

Abbreviations and Methods:

TOC = elevation measured in feet below top of casing

Depth to GW = Depth to groundwater relative to top of casing

(ft) = measured in feet

SPH = Separate phase hydrocarbons

GW Elevation = Groundwater elevation in relation to mean sea level; calculated according to the relationship GW elevation = TOC - DTW + (0.8)(SPH thickness)

(ug/L) = micrograms per Liter

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 tertiary butyl ether by EPA Method 8020

VOCs = volatile organic compounds by EPA Method 8260

a = Relative to site datum established by Earth Systems Engineering surveyed August 1981

b = Top of casing elevation surveyed 8/10/93 by professional engineer (unknown 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.

Table 4. Separate-Phase Hydrocarbon Removal - Credit World Auto Sales, 2345 International Blvd, Oakland, California

Sample ID/ Well ID	Date Sampled	Depth to SPH (feet bgs)	Depth to GW (feet bgs)	SPH Thickness (feet)	Hydrocarbons Removed (liters)	Hydrocarbons Removed (gallons)	Cumulative Hydrocarbons Removed (gallons)
MW-1	12/30/1997	10.79	10.96	0.17	0.10	0.03	0.03
	6/11/1999	12.55	12.56	0.01	0.01	0.00	0.03
	9/15/1999	13.85	14.85	1.00	0.60	0.16	0.19
	12/28/1999	8.15	8.31	0.16	0.10	0.03	0.21
	6/13/2001	8.15	8.31	0.16	0.10	0.03	0.24
	12/27/2003	8.15	8.31	0.16	3.00	0.79	1.03
	3/23/2003	10.60	10.65	0.05	1.26	0.33	1.36
	4/4/2003	10.19	10.23	0.04	0.94	0.25	1.61
	5/1/2003	9.80	9.85	0.05	0.49	0.13	1.74
	5/29/2003	11.83	12.11	0.28	1.00	0.26	2.00
	7/25/2003	11.99	12.24	0.25	0.50	0.13	2.13
	8/11/2003	12.07	12.37	0.30	0.50	0.13	2.27
	8/29/2003	12.07	12.40	0.33	0.50	0.13	2.40
	9/12/2003	12.59	12.90	0.31	0.48	0.13	2.53
	9/26/2003	12.55	12.84	0.29	0.50	0.13	2.66
	10/10/2003	12.61	12.72	0.11	0.11	0.03	2.69
	10/30/2003	12.68	12.75	0.07	0.08	0.02	2.71
	11/25/2003	12.59	12.69	0.10	0.10	0.03	2.73
	12/4/2003	12.40	12.50	0.10	0.10	0.03	2.76
	12/23/2003	11.97	12.08	0.11	0.10	0.03	2.79
MW-2	6/28/1995	12.77	13.50	0.73	0.44	0.12	2.12
	9/28/1995	14.09	14.63	0.54	0.32	0.09	2.20
	12/26/1995	11.68	12.58	0.90	0.54	0.14	2.35
	3/22/1996	11.31	11.46	0.15	0.09	0.02	2.37
	6/20/1996	12.71	13.08	0.37	0.22	0.06	2.43
	9/30/1996	12.92	16.67	3.75	2.25	0.59	3.02
	12/27/1996	8.17	15.74	7.57	4.54	1.20	4.22
	6/28/1997	11.94	11.98	0.04	0.02	0.01	4.23
	9/18/1997	13.44	13.44	0.00	0.00	0.00	4.23
	12/10/1998	10.81	12.91	2.10	1.26	0.33	4.56
	3/26/1999	8.86	9.06	0.20	0.12	0.03	4.59
	9/15/1999	12.59	15.59	3.00	1.80	0.48	5.07
	12/28/1999	12.31	16.81	4.50	2.70	0.71	5.78
	6/13/2001	11.69	14.84	3.15	1.89	0.50	6.28
	6/20/2002	14.10	14.80	0.70	0.42	0.11	6.39
	10/21/2002	16.74	16.98	0.24	0.14	0.04	6.43
	12/27/2002	13.15	13.58	0.43	3.00	0.79	7.22
	3/23/2003	15.20	15.49	0.29	5.68	1.50	8.72
	4/4/2003	14.72	14.80	0.08	3.78	1.00	9.72
	5/1/2003	13.59	13.63	0.04	0.49	0.13	9.85
	5/29/2003	15.64	16.08	0.44	1.00	0.26	10.11
	7/25/2003	15.81	16.31	0.50	0.50	0.13	10.24
	8/11/2003	15.99	16.44	0.45	0.50	0.13	10.38
	8/29/2003	15.92	16.75	0.83	0.50	0.13	10.51
	9/12/2003	16.29	17.10	0.81	0.95	0.25	10.76
	9/26/2003	16.27	17.14	0.87	1.90	0.50	11.26
	10/10/2003	16.35	17.10	0.75	1.89	0.50	11.76
	10/30/2003	16.41	17.03	0.62	0.95	0.25	12.01
	11/25/2003	16.08	16.98	0.90	3.79	1.00	13.01
	12/4/2003	15.74	16.75	1.01	3.79	1.00	14.01
	12/11/2003	15.81	16.90	1.09	3.79	1.00	15.01
	12/23/2003	15.60	16.55	0.95	3.79	1.00	16.01

