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Loh Realty and Investments

## **SOIL AND GROUNDWATER SAMPLING REPORT**

**Warehouses  
678 Third Street, 671 Fourth Street  
Oakland, California**



Prepared for:

Loh Realty and Investments  
6400 Moraga Avenue  
Oakland, California

SOIL AND GROUNDWATER SAMPLING REPORT

Warehouses  
678 Third Street, 671 Fourth Street  
Oakland, California

Project CA1554-2


Prepared by:



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## 1.0 SUMMARY

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### 1.1 SOIL AND GROUNDWATER SAMPLING AND ANALYSIS

The purpose of this Phase II ESA-soil and groundwater sampling was to attempt to identify if previous uses of the Property contributed to soil and groundwater contamination; specifically in the areas of a historic underground storage tank (UST), which was reported to have been closed in place by filling with concrete.

The results of the laboratory analysis predominantly indicate the presence of target analytes in all borings advanced on the Property including: benzene, toluene, ethylbenzene, and xylenes (BTEX), and total petroleum hydrocarbons as gasoline and diesel (TPH-g and TPH-d).

### 1.2 DISCUSSION

A UST, located in the northwest corner of the Property warehouse, was reportedly closed in place at an unknown date. Two separate subsurface assessments have reportedly been conducted in the area of the UST; however a full report of these assessments was not available to Ceres Associates, instead only a summary and figure were provided.

According to a 2005 environmental subsurface investigation report summary prepared by Terra Firma Consulting, LLC, laboratory analysis of ground water samples indicated that the upper limits of the contamination ranges of TPH-gasoline, TPH-diesel, benzene, toluene, ethylbenzene, xylenes, and lead exceeded the environmental screening limits. The results indicated that a contaminant plume containing TPH-gasoline, TPH-diesel, and BTEX compounds extends westward from the underground storage tank for a distance of at least 50 feet and is approximately 30 feet wide and approximately 17 to 20 feet deep. Terra Firma Consulting, LLC recommended that remediation, in the form of excavation and disposal of the contaminated saturated zone, be conducted on the Property.

The results of this assessment further denote the presence of target analytes in the soil and groundwater beneath the Property, and generally these concentrations exceed Industrial Environmental Screening Limits (ESLs) established by the San Francisco Bay Regional Water Quality Control Board.

Groundwater was generally encountered between 18 and 20 feet below ground surface; however, after collecting groundwater samples, groundwater depth was measured at between 8 and 10 feet below ground surface.

#### Soil

Target analytes were reported in all but one soil sample (SB-5, from the warehouse at 671 Fourth Street). The highest concentrations reported were from SB7-10 as high as 20,000 parts per million (ppm) of total petroleum hydrocarbons as gasoline (TPH-g), 3,300 ppm of diesel (TPH-d), 200 ppm of benzene, 980 ppm of toluene, 320 ppm of ethylbenzene, and 1,400 ppm of xylenes. Other soil samples were lower in concentration, generally below 1.0 ppm for BTEX compounds and less than 10 ppm for total petroleum hydrocarbon compounds.

Three of the six soil samples exceeded the ESL for benzene, and one of the six soil samples exceeded the ESL for toluene, ethylbenzene, xylenes, and petroleum hydrocarbons as diesel and gasoline.



### Groundwater

Target compounds were reported in all groundwater samples obtained from the Property. The highest concentrations were reported in the sample collected from SB7, including 3,300 parts per billion (ppb) of benzene, 11,000 ppb of toluene, 2,100 ppb of ethylbenzene, 20,000 ppb of xylenes, 100,000 ppb of TPH-g, and 110,000 of TPH-d. Generally target compounds were reported at approximately 10 - 20 % of those reported for SB7-GW.

Concentration of TPH-g exceeded the industrial ESL for all but one groundwater sample, exceed the industrial ESL for TPH-d in all groundwater samples, and four of five groundwater samples exceed the industrial ESL for some or all of the BTEX compounds.

Further, should further assessment find that the soil beneath the Property is considered "high permeability," groundwater concentrations of benzene would exceed the established "Groundwater Screening Levels for Evaluation of Potential Indoor-Air Impacts" promulgated by the San Francisco Regional Water Quality Control Board.

### Generally

It is apparent that significant soil and groundwater contamination is present beneath the Property, as many samples exceeded established regulatory guidelines (ESLs). Further assessment of the Property subsurface is necessary to assess the extent of contamination.

Tables 1 and 2, located in Section 3.0 Soil and Groundwater Sampling, lists samples with detectable concentrations of target analytes. For laboratory data sheets results see Appendix- Laboratory Data Reports. These results and conclusions are subject to the limitations outlined in section 4.0 Limitations.

## 1.3 RECOMMENDATIONS

Based upon the laboratory data results it appears that significant subsurface contamination is present beneath the Property. This contamination is likely attributable to the UST on the Property. Based upon the results of data accumulated during this assessment, Ceres Associates recommends the following:

- It is unknown whether the UST was closed in place in accordance with state and local regulations. The UST should be properly removed from the Property in accordance with state and local regulations.
- Concentrations of target analytes were reported by the laboratory to exceed established ESLs for the Property use. A copy of this report should be forwarded to the Alameda County Environmental Health Department. It is likely that further work including assessments, preparation of an unauthorized leak form, and potential remediation efforts will be directed by the County.
- Concentrations of both diesel and gasoline were found to be significant in the subsurface, however there is only one reported UST. A geophysical survey should be conducted to assess if other USTs are present.



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## 2.0 INTRODUCTION

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At the request of Loh Realty and Investments, Ceres Associates conducted a Phase II Environmental Site Assessment-soil and groundwater sampling (ESA) at the Warehouses located at 678 Third Street, 671 Fourth Street, Oakland, Alameda County, California (Property) (*refer to Figure 1 - Property Location Map*).

### 2.1 PURPOSE

The purpose of this Phase II ESA was to identify possible contamination of the local environment originating from a UST purportedly closed in place on the Property.

### 2.2 PHYSICAL SETTING

The Property is located on the southwest corner of Martin Luther King Jr. Way and Fourth Street. The Property lies amongst predominantly warehouses. Although three sites are listed on the LUST database within 1/8 mile of the Property, these sites have been issued closure letters and are not anticipated to have adversely impacted the Property either because of their distance from the Property, regulatory status, or presumed groundwater flow direction.

According to the United States Department of Agriculture, Soil Conservation Service, the soil in the area of the Property is Urban land - Baywood complex. This complex consists of Urban land and Baywood loamy sand. Urban land consists of areas that are covered by buildings and other structures. The soil material has been altered or mixed, but it closely resembles the Baywood soil. The Baywood soil is very deep and somewhat excessively drained. Typically, the surface layer is grayish brown and brown, slightly acid loamy sand about 32 inches thick. The underlying material is pale brown and light yellowish brown, slightly acid loamy sand and extends to a depth of 60 inches or more. Permeability is rapid.

### 2.3 BACKGROUND

Ceres Associates prepared a Phase I Environmental Site Assessment for the Property dated June 3, 2006. According to the report, the Property is approximately 35,000 square feet and developed with warehouses. From at least 1912 to approximately 1938 the Property was developed with two residences. From at least 1939 to the present, the Property has been used for warehouse purposes. The Property is currently in use as unoccupied warehouses.

The report further noted that one underground storage tank is currently located in the northeast corner of the smaller concrete tilt-up warehouse on the Property. Ms. Wharton-Morris, a representative for the Property, stated that the tank was formerly used to fuel delivery trucks and that it had been emptied and filled with cement. Ms. Wharton-Morris did not have knowledge of when the tank had been emptied and filled with cement.



According to a 2005 environmental subsurface investigation report summary prepared by Terra Firma Consulting, LLC, laboratory analysis of ground water samples indicated that the upper limits of the contamination ranges of TPH-gasoline, TPH-diesel, benzene, toluene, ethylbenzene, xylenes, and lead exceeded the environmental screening limits. The results indicated that a contaminant plume containing TPH-gasoline, TPH-diesel, and BTEX compounds extends westward from the underground storage tank for a distance of at least 50 feet and is approximately 30 feet wide and approximately 17 to 20 feet deep. Terra Firma Consulting, LLC recommended that remediation, in the form of excavation and disposal of the contaminated saturated zone, be conducted on the Property.