Table 4. Separate-Phase Hydrocarbon Removal - Credit World Auto Sales, 2345 International Blvd, Oakland, California

Sample ID/ Well ID	Date Sampled	Depth to SPH (feet bgs)	Depth to GW (feet bgs)	SPH Thickness (feet)	Hydrocarbons Removed (liters)	Hydrocarbons Removed (gallons)	Cumulative Hydrocarbons Removed (gallons)
MW-3	4/16/1992	13.98	14.14	0.16	0.10	0.03	0.03
	9/16/1994	15.37	15.42	0.05	0.03	0.01	0.03
	3/31/1995	12.52	12.98	0.46	0.28	0.07	0.11
	6/28/1995	14.15	14.20	0.05	0.03	0.01	0.11
	12/26/1995	13.27	13.33	0.06	0.04	0.01	0.12
	3/22/1995	12.77	12.81	0.04	0.02	0.01	0.13
	6/20/1996	13.88	13.95	0.07	0.04	0.01	0.14
	9/24/1996	14.82	14.86	0.04	0.02	0.01	0.15
	12/27/1996	10.98	11.04	0.06	0.04	0.01	0.16
	6/28/1997	13.66	13.72	0.06	0.04	0.01	0.17
	12/28/1999	14.91	15.16	0.25	0.15	0.04	0.21
	6/13/2001	14.30	14.70	0.40	0.24	0.06	0.27
	6/20/2002	14.66	14.68	0.02	0.01	0.00	0.27
	12/27/2002	11.20	11.37	0.17	3.00	0.79	1.07
	5/29/2003	13.91	13.99	0.08	0.01	0.03	1.09
	7/25/2003	14.02	14.12	0.10	0.20	0.05	1.14
	8/11/2003	14.25	14.35	0.10	0.15	0.04	1.18
	8/29/2003	14.18	14.33	0.15	0.15	0.04	1.22
	9/12/2003	14.41	14.55	0.14	0.10	0.03	1.25
	9/26/2003	14.46	14.51	0.05	0.15	0.04	1.29
	10/10/2003	14.50	14.58	0.08	0.20	0.05	1.34
	10/30/2003	14.59	14.63	0.04	0.12	0.03	1.37
	11/25/2003	14.30	14.40	0.10	0.11	0.03	1.40
	12/4/2003	14.18	14.28	0.10	0.10	0.03	1.43
	12/23/2003	13.81	13.91	0.10	0.05	0.01	1.44
TMW-4	12/27/2002	8.95	9.07	0.12	1.50	0.40	0.40
	3/23/2003	10.70	10.73	0.03	0.95	0.25	0.65
	4/4/2003	10.35	10.40	0.05	0.95	0.25	0.90
	5/1/2003	10.07	10.09	0.02	0.49	0.13	1.02
	5/29/2003	12.48	12.50	0.02	0.00	0.00	1.02
	7/25/2003	12.61	12.67	0.06	0.05	0.01	1.03
	8/11/2003	14.49	14.59	0.10	0.10	0.03	1.06
	8/29/2003	12.93	12.95	0.02	0.05	0.01	1.07
	9/12/2003	13.24	13.29	0.05	0.03	0.01	1.08
	9/26/2003	13.21	13.27	0.06	0.04	0.01	1.09
	10/10/2003	13.31	13.40	0.09	0.05	0.01	1.11
	10/30/2003	13.30	13.38	0.08	0.04	0.01	1.12
	11/25/2003	13.09	13.19	0.10	0.02	0.01	1.12
	12/4/2003	12.97	13.07	0.10	0.05	0.01	1.14
	12/23/2003	13.59	13.69	0.10	0.05	0.01	1.15
TMW-5	8/17/1993	12.95	12.98	0.03	0.02	0.00	0.00
	9/16/1994	12.97	13.02	0.05	0.03	0.01	0.01
	6/28/1995	11.25	11.31	0.06	0.04	0.01	0.02
	12/26/1995	10.11	10.16	0.05	0.03	0.01	0.03
	3/22/1996	7.54	7.59	0.05	0.03	0.01	0.04
	8/17/1997	12.95	12.98	0.03	0.02	0.00	0.04
	5/23/2001	--	11.31	0.00	0.00	0.00	0.04
	6/20/2002	11.24	11.29	0.05	0.03	0.01	0.05
	10/21/2002	13.50	13.60	0.10	0.06	0.02	0.07
	12/27/2002	13.50	13.60	0.10	1.50	0.40	0.46
	3/23/2003	9.75	9.79	0.04	0.95	0.25	0.71