The consultant recommended conducting soil and groundwater sampling at the Property based upon a noted lack of trust in previous subsurface assessments by the Property owner and Ceres Associates because of a lack of original report documents.



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## 3.0 SOIL AND GROUNDWATER SAMPLING

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### 3.1 SOIL AND GROUNDWATER SAMPLING

Soil and groundwater sampling occurred on June 6, 2006. Prior to sampling, individual boring locations were cleared using USA notification processes as well as a private utility locating service. Underground pipelines and conduits which were identified within the boring area were marked on the surface. The boring locations were cored prior to sampling because of the depth of the concrete foundation.

A Health and Safety Plan, prepared by Ceres Associates, was used to facilitate a pre-drilling safety meeting prior to conducting work. Signatures of attendees were collected at the meeting indicating an understanding of the risks and hazards involved in the drilling process. A copy of this document was kept on site during the drilling process.

#### PURPOSE OF BORING LOCATIONS

Although previous sampling had reportedly been conducted on the Property, full documentation of such sampling was not provided to Ceres Associates. Boring placement was made further from the UST than reportedly conducted previously in a conservative attempt to identify potential subsurface contamination resulting from the identified UST location (*refer to Figure 2 - Soil Boring Location Map*).

Soil borings were labeled SB5 through SB-9, so as not to confuse these sample locations with prior reported borings. The approximate location of previous soil borings were also placed on the above referenced map.

#### SAMPLE METHODOLOGY

Soil and groundwater samples were collected using Geoprobe® sampling equipment provided by Vironex of San Leandro, California. The Geoprobe® sampler utilizes direct-push technology to collect soil and groundwater samples from specific subsurface depths without generating soil cuttings. The Geoprobe® sampling system consists of a series of 1.5-inch diameter hollow stainless steel rods which are hydraulically driven into the ground using a pneumatic hammer attached to the Geoprobe® assembly.

#### Soil Sampling

Soil samples were collected by driving a four-foot long stainless steel sample sleeve attached to the end of the steel rods into soil at a specified sample depth. Soil samples were then collected in acetate sample tubes installed inside the sample sleeve. After the rod assembly was hydraulically extended to the target sample depth, the sample sleeve was retrieved to ground surface and the acetate sample tube containing soil from the appropriate sample interval was capped with Teflon®-lined plastic end caps, labeled, placed in a Ziplock® bag, and stored in a chest cooled with crushed ice.





### Groundwater Sampling

Groundwater samples were collected with the Geoprobe® sampler by hydraulically driving a temporary PVC well screen into the water bearing zone, and allowing the groundwater to collect in the bottom of the PVC pipe. Groundwater samples were collected using a disposable bailer, then transferred to containers preserved with HCL (for VOC analysis). Sample containers were then labeled, placed in a Ziplock® bag, and stored in a chest cooled with crushed ice.

Groundwater was generally encountered around 18 to 20 feet below ground surface (bgs) during assessment activities. After groundwater samples were taken, the groundwater depth in the temporary wells was noted at between approximately 8 and 10 feet bgs.

### Boring Completion

After soil and groundwater samples had been collected, each borehole was tremmie-grouted with Portland Cement and the ground surface was repaired with concrete. A black dying agent was mixed with the surface concrete in an attempt to match the surrounding surface color. The permit for the work obtained from the Alameda County Public Works Agency indicated that an inspector may do spot checks of the borings; however, the inspector did not arrive while assessment activities were in progress.

## **3.2 LABORATORY ANALYSIS**

Ceres Associates, following chain of custody protocols, released soil and groundwater samples to Mc Campbell Analytical of Pacheco, California, a State of California-certified analytical laboratory, on June 6, 2006.

Ceres Associates analyzed the soil samples collected from approximately 10 feet below ground surface (bgs), as well as one soil sample collected from approximately 17 feet in SB-7 that was noted as having a particularly strong petroleum odor. Soil and groundwater samples were analyzed for total petroleum hydrocarbons as gasoline and diesel, benzene, toluene, ethylbenzene, and xylenes using US EPA method 8015/8020. Laboratory Data Reports are included in the Appendix of this document.

Additionally, soil sample SB7-10, SB7-17, and groundwater samples SB7GW and SB9GW were analyzed for volatile organic compounds (VOCs) using U.S. EPA method 8260b. The purpose of the additional VOC analysis was to provide a broader analysis of potential subsurface contaminants than would otherwise be identified through 8015/8020 analyses. These samples were chosen based upon their distance from the UST and noted odors during sampling.

## **RESULTS**

Tables 1 - 2 report concentrations of target analytes above laboratory reporting limits.



**Table 1: Total Petroleum Hydrocarbons as Gasoline and Diesel in soil and groundwater**

(concentrations of soil samples reported as parts per million, *ppm*  
concentrations of groundwater samples reported as parts per billion, *ppb*)

Sample	Type	TPH-g	TPH-d
SB5-10	Soil	ND	ND
SB6-10	Soil	5.0	3.1
SB7-10	Soil	20,000	3,300
SB7-17	Soil	9.2	3.4
SB8-10	Soil	4.7	3.0
SB9-10	Soil	7.5	4.2
<b>Industrial ESL (Soil)</b>		<b>100</b>	<b>100</b>
SB5-GW	Groundwater	ND	170
SB6-GW	Groundwater	380	290
SB7-GW	Groundwater	100,000	110,000
SB8-GW	Groundwater	580	550
SB9-GW	Groundwater	610	360
<b>Industrial ESL (Groundwater)</b>		<b>100</b>	<b>100</b>

ND = Not detected above laboratory method reporting limits

Industrial ESL = Industrial Environmental Screening Limit where groundwater is a potential source of drinking water, shallow soils or groundwater generally, established by the San Francisco Bay Regional Water Quality Control Board

TPH-g = total petroleum hydrocarbons as gasoline

TPH-d = total petroleum hydrocarbons as diesel



**Table 2: BTEX + MTBE in soil and groundwater**  
 (concentrations soil samples reported as parts per million, *ppm*  
 concentrations of groundwater samples reported as parts per billion, *ppb*)

Sample	Type	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
SB5-10	Soil	ND	ND	ND	ND	ND
SB6-10	Soil	0.023	0.025	0.027	0.64	ND
SB7-10	Soil	200	980	320	1,400	ND<45
SB7-17	Soil	0.77	0.64	0.16	0.79	ND<0.1
SB8-10	Soil	0.058	0.030	0.083	0.48	ND
SB9-10	Soil	0.068	0.22	0.21	1.1	ND
<b>Industrial ESL (Soil)</b>		<b>0.044</b>	<b>2.90</b>	<b>3.30</b>	<b>1.5</b>	<b>0.023</b>
SB5-GW	Groundwater	ND	ND	ND	1.8	ND
SB6-GW	Groundwater	3.4	1.8	3.8	51	ND
SB7-GW	Groundwater	3,300	11,000	2,100	20,000	ND<100
SB8-GW	Groundwater	8.4	3.6	18	47	ND
SB9-GW	Groundwater	10	15	21	70	ND
<b>Industrial ESL (Groundwater)</b>		<b>1.0</b>	<b>40</b>	<b>30</b>	<b>13</b>	<b>5.0</b>

ND = Not detected above laboratory method reporting limits

Where multiple analyses conducted, the highest reported concentration of the analyte was used

MTBE = methyle-tert-butyl-ether

Industrial ESL = Industrial Environmental Screening Limit where groundwater is a potential source of drinking water, shallow soils or groundwater generally, established by the San Francisco Bay Regional Water Quality Control Board

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## 4.0 LIMITATIONS

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This Environmental Site Assessment (ESA) was conducted according to accepted industry standards and guidelines for similar assessments conducted in this geographic region at this time.

This assessment cannot fully eliminate the possibility of the Property having environmental impairments. In today's technology, no amount of assessment can certify that the Property is completely free of environmental concern. It is possible undocumented or concealed conditions of the Property could exist beyond what was found during this ESA. This report does not cover any Property conditions beyond the date the Property survey was conducted.