Table 4. Separate-Phase Hydrocarbon Removal - Credit World Auto Sales, 2345 International Blvd, Oakland, California

Sample ID/ Well ID	Date Sampled	Depth to SPH (feet bgs)	Depth to GW (feet bgs)	SPH Thickness (feet)	Hydrocarbons Removed (liters)	Hydrocarbons Removed (gallons)	Cumulative Hydrocarbons Removed (gallons)
MW-5	4/4/2003	9.40	9.45	0.05	0.49	0.13	0.84
(con't)	5/1/2003	8.93	8.95	0.02	0.38	0.10	0.94
	5/29/2003	11.25	11.29	0.04	0.01	0.01	0.95
	7/25/2003	11.33	11.37	0.04	0.02	0.01	0.96
	8/11/2003	11.47	11.49	0.02	0.01	0.003	0.96
	8/29/2003	12.10	12.17	0.07	0.02	0.01	0.96
	9/12/2003	12.45	12.50	0.05	0.03	0.01	0.97
	9/26/2003	12.40	12.47	0.07	0.02	0.01	0.98
	10/10/2003	12.51	12.61	0.10	0.02	0.01	0.98
	10/30/2003	12.65	12.70	0.05	0.01	0.003	0.99
	11/25/2003	12.39	12.49	0.10	0.01	0.003	0.99
	12/4/2003	12.25	12.35	0.10	0.01	0.001	0.99
	12/23/2003	13.78	13.88	0.10	0.01	0.003	0.99
MW-6	12/27/2002	7.20	7.24	0.04	1.50	0.39	0.39
	5/29/2003	11.93	11.95	0.02	0.01	0.01	0.40
	7/25/2003	12.05	12.07	0.02	0.02	0.01	0.41
	8/11/2003	12.18	12.20	0.02	0.01	0.003	0.41
	8/29/2003	12.74	12.77	0.03	0.05	0.01	0.42
	9/12/2003	13.09	13.15	0.06	0.05	0.01	0.44
	9/26/2003	13.08	13.11	0.03	0.05	0.01	0.45
	10/10/2003	13.27	13.43	0.16	0.08	0.02	0.47
	10/30/2003	13.32	13.40	0.08	0.05	0.01	0.49
	11/25/2003	13.09	13.24	0.15	0.04	0.01	0.50
	12/4/2003	13.04	13.14	0.10	0.02	0.01	0.50
	12/23/2003	13.50	13.60	0.10	0.01	0.003	0.50

Hydrocarbons removed by bailing or purging (gallons) = ***20.88***

Hydrocarbons removed by Tank Protect (see below) (gallons) = ***5.0***

Total estimated hydrocarbons removed (gallons) = ***25.88***

Note = approximately 3 to 5 gallons reported removed by Tank Protect between 8/20/97 and 1/14/98 with continuous free product removal system.

bgs = below ground surface
SPH = Separate phase hydrocarbons
SPH removal volumes were provided for 5/23/01, 6/13/01, and 12/27/02 data.
The volume of hydrocarbons removed prior to 12/27/2002 were estimated by multiplying the well casing volume (2" diameter casing = 0.60L/ft) by the SPH thickness (feet)

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Appendix A

Agency Correspondence

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

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

February 25, 2004

Mr. Stanley Wong
2200 E. 12th St.
Oakland CA 94606

Dear Mr. Wong:

Subject: Fuel Leak Case No. RO0000327, 2345 E. 14th St., Oakland, CA94601

Alameda County Environmental Health, Local Oversight Program (LOP), has received and reviewed the Site Summary Report document dated April 30, 2003, regarding the above referenced site, prepared by Mr. Robert Clark-Riddell of Cambria Environmental. I have also called and discussed with Mr. Ron Scheele of Cambria Environmental. As you are aware, there had been a verbal approval of the recommendations and interim remedial activities per my discussions with Ms. Mary Holland-Ford of Cambria Environmental.

This office requests that you address the following technical comments, perform the proposed work, and send us the technical reports requested below:

TECHNICAL COMMENTS

This site summary report recommends continual monitoring, interim remedial activity, further assessment or investigation of the plume, along with feasiblity studies.

This office concurs with your recommendations as specified above.

TECHNICAL REPORT REQUEST

Please submit the following technical reports to Alameda County Department of Environmental Health (Attention: Amir K. Gholami):

March 31, 2004 Work Plan

Should you have any questions, please do not hesitate to call me at (510) 567-6876.

Sincerely,

Amir K. Gholami
Hazardous Materials Specialist

C: A.gholami, D.Drogos
Mr. Robert Clark-Riddell of Cambria Environmental, 5900 Hollis St., Suite A, Emeryville, CA 94608

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Appendix B

Standard Field Procedures for Soil Boring
and Monitoring Well Installations

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STANDARD FIELD PROCEDURES FOR SOIL BORING AND MONITORING WELL INSTALLATIONS

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

SOIL BORINGS

Objectives

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

Soil Boring and Sampling

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

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

Sample Analysis

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

Field Screening

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

Water Sampling

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

Grouting

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

MONITORING WELL INSTALLATION, DEVELOPMENT AND SAMPLING

Well Construction and Surveying

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

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

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

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

Well Development

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

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

Groundwater Sampling

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

Waste Handling and Disposal

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

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

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Appendix C

Soil Boring Logs and Well Construction Details

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

Geologist: ESE - Mark Meyerger, R.G.

Driller: Consolidated Testing

Wong's Taxi

LOG of BORING

MW-1

PLATE

Project Number: 69-8014-1

5/22/91

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
Grout Cement				0				
Neat cement								
7-1" PVC Blank		90	5 13 16	5			CL/SM	Silty Clay with minor gravel/sand, dark greenish gray, slightly moist, medium dense, good plasticity, no stain, very slight hydrocarbon like odor
Bentonite	4320	360	7 13 13	10		8014-6	SM	Silty Sand, slightly moist dark gray, loose, gray stain, strong odor
2-1/2" Concrete Sand	160	250	7 15 20	15		8014-7	SM/CL	Silty Clay, Sand with minor gravel, light greenish gray, moist, medium dense, no stain, very slight odor
				20			SM/CL	Same as above, saturated, no odor
2-1" 0.010" Pre-Pack Slot				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: STS

Wong's Taxi

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

LOG of BORING

MW-2

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
Portland Cement				0				
		40	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		B014-12	OL	Organic Clay, greenish brown, moist, medium dense, good plasticity, no staining no odor
2"-12/12 Lonestar Sand	25	70	5/8/13	15		B014-13	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 staining, no odor
				30			CL	Same as above
				35			SM	Silty Sand, light green, saturated, loose, nothing under TD35'
2"-10/20 Lonestar Sand								
Sand								

Geologist: ESE - Mark Magargee, R.G.