Physical setting information provided in this report is for drawing conclusions, by Ceres Associates, within the context and timing of this report only. This information is preliminary and should not be used for any subsequent purposes.

Much of the information upon which the conclusions and recommendations of this Phase I ESA are based, comes from data provided by others. Ceres Associates is not responsible for the accuracy or completeness of this information. Inaccurate data, or information that was not found or made available to Ceres Associates, may result in a modification of the stated conclusions and recommendations.

### REPORT USE

This report was prepared for the sole use and benefit of Loh Realty and Investments. This report is not a legal opinion and does not offer warranties or guarantees.



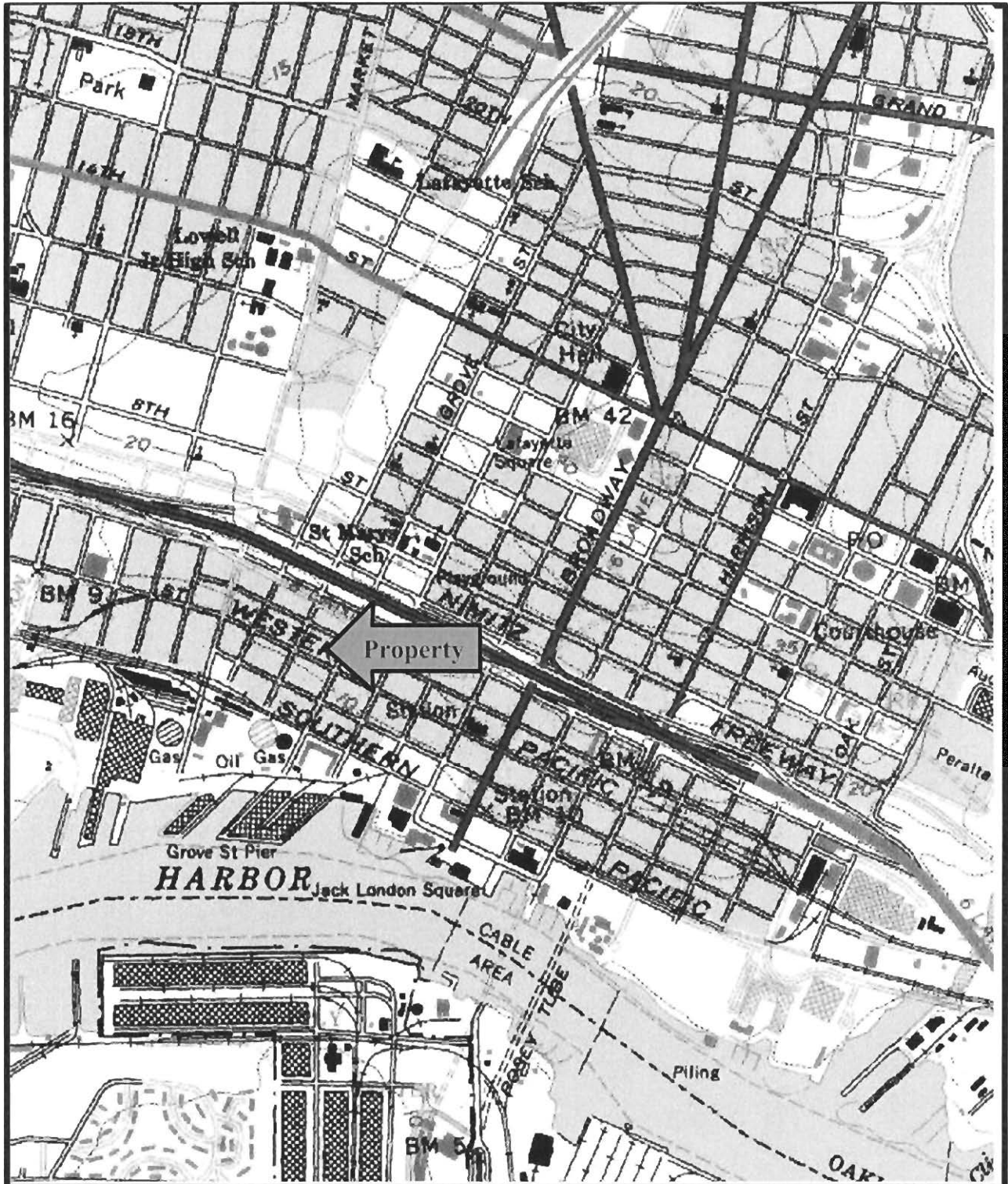
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FIGURES

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MAP TAKEN FROM:  
 UNITED STATES GEOLOGICAL SURVEY  
 7.5 MINUTE TOPOGRAPHIC SERIES  
 OAKLAND CALIFORNIA QUADRANGLE



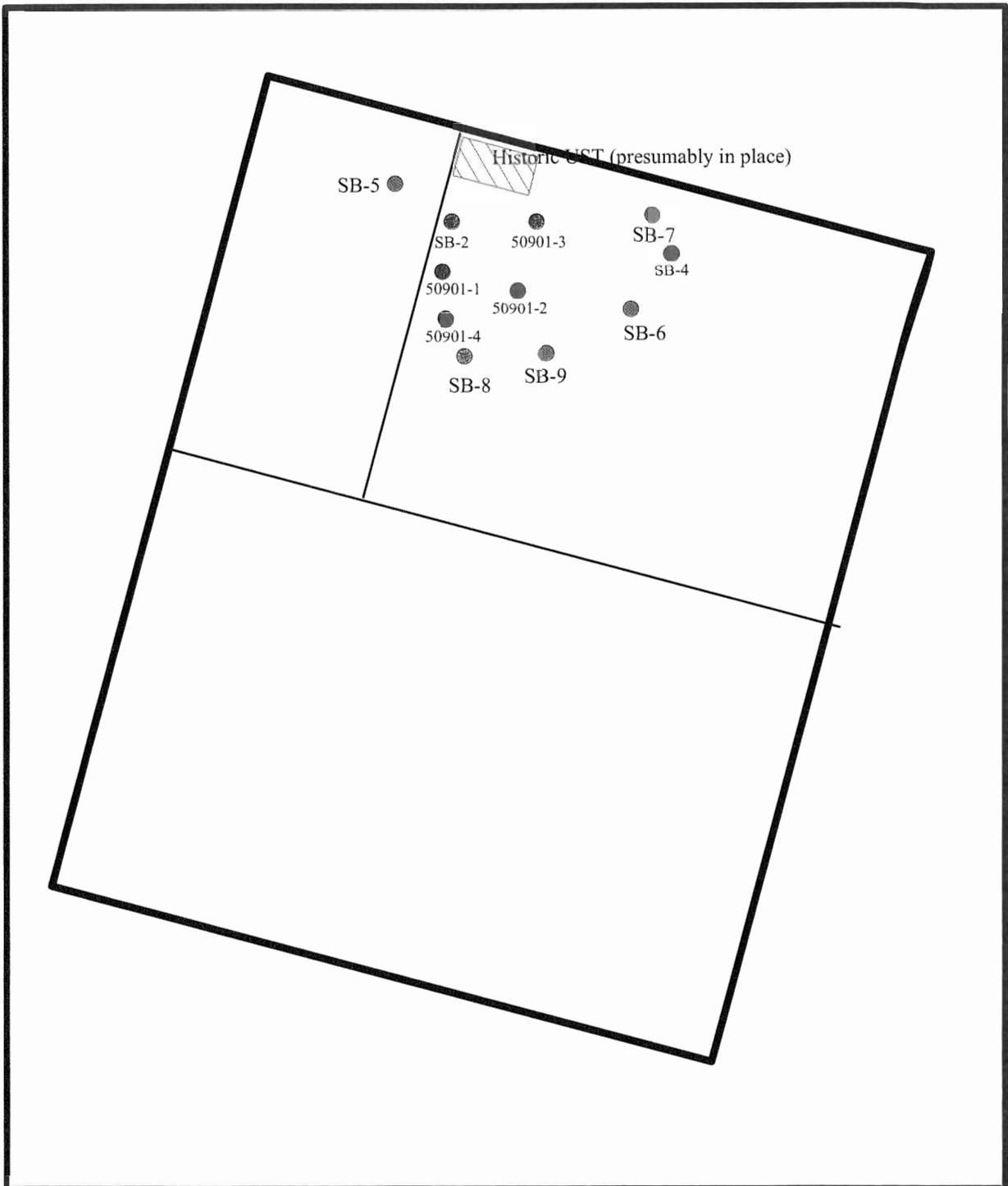
0 1/2 Mile

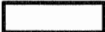





**Ceres**  
 Associates  
 Project CA1554-2

Warehouses  
 678 Third Street, 671 Fourth Street,  
 & 325 Martin Luther King Jr. Way  
 Oakland, California