Driller: SBJS

Wong's Taxi

LOG of BORING

MW-3

PLATE

Project Number: ES-8014-1

8/21/91

Page 1 of 1

LOG OF EXPLORATORY BORING

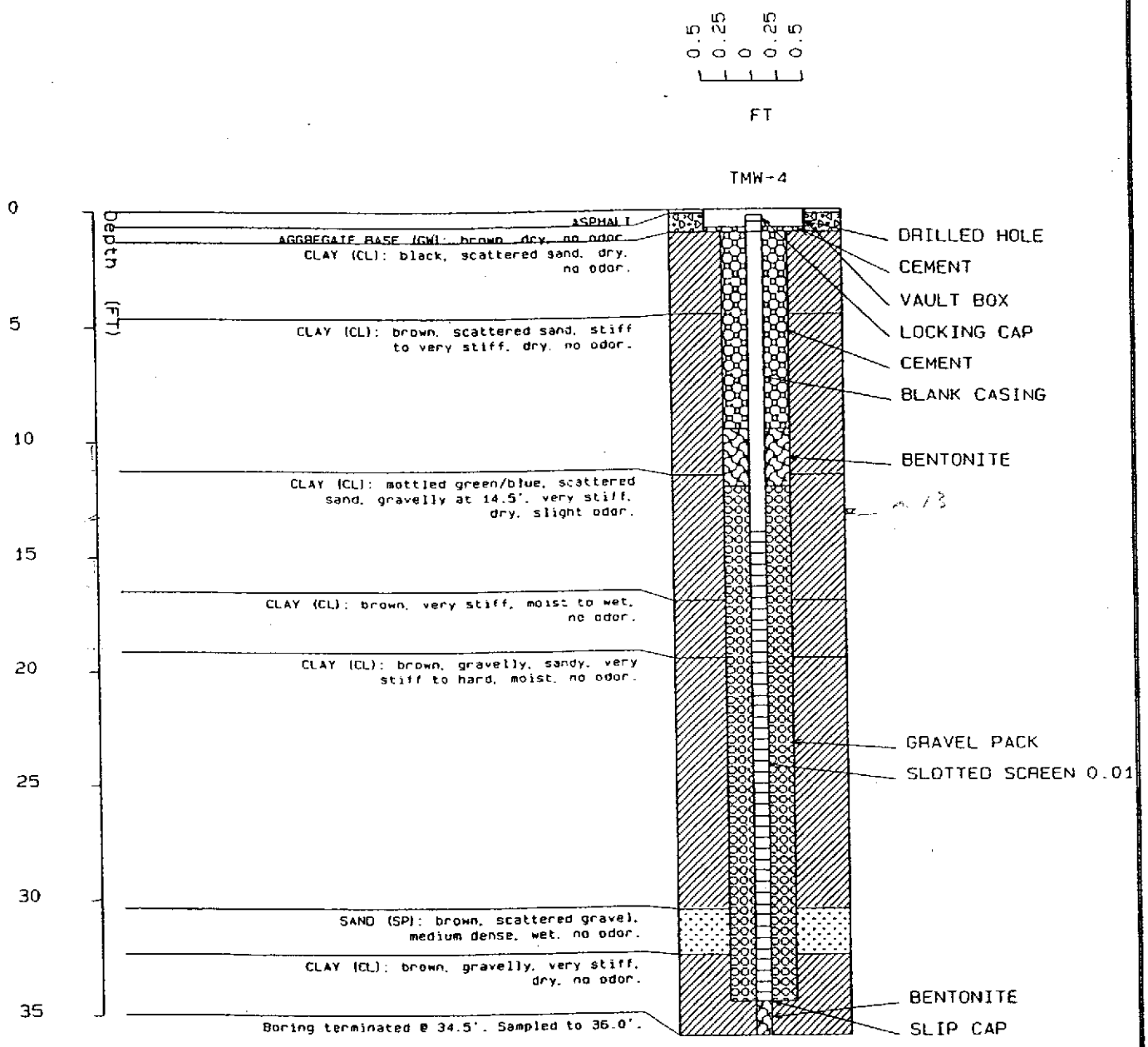
PROJECT NUMBER 267 BORING NO. TMW-4

PROJECT NAME 2345 EAST 14TH STREET, OAKLAND CA.

BY LNH DATE 7/22/93 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, scattered sand, dry, no odor.
.75/1.5		9		5			CLAY (CL): brown, scattered sand, stiff to very stiff, dry, no odor.
.75/1.5		20		10			
			▽				CLAY (CL): mottled green/blue, scattered sand, gravelly at 14.5', very stiff, dry, slight odor.
1.5/1.5		26		15			
							CLAY (CL): brown, very stiff, moist to wet, no odor.
1.5/1.5		36		20			CLAY (CL): brown, gravelly, sandy, very stiff to hard, moist, no odor.
1.5/1.5		46					
1.5/1.5		43					
1.5/1.5		33		25			
1.5/1.5		44					
1.0/1.5		28					SAND (SP): brown, scattered gravel, medium dense, wet, no odor.
.1.0/1.5		22		30			CLAY (CL): brown, gravelly, very stiff, dry, no odor.
							Boring terminated @ 34.5'. Sampled to 36.0'.
1.5/1.5		29		35			

REMARKS: Boring drilled with continuous-flight, hollow-stem, 8-inch O.D. augers. Samples collected in a 2.0-inch I.D. California and standard penetration sampler.



LEGEND ▽ Static Water Level

GW SP CL ASPHALT

WELL ID : TMW-4

2345 EAST 14TH STREET, OAKLAND, CA

TANK PROTECT ENGINEERING

Figure :

LOG OF EXPLORATORY BORING

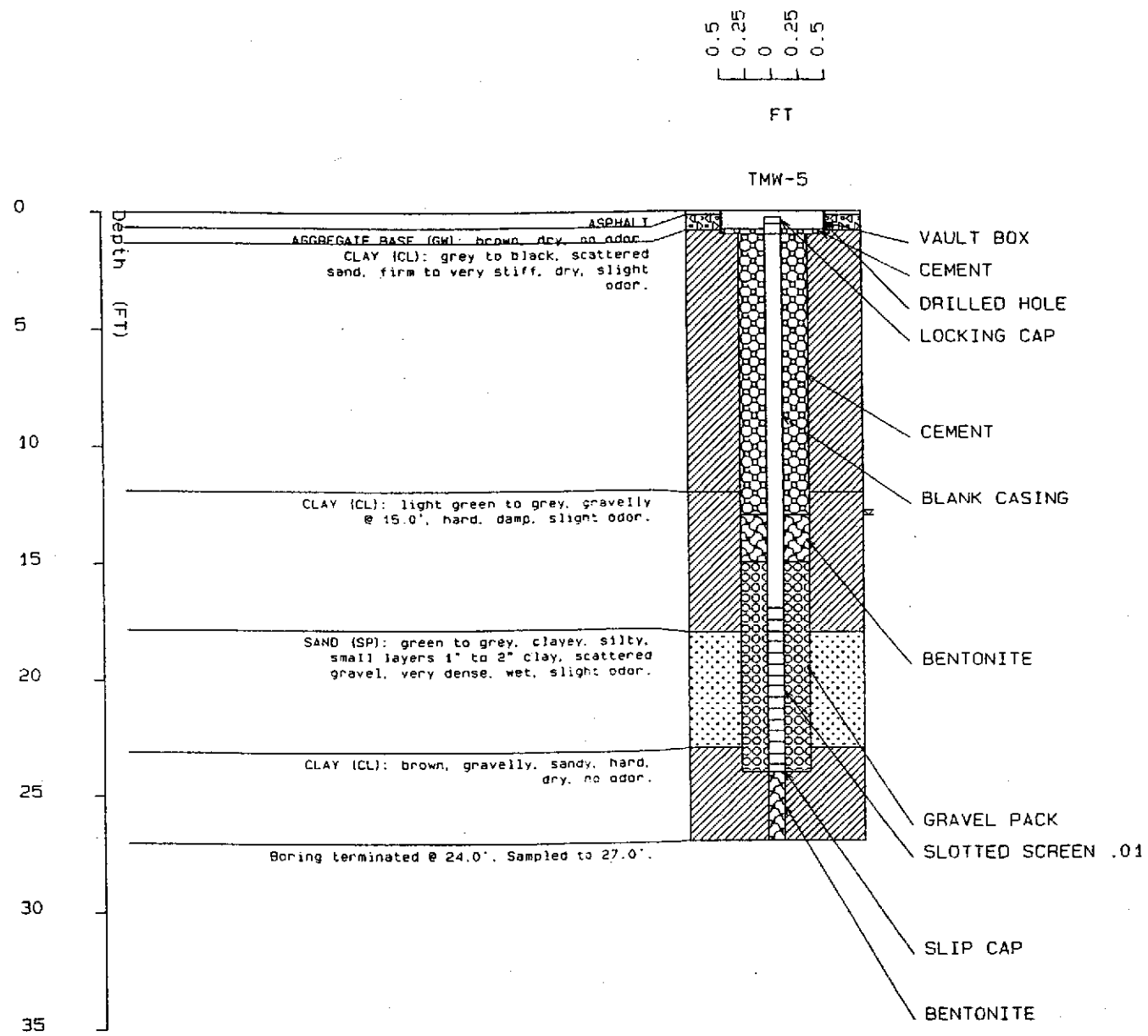
PROJECT NUMBER 267 BORING NO. TMW-5

PROJECT NAME 2345 EAST 14TH STREET, OAKLAND CA.