**PROPERTY  
 LOCATION MAP**

**FIGURE  
 1**



<p>  Property Boundary   Boring Locations   Reported Prior Boring Locations         </p>	<p>  N   Estimated Groundwater Flow Direction         </p>	<p>  <b>Ceres Associates</b>            Warehouses            678 Third Street, 671 Fourth Street,            &amp; 325 Martin Luther King Jr. Way            Oakland, California            Project CA1554-2         </p> <p> <b>BORING LOCATION MAP</b> </p>	<p> <b>FIGURE</b>  <b>2</b> </p>
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APPENDIX A  
LABORATORY DATA REPORTS

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# McC Campbell Analytical, Inc.

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

Ceres Associates  424 First Street  Benicia, CA 94510	Client Project ID: #CA1554-2; Oakland	Date Sampled: 06/06/06
	Client Contact: Ryan Meyer	Date Received: 06/06/06
	Client P.O.:	Date Extracted: 06/06/06
		Date Analyzed: 06/06/06

### Volatile Organics by P&T and GC/MS (Basic Target List)\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0606132

Lab ID	0606132-010A
Client ID	SB7-10
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<200	4000	0.05	Acrolein (Propenal)	ND<200	4000	0.05
Acrylonitrile	ND<80	4000	0.02	tert-Amyl methyl ether (TAME)	ND<20	4000	0.005
Benzene	130	4000	0.005	Bromobenzene	ND<20	4000	0.005
Bromochloromethane	ND<20	4000	0.005	Bromodichloromethane	ND<20	4000	0.005
Bromoform	ND<20	4000	0.005	Bromomethane	ND<20	4000	0.005
2-Butanone (MEK)	ND<80	4000	0.02	1-Butyl alcohol (TBA)	ND<200	4000	0.05
n-Butyl benzene	84	4000	0.005	sec-Butyl benzene	ND<20	4000	0.005
tert-Butyl benzene	ND<20	4000	0.005	Carbon Disulfide	ND<20	4000	0.005
Carbon Tetrachloride	ND<20	4000	0.005	Chlorobenzene	ND<20	4000	0.005
Chloroethane	ND<20	4000	0.005	2-Chloroethyl Vinyl Ether	ND<40	4000	0.01
Chloroform	ND<20	4000	0.005	Chloromethane	ND<20	4000	0.005
2-Chlorotoluene	ND<20	4000	0.005	4-Chlorotoluene	ND<20	4000	0.005
Dibromochloromethane	ND<20	4000	0.005	1,2-Dibromo-3-chloropropane	ND<20	4000	0.005
1,2-Dibromoethane (EDB)	ND<20	4000	0.005	Dibromomethane	ND<20	4000	0.005
1,2-Dichlorobenzene	ND<20	4000	0.005	1,3-Dichlorobenzene	ND<20	4000	0.005
1,4-Dichlorobenzene	ND<20	4000	0.005	Dichlorodifluoromethane	ND<20	4000	0.005
1,1-Dichloroethane	ND<20	4000	0.005	1,2-Dichloroethane (1,2-DCA)	ND<20	4000	0.005
1,1-Dichloroethene	ND<20	4000	0.005	cis-1,2-Dichloroethene	ND<20	4000	0.005
trans-1,2-Dichloroethene	ND<20	4000	0.005	1,2-Dichloropropane	ND<20	4000	0.005
1,3-Dichloropropane	ND<20	4000	0.005	2,2-Dichloropropane	ND<20	4000	0.005
1,1-Dichloropropene	ND<20	4000	0.005	cis-1,3-Dichloropropene	ND<20	4000	0.005
trans-1,3-Dichloropropene	ND<20	4000	0.005	Diisopropyl ether (DIPE)	ND<20	4000	0.005
Ethylbenzene	260	4000	0.005	Ethyl tert-butyl ether (ETBE)	ND<20	4000	0.005
Freon 113	ND<400	4000	0.1	Hexachlorobutadiene	ND<20	4000	0.005
Hexachloroethane	ND<20	4000	0.005	2-Hexanone	ND<20	4000	0.005
Isopropylbenzene	28	4000	0.005	4-Isopropyl toluene	ND<20	4000	0.005
Methyl-t-butyl ether (MTBE)	ND<20	4000	0.005	Methylene chloride	ND<20	4000	0.005
4-Methyl-2-pentanone (MIBK)	ND<20	4000	0.005	Naphthalene	70	4000	0.005
Nitrobenzene	ND<400	4000	0.1	n-Propyl benzene	87	4000	0.005
Styrene	ND<20	4000	0.005	1,1,1,2-Tetrachloroethane	ND<20	4000	0.005
1,1,2,2-Tetrachloroethane	ND<20	4000	0.005	Tetrachloroethene	ND<20	4000	0.005
Toluene	800	4000	0.005	1,2,3-Trichlorobenzene	ND<20	4000	0.005
1,2,4-Trichlorobenzene	ND<20	4000	0.005	1,1,1-Trichloroethane	ND<20	4000	0.005
1,1,2-Trichloroethane	ND<20	4000	0.005	Trichloroethene	ND<20	4000	0.005
Trichlorofluoromethane	ND<20	4000	0.005	1,2,3-Trichloropropane	ND<20	4000	0.005
1,2,4-Trimethylbenzene	510	4000	0.005	1,3,5-Trimethylbenzene	150	4000	0.005
Vinyl Chloride	ND<20	4000	0.005	Xylenes	1300	4000	0.005

#### Surrogate Recoveries (%)

%SS1:	93	%SS2:	99
%SS3:	103		

#### Comments:

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

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



# McC Campbell Analytical, Inc.

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

Ceres Associates 424 First Street Benicia, CA 94510	Client Project ID: #CA1554-2; Oakland	Date Sampled: 06/06/06
	Client Contact: Ryan Meyer	Date Received: 06/06/06
	Client P.O.:	Date Extracted: 06/06/06
		Date Analyzed: 06/06/06