BY LNH DATE 7/23/93 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): grey to black, scattered sand, firm to very stiff, dry, slight odor.
.75/1.5	0	7		5			
1.5/1.5	>1000	20		10			
			▽				CLAY (CL): light green to grey, gravelly @ 15.0', hard, damp, slight odor.
1.2/1.5	>1000	>50		15			
-	750	-					SAND (SP): green to grey, clayey, silty, small layers 1" to 2" clay, scattered gravel, very dense, wet, slight odor.
1.5/1.5		>50		20			
1.5/1.5		>50					CLAY (CL): brown, gravelly, sandy, hard, dry, no odor.
1.2/1.5		39					Boring terminated @ 24.0'. Sampled to 27.0'.
1.5/1.5		>50		25			
1.5/1.5		49					

REMARKS: Boring drilled with continuous-flight, hollow-stem, 8-inch O.D. augers. Samples collected in a 2.0-inch I.D. California and standard penetration sampler.



LEGEND ▽ Static Water Level

GW SP CL ASPHALT

WELL ID : TMW-5

2345 EAST 14TH STREET, OAKLAND, CA

TANK PROTECT ENGINEERING

Figure :

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

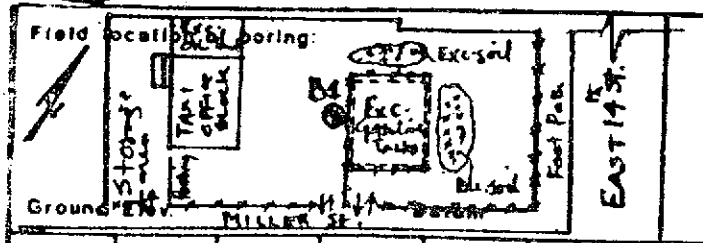
LOGGED BY: Chris Wabuzoh REVIEWED BY: Ola Balogun

DEPTH	SOIL TYPE	PID (ppm)	RECOVERY	CONSTRUCTION: SEAL	CASING	SCREEN	
							ASPHALT covering
5	CL	3	2,2,3	CEMENT GROUT			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.
10	CL	36	4,5,8		CASING		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.
15	SC	370	6,10,12				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.
20	CL	2	5,7,8				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.
25							

LOG OF EXPLORATORY BORING

PROJECT No CEC/SB[illegible]88 DATE 2 Oct 3,88
CLIENT West Coast Tank Testing
LOCATION 2345 East 14th street
LOGGED BY TS DRILLER Hew 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		16.11
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					0-2" 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 greenish 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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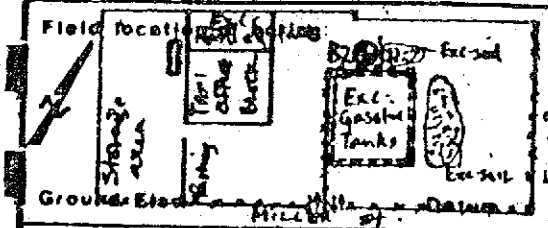
1117 HAPPY VALLEY AVENUE • SAN JOSE, CA 95129 • (408) 725-2644

LOG OF EXPLORATORY BORING

PROJECT No. CEC/SBW-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 sketch



Drilling method Solid Stem Auger
CME-55 Mobile Drill Rig Hole dia 6 inches
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 bottc

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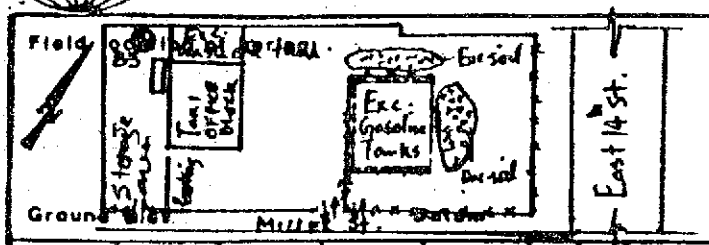
LOG OF EXPLORATORY BORING

PROJECT No CEC/S[illegible]9 DATE 2 Oct 3,88 | BORING No B3
CLIENT West Coast Tank Testing | Sheet 1 of 1
LOCATION 2345 East 14th Street
LOGGED BY TS DRILLED Hew Drilling
Drilling method Solid Stem Auger
CME-55 Mobile Drill Rig
Hole dia 6inches
Casing installation data



Water level	21ft		16 Ft.
Time	10.35	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, dry.
							CL	Dry to damp black silty clay w/ sand. Some discoloration(reddish) & oily odor
		2						
		2						
		3	B3-5		5		CL	Blackish to brown damp silty clay, soft. w/ some reddish sand.
		2						
		3						
		7	B3-10		10		CL	Damp,brown silty clay w/ reddish sand soft to med.stiff. Oily odor
		5						
		8						
		12	B3-15		15		CL	Damp,greenish and brown silty clay w/ fi Med.stiff. Oily odor. Some discoloration observed.
								Water encountered at 21 feet. Boring bott

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WELL CONSTRUCTION	CHEMICAL ANALYSES: Laboratory TPH (mg/Kg)	CHEMICAL ANALYSES: Field PID (ppm)	BLOW COUNT	DEPTH (feet)	INTERVAL	SAMPLE NUMBER	U.S.C.S. DESIGN.	SOIL DESCRIPTION
				0				
			4 6 7	5			ML/SM	Sand, silt to silty sand with minor clay, dark green with gray, loose, dry, no stain, very slight odor
		20						
								Ground water in test filled pit @ 9'
				10			ML/CL	Clayey silt to silty clay, dark green with gray, wet, loose, no stain, weak odor
		ND						
	2775	ND		15		B0143	ML/CL	Same as above TD 16'

Geologist: ESE - Mark Magargee, R.G.

Driller: SB/S

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	4/9/17	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: S & S

Wong's Taxi

LOG of BORING

TH-2

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)	SAMPLES INTERVAL	SAMPLES NUMBER	U.S.C.S. DESIGN.	SOIL DESCRIPTION
				0				
		NO	4/8/11	5			CL/ML	Clay, trace sandy silt, yellowish brown to dark greenish gray,
	10	NO	6/9/14	10		8014-8	OL	Organic Clay, dark greenish gray, slightly moist, good plasticity, no stain no odor
		NO	13/13/15	15			CL	Fat Clay, minor silt, light green, moist, medium dense, good plasticity, no stain, minor hydrocarbon like odor
	10	NO	12/20/20	20		8014-9	CL ▽?	Same as above, light brownish yellow, slight odor
		NO	7/11/16	25			CL	Same as above, very moist, no odor
		NO	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: SOS

Wong's Taxi

LOG of BORING

TH-3

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				
		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 19	15			CL	Fat Clay, minor silt, light greenish, moist, medium dense, good plasticity, no stain, slight odor
	450	20	6 6 12	20		8014-11	SM	Clayey Silty Sand, light greenish, saturated, medium dense, no stain, moderate odor TD 21'

Geologist: ESE - Mark Magargee, R.G.

Driller: SBJS

Wong's Taxi

Project Number: ES-8014-1

5/21/91

LOG of BORING

TH-4

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				
		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	15 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 TD 21'

Geologist: ESE - Mark Magargee, R.G.

Driller: SOS

Wong's Taxi

Project Number: ES-8014-1

8/2/91

LOG of BORING

TH-5

PLATE

Page 1 of 1

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			
2.0/2.0	2	--		30			Boring terminated at 32 feet. Boring sampled to 32 feet. No water level was obtained due to caving.
				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.

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/ WEL #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: Ola 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				
10			4,10,12 ■			
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				
15			8,11,15 ■			
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				
20			5,10,15 ■			
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
		0	4,6,11 ☐				NO RECOVERY
5							
	CL	348	4,6,11 ■				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.
10							
	SC	400	7,11,18 ■				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.
15							
	SC	5	4,18,14 ■				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.
20							
25							

BORING & MONITORING WELL LOG

BORING/ WELL # SB-1

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.	CL	0	2,2,3			
5						
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.	CL	100	4,8,10			
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.	SC	169	8,12,15			
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.	SC	0	3,6,8			
20						
25						

BORING & MONITORING WELL LOG

CONTINUE 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 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.	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-6

SB7 / MW-6

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 Spilt 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 Webuzoh — 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	2,2,2 ■			
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						