### Volatile Organics by P&T and GC/MS (Basic Target List)\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0606132

Lab ID	0606132-012A
Client ID	SB7-17
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<0.50	10	0.05	Acrolein (Propenal)	ND<0.50	10	0.05
Acrylonitrile	ND<0.20	10	0.02	tert-Amyl methyl ether (TAME)	ND<0.050	10	0.005
Benzene	0.77	10	0.005	Bromobenzene	ND<0.050	10	0.005
Bromochloromethane	ND<0.050	10	0.005	Bromodichloromethane	ND<0.050	10	0.005
Bromoform	ND<0.050	10	0.005	Bromomethane	ND<0.050	10	0.005
2-Butanone (MEK)	ND<0.20	10	0.02	t-Butyl alcohol (TBA)	ND<0.50	10	0.05
n-Butyl benzene	ND<0.050	10	0.005	sec-Butyl benzene	ND<0.050	10	0.005
tert-Butyl benzene	ND<0.050	10	0.005	Carbon Disulfide	ND<0.050	10	0.005
Carbon tetrachloride	ND<0.050	10	0.005	Chlorobenzene	ND<0.050	10	0.005
Chloroethane	ND<0.050	10	0.005	2-Chloroethyl Vinyl Ether	ND<0.10	10	0.01
Chloroform	ND<0.050	10	0.005	Chloromethane	ND<0.050	10	0.005
2-Chlorotoluene	ND<0.050	10	0.005	4-Chlorotoluene	ND<0.050	10	0.005
Dibromochloromethane	ND<0.050	10	0.005	1,2-Dibromo-3-chloropropane	ND<0.050	10	0.005
1,2-Dibromoethane (EDB)	ND<0.050	10	0.005	Dibromomethane	ND<0.050	10	0.005
1,2-Dichlorobenzene	ND<0.050	10	0.005	1,3-Dichlorobenzene	ND<0.050	10	0.005
1,4-Dichlorobenzene	ND<0.050	10	0.005	Dichlorodifluoromethane	ND<0.050	10	0.005
1,1-Dichloroethane	ND<0.050	10	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.050	10	0.005
1,1-Dichloroethene	ND<0.050	10	0.005	cis-1,2-Dichloroethene	ND<0.050	10	0.005
trans-1,2-Dichloroethene	ND<0.050	10	0.005	1,2-Dichloropropane	ND<0.050	10	0.005
1,3-Dichloropropane	ND<0.050	10	0.005	2,2-Dichloropropane	ND<0.050	10	0.005
1,1-Dichloropropene	ND<0.050	10	0.005	cis-1,3-Dichloropropene	ND<0.050	10	0.005
trans-1,3-Dichloropropene	ND<0.050	10	0.005	Diisopropyl ether (DIPE)	ND<0.050	10	0.005
Ethylbenzene	0.16	10	0.005	Ethyl tert-butyl ether (ETBE)	ND<0.050	10	0.005
Freon 113	ND<1.0	10	0.1	Hexachlorobutadiene	ND<0.050	10	0.005
Hexachloroethane	ND<0.050	10	0.005	2-Hexanone	ND<0.050	10	0.005
Isopropylbenzene	ND<0.050	10	0.005	4-Isopropyl toluene	ND<0.050	10	0.005
Methyl-t-butyl ether (MTBE)	ND<0.050	10	0.005	Methylene chloride	ND<0.050	10	0.005
4-Methyl-2-pentanone (MIBK)	ND<0.050	10	0.005	Naphthalene	ND<0.050	10	0.005
Nitrobenzene	ND<1.0	10	0.1	n-Propyl benzene	ND<0.050	10	0.005
Styrene	ND<0.050	10	0.005	1,1,1,2-Tetrachloroethane	ND<0.050	10	0.005
1,1,2,2-Tetrachloroethane	ND<0.050	10	0.005	Tetrachloroethene	ND<0.050	10	0.005
Toluene	0.60	10	0.005	1,2,3-Trichlorobenzene	ND<0.050	10	0.005
1,2,4-Trichlorobenzene	ND<0.050	10	0.005	1,1,1-Trichloroethane	ND<0.050	10	0.005
1,1,2-Trichloroethane	ND<0.050	10	0.005	Trichloroethene	ND<0.050	10	0.005
Trichlorofluoromethane	ND<0.050	10	0.005	1,2,3-Trichloropropane	ND<0.050	10	0.005
1,2,4-Trimethylbenzene	0.20	10	0.005	1,3,5-Trimethylbenzene	0.061	10	0.005
Vinyl Chloride	ND<0.050	10	0.005	Xylenes	0.79	10	0.005

#### Surrogate Recoveries (%)

%SS1:	119	%SS2:	95
%SS3:	91		

#### Comments:

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

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



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Ceres Associates  424 First Street  Benicia, CA 94510	Client Project ID: #CA1554-2; Oakland	Date Sampled: 06/06/06
	Client Contact: Ryan Meyer	Date Received: 06/06/06
	Client P.O.:	Date Extracted: 06/06/06
		Date Analyzed: 06/06/06

### Volatile Organics by P&T and GC/MS (Basic Target List)\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0606132

Lab ID	0606132-024C
Client ID	SB7 GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<1700	330	5.0	Acrolein (Propenal)	ND<1700	330	5.0
Acrylonitrile	ND<670	330	2.0	tert-Amyl methyl ether (TAME)	ND<170	330	0.5
Benzene	3300	330	0.5	Bromobenzene	ND<170	330	0.5
Bromochloromethane	ND<170	330	0.5	Bromodichloromethane	ND<170	330	0.5
Bromoform	ND<170	330	0.5	Bromomethane	ND<170	330	0.5
2-Butanone (MEK)	ND<670	330	2.0	t-Butyl alcohol (TBA)	ND<1700	330	5.0
n-Butyl benzene	390	330	0.5	sec-Butyl benzene	ND<170	330	0.5
tert-Butyl benzene	ND<170	330	0.5	Carbon Disulfide	ND<170	330	0.5
Carbon Tetrachloride	ND<170	330	0.5	Chlorobenzene	ND<170	330	0.5
Chloroethane	ND<170	330	0.5	2-Chloroethyl Vinyl Ether	ND<330	330	1.0
Chloroform	ND<170	330	0.5	Chloromethane	ND<170	330	0.5
2-Chlorotoluene	ND<170	330	0.5	4-Chlorotoluene	ND<170	330	0.5
Dibromochloromethane	ND<170	330	0.5	1,2-Dibromo-3-chloropropane	ND<170	330	0.5
1,2-Dibromoethane (EDB)	ND<170	330	0.5	Dibromomethane	ND<170	330	0.5
1,2-Dichlorobenzene	ND<170	330	0.5	1,3-Dichlorobenzene	ND<170	330	0.5
1,4-Dichlorobenzene	ND<170	330	0.5	Dichlorodifluoromethane	ND<170	330	0.5
1,1-Dichloroethane	ND<170	330	0.5	1,2-Dichloroethane (1,2-DCA)	ND<170	330	0.5
1,1-Dichloroethene	ND<170	330	0.5	cis-1,2-Dichloroethene	ND<170	330	0.5
trans-1,2-Dichloroethene	ND<170	330	0.5	1,2-Dichloropropane	ND<170	330	0.5
1,3-Dichloropropane	ND<170	330	0.5	2,2-Dichloropropane	ND<170	330	0.5
1,1-Dichloropropene	ND<170	330	0.5	cis-1,3-Dichloropropene	ND<170	330	0.5
trans-1,3-Dichloropropene	ND<170	330	0.5	Diisopropyl ether (DIPE)	ND<170	330	0.5
Ethylbenzene	2100	330	0.5	Ethyl tert-butyl ether (ETBE)	ND<170	330	0.5
Freon 113	ND<3300	330	10	Hexachlorobutadiene	ND<170	330	0.5
Hexachloroethane	ND<170	330	0.5	2-Hexanone	ND<170	330	0.5
Isopropylbenzene	270	330	0.5	4-Isopropyl toluene	ND<170	330	0.5
Methyl-t-butyl ether (MTBE)	ND<170	330	0.5	Methylene chloride	ND<170	330	0.5
4-Methyl-2-pentanone (MIBK)	ND<170	330	0.5	Naphthalene	1300	330	0.5
Nitrobenzene	ND<3300	330	10	n-Propyl benzene	500	330	0.5
Styrene	ND<170	330	0.5	1,1,1,2-Tetrachloroethane	ND<170	330	0.5
1,1,2,2-Tetrachloroethane	ND<170	330	0.5	Tetrachloroethene	ND<170	330	0.5
Toluene	11,000	330	0.5	1,2,3-Trichlorobenzene	ND<170	330	0.5
1,2,4-Trichlorobenzene	ND<170	330	0.5	1,1,1-Trichloroethane	ND<170	330	0.5
1,1,2-Trichloroethane	ND<170	330	0.5	Trichloroethene	ND<170	330	0.5
Trichlorofluoromethane	ND<170	330	0.5	1,2,3-Trichloropropane	ND<170	330	0.5
1,2,4-Trimethylbenzene	4700	330	0.5	1,3,5-Trimethylbenzene	1600	330	0.5
Vinyl Chloride	ND<170	330	0.5	Xylenes	20,000	330	0.5

#### Surrogate Recoveries (%)

%SS1:	113	%SS2:	107
%SS3:	109		

Comments: i

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

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



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Ceres Associates 424 First Street Benicia, CA 94510	Client Project ID: #CA1554-2; Oakland	Date Sampled: 06/06/06
	Client Contact: Ryan Meyer	Date Received: 06/06/06
	Client P.O.:	Date Extracted: 06/06/06
		Date Analyzed: 06/06/06

### Volatile Organics by P&T and GC/MS (Basic Target List)\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0606132

Lab ID	0606132-026C
Client ID	SB9 GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Acrolein (Propenal)	ND	1.0	5.0
Acrylonitrile	ND	1.0	2.0	tert-Amyl methyl ether (TAME)	ND	1.0	0.5
Benzene	10	1.0	0.5	Bromobenzene	ND	1.0	0.5
Bromochloromethane	ND	1.0	0.5	Bromodichloromethane	ND	1.0	0.5
Bromoform	ND	1.0	0.5	Bromomethane	ND	1.0	0.5
2-Butanone (MEK)	ND	1.0	2.0	t-Butyl alcohol (TBA)	ND	1.0	5.0
n-Butyl benzene	6.6	1.0	0.5	sec-Butyl benzene	1.8	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	4.5	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Diisopropyl ether (DIPE)	ND	1.0	0.5
Ethylbenzene	18	1.0	0.5	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5
Freon 113	ND	1.0	10	Hexachlorobutadiene	ND	1.0	0.5
Hexachloroethane	ND	1.0	0.5	2-Hexanone	ND	1.0	0.5
Isopropylbenzene	3.1	1.0	0.5	4-Isopropyl toluene	ND	1.0	0.5
Methyl-t-butyl ether (MTBE)	ND	1.0	0.5	Methylene chloride	ND	1.0	0.5
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5	Naphthalene	13	1.0	0.5
Nitrobenzene	ND	1.0	10	n-Propyl benzene	7.6	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	15	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	33	1.0	0.5	1,3,5-Trimehylbenzene	15	1.0	0.5
Vinyl Chloride	ND	1.0	0.5	Xylenes	62	1.0	0.5

#### Surrogate Recoveries (%)

%SS1:	117	%SS2:	106
%SS3:	109		

Comments: i

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

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



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Ceres Associates  424 First Street  Benicia, CA 94510	Client Project ID: #CA1554-2; Oakland	Date Sampled: 06/06/06
		Date Received: 06/06/06
	Client Contact: Ryan Meyer	Date Extracted: 06/06/06-06/07/06
	Client P.O.:	Date Analyzed: 06/06/06-06/07/06

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

Extraction method: SW5030B

Analytical methods: SW8021B/8015Cm

Work Order: 0606132

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
002A	SB5-10	S	ND	ND	ND	ND	ND	ND	1	90
006A	SB6-10	S	5.0,a	ND	0.023	0.025	0.027	0.64	1	99
010A	SB7-10	S	20,000,a	ND<45	200	980	320	1400	500	94
012A	SB7-17	S	9.2,a	ND<0.1	0.74	0.64	0.16	0.70	1	114
015A	SB8-10	S	4.7,a	ND	0.058	0.030	0.083	0.48	1	103
019A	SB9-10	S	7.5,a	ND	0.068	0.22	0.21	1.1	1	106
022A	SB5 GW	W	ND,i	ND	ND	ND	ND	1.8	1	105
023A	SB6 GW	W	380,a,i	ND	3.4	1.8	3.8	51	1	109
024A	SB7 GW	W	100,000,a,h,i	ND<100	2600	8000	1400	17,000	20	93
025A	SB8 GW	W	580,a,i	ND	8.4	3.6	18	47	1	117
026A	SB9 GW	W	610,a,i	ND	10	15	21	70	1	110

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

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

# cluttered chromatogram; sample peak coelutes with surrogate peak.

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



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Ceres Associates  424 First Street  Benicia, CA 94510	Client Project ID: #CA1554-2; Oakland	Date Sampled: 06/06/06
		Date Received: 06/06/06
	Client Contact: Ryan Meyer	Date Extracted: 06/06/06
	Client P.O.:	Date Analyzed: 06/06/06-06/07/06

### Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel\*

Extraction method: SW3510C/SW3550C

Analytical methods: SW8015C

Work Order: 0606132

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0606132-002A	SB5-10	S	ND	1	110
0606132-006A	SB6-10	S	3.1,d	1	111
0606132-010A	SB7-10	S	3300,d,b	10	---#
0606132-012A	SB7-17	S	3.4,d	1	113
0606132-015A	SB8-10	S	3.0,d	1	110
0606132-019A	SB9-10	S	4.2,d	1	109
0606132-022B	SB5 GW	W	170,g,b,i	1	107
0606132-023B	SB6 GW	W	290,d,i	1	107
0606132-024B	SB7 GW	W	110,000,d,h,i	50	---#
0606132-025B	SB8 GW	W	550,d,i	1	110
0606132-026B	SB9 GW	W	360,d,i	1	106

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

\* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all D1512C / STLC / SPLP / TCLP extracts are reported in µg/L.

# cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant; d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range/jet fuel range; l) bunker oil; m) fuel oil; n) standard solvent/mineral spirit.



QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder: 0606132

EPA Method: SW8260B		Extraction: SW5030B			BatchID: 22030			Spiked Sample ID 0606097-007A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
tert-Amyl methyl ether (TAME)	ND	0.050	95.7	94.3	1.46	98.3	98	0.387	70 - 130	70 - 130
Benzene	ND	0.050	119	117	1.64	120	119	0.733	70 - 130	70 - 130
t-Butyl alcohol (TBA)	ND	0.25	104	95.8	8.63	114	108	5.35	70 - 130	70 - 130
Chlorobenzene	ND	0.050	89.3	87.6	1.93	90.2	88.1	2.38	70 - 130	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	111	111	0	114	113	0.134	70 - 130	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	97.9	96.2	1.70	98.6	99	0.392	70 - 130	70 - 130
1,1-Dichloroethene	ND	0.050	120	118	0.966	120	118	1.14	70 - 130	70 - 130
Diisopropyl ether (DIPE)	ND	0.050	101	99.4	1.21	103	102	1.17	70 - 130	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	0.050	90.9	89.7	1.30	92.8	92.3	0.614	70 - 130	70 - 130
Methyl-t-butyl ether (MTBE)	ND	0.050	93	91.5	1.64	95.1	96.9	1.87	70 - 130	70 - 130
Toluene	ND	0.050	113	108	4.55	109	114	4.52	70 - 130	70 - 130
Trichloroethene	ND	0.050	83.4	81.3	2.54	83.8	82.6	1.44	70 - 130	70 - 130
%SS1:	101	0.050	100	98	2.01	100	99	1.33	70 - 130	70 - 130
%SS2:	99	0.050	97	96	0.652	96	97	0.724	70 - 130	70 - 130
%SS3:	96	0.050	108	106	1.26	108	106	1.96	70 - 130	70 - 130

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

BATCH 22030 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0606132-010A	6/06/06	6/06/06	6/06/06 9:52 PM	0606132-012A	6/06/06	6/06/06	6/06/06 9:07 PM

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

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

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

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

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

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0606132

EPA Method: SW8260B		Extraction: SW5030B			BatchID: 22042			Spiked Sample ID: 0606119-009C		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
tert-Amyl methyl ether (TAME)	ND	10	94.8	96.3	1.49	94.3	101	6.71	70 - 130	70 - 130
Benzene	ND	10	116	118	1.56	117	118	0.979	70 - 130	70 - 130
t-Butyl alcohol (TBA)	ND	50	96.5	109	12.5	97	100	3.29	70 - 130	70 - 130
Chlorobenzene	ND	10	81.4	81.8	0.481	81.5	85.7	4.96	70 - 130	70 - 130
1,2-Dibromoethane (EDB)	ND	10	102	106	4.11	103	110	6.72	70 - 130	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	94.6	96.1	1.63	95.1	99.7	4.74	70 - 130	70 - 130
1,1-Dichloroethene	ND	10	116	119	2.35	118	116	1.52	70 - 130	70 - 130
Diisopropyl ether (DIPE)	ND	10	98.7	100	1.40	98.9	106	6.50	70 - 130	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	88.6	90.4	2.09	89.3	95.2	6.39	70 - 130	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	90.6	93.2	2.77	91.1	98.7	8.03	70 - 130	70 - 130
Toluene	ND	10	98.6	100	1.77	101	108	7.00	70 - 130	70 - 130
Trichloroethene	ND	10	80.8	80.7	0.148	80	84.4	5.29	70 - 130	70 - 130
%SS1:	103	10	106	104	1.83	102	100	2.22	70 - 130	70 - 130
%SS2:	97	10	96	97	1.88	94	94	0	70 - 130	70 - 130
%SS3:	110	10	107	107	0	107	108	0.0812	70 - 130	70 - 130

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

BATCH 22042 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0606132-024C	6/06/06	6/06/06	6/06/06 11:32 PM	0606132-026C	6/06/06	6/06/06	6/06/06 9:19 PM

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

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

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

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

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

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.





QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder: 0606132

EPA Method: SW8021B/8015Cm		Extraction: SW5030B			BatchID: 22032			Spiked Sample ID 0606131-001A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex) <sup>£</sup>	ND	0.60	102	101	0.627	95.7	95.3	0.478	70 - 130	70 - 130
MTBE	ND	0.10	98.7	102	3.52	109	99.8	9.10	70 - 130	70 - 130
Benzene	ND	0.10	92.2	95.9	3.98	99.1	89.9	9.68	70 - 130	70 - 130
Toluene	ND	0.10	91.9	95.4	3.80	98.1	89.1	9.70	70 - 130	70 - 130
Ethylbenzene	ND	0.10	93.3	95.8	2.71	97.1	89.1	8.64	70 - 130	70 - 130
Xylenes	ND	0.30	89.7	89.7	0	84.7	84.3	0.394	70 - 130	70 - 130
%SS:	98	0.10	102	104	1.84	109	105	3.62	70 - 130	70 - 130

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

NONE

BATCH 22032 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0606132-002A	6/06/06	6/06/06	6/07/06 1:32 AM	0606132-006A	6/06/06	6/06/06	6/06/06 11:52 PM
0606132-010A	6/06/06	6/06/06	6/06/06 10:46 PM	0606132-012A	6/06/06	6/06/06	6/06/06 11:19 PM
0606132-015A	6/06/06	6/06/06	6/07/06 2:38 AM	0606132-019A	6/06/06	6/06/06	5/07/06 12:59 AM

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

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

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

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

# cluttered chromatogram; sample peak coelutes with surrogate peak.

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



QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0606132

EPA Method: SW8021B/8015Cm		Extraction: SW5030B			BatchID: 22053			Spiked Sample ID: 0606126-001A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex) <sup>£</sup>	ND	60	111	111	0	109	102	5.99	70 - 130	70 - 130
MTBE	ND	10	111	111	0	105	117	10.6	70 - 130	70 - 130
Benzene	ND	10	100	109	8.10	101	108	6.02	70 - 130	70 - 130
Toluene	ND	10	92.4	100	8.09	94.2	99.9	5.89	70 - 130	70 - 130
Ethylbenzene	ND	10	96.9	100	3.45	98.5	107	7.92	70 - 130	70 - 130
Xylenes	ND	30	96	96.3	0.347	91.3	96.3	5.33	70 - 130	70 - 130
%SS:	104	10	102	100	2.61	98	100	2.04	70 - 130	70 - 130

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

BATCH 22053 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0606132-022A	6/06/06	6/07/06	6/07/06 6:33 AM	0606132-023A	6/06/06	6/07/06	6/07/06 5:43 AM
0606132-024A	6/06/06	6/07/06	6/07/06 7:06 AM	0606132-025A	6/06/06	6/07/06	6/07/06 7:39 AM
0606132-026A	6/06/06	6/07/06	6/07/06 8:12 AM				

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

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

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

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

# cluttered chromatogram; sample peak coelutes with surrogate peak.

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

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



**QC SUMMARY REPORT FOR SW8015C**

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder: 0606132

EPA Method: SW8015C		Extraction: SW3550C			BatchID: 22033			Spiked Sample ID 0606120-001A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(d)	220	20	NR	NR	NR	105	99.2	5.43	70 - 130	70 - 130
%SS:	94	50	100	98	1.69	110	113	3.03	70 - 130	70 - 130

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

BATCH 22033 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0606132-002A	6/06/06	6/06/06	6/06/06 8:04 PM	0606132-006A	6/06/06	6/06/06	6/06/06 9:14 PM
0606132-010A	6/06/06	6/06/06	6/05/06 10:23 PM	0606132-012A	6/06/06	6/06/06	5/07/06 11:12 AM

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

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

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

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

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



**QC SUMMARY REPORT FOR SW8015C**

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder: 0606132

EPA Method: SW8015C		Extraction: SW3550C			BatchID: 22060			Spiked Sample ID 0606132-015A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(d)	3	20	104	106	0.957	111	110	0.590	70 - 130	70 - 130
%SS:	110	50	109	110	0.925	112	111	0.527	70 - 130	70 - 130

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

BATCH 22060 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0606132-015A	6/06/06	6/06/06	6/07/06 2:57 AM	0606132-019A	6/06/06	6/06/06	6/07/06 1:49 AM

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

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

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

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

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



**QC SUMMARY REPORT FOR SW8015C**

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0606132

EPA Method: SW8015C		Extraction: SW3510C			BatchID: 22054			Spiked Sample ID N/A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(d)	N/A	1000	N/A	N/A	N/A	100	103	2.13	N/A	70 - 130
%SS:	N/A	2500	N/A	N/A	N/A	109	111	1.61	N/A	70 - 130

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

BATCH 22054 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0606132-022B	6/06/06	6/06/06	6/06/06 9:14 PM	0606132-023B	6/06/06	6/06/06	6/06/06 10:23 PM
0606132-024B	6/06/06	6/06/06	5/07/06 11:12 AM	0606132-025B	6/06/06	6/06/06	5/07/06 12:41 AM
0606132-026B	6/06/06	6/06/06	6/07/06 1:49 AM				

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

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

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

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

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

# McCAMPBELL ANALYTICAL, INC.

110 2<sup>nd</sup> AVENUE SOUTH, #D7  
PACHECO, CA 94553-5560

Website: [www.mccampbell.com](http://www.mccampbell.com) Email: [main@mccampbell.com](mailto:main@mccampbell.com)

Telephone: (877) 798-1620

Fax: (925) 798-1622

## CHAIN OF CUSTODY RECORD

TURN AROUND TIME



GeoTracker EDF  PDF  Excel  Write On (DW)

Report To: Ryan Meyer		Bill To:		Analysis Request										Other	Comments		
Company: Ceres Associates		424 First St													Filter Samples for Metals analysis: Yes / No		
Benicia, CA, 94510		E-Mail: <a href="mailto:ryanmeyer@ceresassociates.com">ryanmeyer@ceresassociates.com</a>															
Tele: (707) 248-3170		Fax: (707) 748-3171															
Project #: CA1554-2		Project Name: -															
Project Location: Oakland		Sampler Signature: <i>R Meyer</i>															
SAMPLE ID	LOCATION/ Field Point Name	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED				Analysis Request	Other	Comments
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO <sub>3</sub>	Other			
SB5-5		6/6/08				X					X						
SB5-10																	
SB5-15																	
SB5-20																	
SB6-5																	
SB6-10																	
SB6-15																	
SB6-20																	
SB7-5																	
SB7-10																	
SB7-15																	
SB7-17*																	
SB7-20																	
SB8-5																	
Relinquished By: <i>R Meyer</i>		Date: 6/6/08	Time: 3:00 PM	Received By: <i>[Signature]</i>		ICE/* <input checked="" type="checkbox"/> GOOD CONDITION <input checked="" type="checkbox"/> *Jar Labeled COMMENTS: SB7-18											
Relinquished By:		Date:	Time:	Received By:		HEAD SPACE ABSENT <input checked="" type="checkbox"/> DECHLORINATED IN LAB <input checked="" type="checkbox"/> APPROPRIATE CONTAINERS <input checked="" type="checkbox"/> PRESERVED IN LAB <input checked="" type="checkbox"/>											
Relinquished By:		Date:	Time:	Received By:		VOAS <input checked="" type="checkbox"/> O&G <input checked="" type="checkbox"/> METALS <input checked="" type="checkbox"/> OTHER <input checked="" type="checkbox"/> PRESERVATION pH<2											

# McCAMPBELL ANALYTICAL, INC.

110 2<sup>nd</sup> AVENUE SOUTH, #D7  
PACHECO, CA 94553-5560

Website: [www.mccampbell.com](http://www.mccampbell.com) Email: [main@mccampbell.com](mailto:main@mccampbell.com)  
Telephone: (877) 798-1620 Fax: (925) 798-1622

## CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH  24 HR  48 HR  72 HR  5 DAY

GeoTracker EDF  PDF  Excel  Write On (DW)

Report To: Ryan Meyer Bill To: \_\_\_\_\_  
Company: Ceres Associates  
144 First St  
Benicla, CA 94510 E-Mail: Ryan.Meyer@ceresassoc.com  
Tele: (707) 798-3170 Fax: (707) 798-3171  
Project #: CA 1554-2 Project Name: \_\_\_\_\_  
Project Location: Oakland  
Sampler Signature: Kate Miller

### Analysis Request

Analysis Request		Other	Comments
<input checked="" type="checkbox"/>	BTEX & TPH as Gas (602 / 8021 + 8015) / MTBE TPH as Diesel (8015)		Filter Samples for Metals analysis: Yes / No
<input type="checkbox"/>	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)		
<input type="checkbox"/>	Total Petroleum Hydrocarbons (418.1)		
<input type="checkbox"/>	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)		
<input type="checkbox"/>	MTBE / BTEX ONLY (EPA 602 / 8021)		
<input type="checkbox"/>	EPA 505/608 / 8081 (CI Pesticides)		
<input type="checkbox"/>	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners		
<input type="checkbox"/>	EPA 507 / 8141 (NP Pesticides)		
<input type="checkbox"/>	EPA 515 / 8151 (Acidic CI Herbicides)		
<input type="checkbox"/>	EPA 524.2 / 624 / 8260 (VOCs) <u>2 Samples Only</u>		
<input type="checkbox"/>	EPA 525.2 / 625 / 8270 (SVOCs)		
<input type="checkbox"/>	EPA 8270 SIM / 8310 (PAHs / PNAs)		
<input type="checkbox"/>	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)		
<input type="checkbox"/>	LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)		
<input type="checkbox"/>	Lead (200.7 / 200.8 / 6010 / 6020)		


SAMPLE ID	LOCATION/ Field Point Name	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED							
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO <sub>3</sub>	Other				
SB8-10		6/6/00				X					X							
SB8-15																		
SB8-20																		
SB9-5																		
SB9-10																		
SB9-15																		
SB9-20																		
+50 SB5 GW				4		X					X	X						
+80 SB6 GW				4														
+50 SB7 GW				4														
+50 SB8 GW				4														
+50 SB9 GW				4														
Nothing further																		

Relinquished By: Kate Miller Date: 6/6/00 Time: 3:05 Received By: [Signature]  
Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_  
Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_

ICE/°  \_\_\_\_\_  
GOOD CONDITION \_\_\_\_\_  
HEAD SPACE ABSENT \_\_\_\_\_  
DECHLORINATED IN LAB \_\_\_\_\_  
APPROPRIATE CONTAINERS \_\_\_\_\_  
PRESERVED IN LAB \_\_\_\_\_  
VOAS O&G METALS OTHER  
PRESERVATION pH<2

COMMENTS:

**McC Campbell Analytical, Inc.**

 110 Second Avenue South, #D7  
Pacheco, CA 94553-5560  
(925) 798-1620

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 0606132

ClientID: CAB

EDF: NO

**Report to:**

Ryan Meyer  
Ceres Associates  
424 First Street  
Benicia, CA 94510

TEL: (707) 748-3170  
FAX: (707) 748-3171  
ProjectNo: #CA1554-2; Oakland  
PO:

**Bill to:**

Lori  
Ceres Associates  
424 First Street  
Benicia, CA 94510

**Requested TAT:**

**1 day**

Date Received: 06/06/2006

Date Printed: 06/06/2006

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
0606132-002	SB5-10	Soil	6/6/06	<input type="checkbox"/>			A		A								
0606132-006	SB6-10	Soil	6/6/06	<input type="checkbox"/>			A		A								
0606132-010	SB7-10	Soil	6/6/06	<input type="checkbox"/>	A		A		A								
0606132-012	SB7-17	Soil	6/6/06	<input type="checkbox"/>	A		A		A								
0606132-015	SB8-10	Soil	6/6/06	<input type="checkbox"/>			A		A								
0606132-019	SB9-10	Soil	6/6/06	<input type="checkbox"/>			A		A								
0606132-022	SB5 GW	Water	6/6/06	<input type="checkbox"/>			A		B								
0606132-023	SB6 GW	Water	6/6/06	<input type="checkbox"/>			A		B								
0606132-024	SB7 GW	Water	6/6/06	<input type="checkbox"/>		C	A		B								
0606132-025	SB8 GW	Water	6/6/06	<input type="checkbox"/>			A		B								
0606132-026	SB9 GW	Water	6/6/06	<input type="checkbox"/>		C	A		B								

**Test Legend:**

1	8260B_S	2	8260B_W	3	G-MBTEX S	4	G-MBTEX_W	5	TPH(D)_S
6	TPH(D)_W	7		8		9		10	
11		12							

Prepared by: Maria Venegas

Comments: 24hr Rush

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.



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APPENDIX B  
PERMITS

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# Alameda County Public Works Agency - Water Resources Well Permit



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

**Application Approved on:** 05/31/2006 **By** jamesy  
**Permits Issued:** W2006-0529

**Receipt Number:** WR2006-0264  
**Permits Valid from** 06/06/2006 **to** 06/06/2006

**Application Id:** 1149100445983  
**Site Location:** 671 Fourth Street  
**Project Start Date:** 06/06/2006

**City of Project Site:**Oakland  
**Completion Date:**06/06/2006

**Applicant:** Ceres Associates - Ryan Meyer  
424 First Street, Benicia, CA 94510  
**Property Owner:** Kimball and Jane Allen  
2 Lone Tree Avenue, Mill Valley, CA 94941  
**Client:** John Loh  
6400 Moraga Avenue, Oakland, CA 94611  
**Contact:** Ryan Meyer

**Phone:** 707-748-3170  
**Phone:** --  
**Phone:** --  
**Phone:** 530-320-4074  
**Cell:** --

	<b>Total Due:</b>	\$200.00
	<b>Total Amount Paid:</b>	\$200.00
<b>Payer Name : Ryan Meyer</b>	<b>Paid By:</b> MC	<b>PAID IN FULL</b>

**Works Requesting Permits:**

Borehole(s) for Geo Probes-Sampling 24 to 72 hours only - 5 Boreholes  
Driller: Vironex - Lic #: 705927 - Method: DP

**Work Total: \$200.00**

**Specifications**

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2006-0529	05/31/2006	09/09/2006	5	2.50 in.	20.00 ft

**Specific Work Permit Conditions**

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site.
2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
4. Permitte, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.
5. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.

**Alameda County Public Works Agency - Water Resources Well Permit**

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

7. Spot Check Only

Inspector does not have to be present for grout inspection.

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MAY-8-2006 03:13 FROM:ALLEN

4153832689

TO: 15103393807

P.1/5



NICK LATZ  
2077483170  
terra firma  
consulting llc

TO DENISE  
FROM JANIE ALLEN

**Prepared For:**

William Wong  
Unity Properties  
Oakland, California

**Date of Report:**

September 16, 2005

**RE: Findings of Environmental Subsurface Investigation**  
325 Martin Luther King Way, Oakland, CA

**Introduction**

A Subsurface Investigation to evaluate soil and groundwater from the referenced property for potential petroleum hydrocarbon and metals contamination has been completed. The scope of services for this project was: 1) to advance direct penetration borings to obtain soil and/or groundwater samples at representative locations; 2) to submit samples to a State-accredited laboratory to analyze for Total Petroleum Hydrocarbons as gasoline and diesel (EPA Standard Method 8015M), BTEX volatiles (EPA 8020), and inorganic lead (EPA 7420) and 3) to present all findings in written form and recommend further action as necessary to satisfy regulatory requirements or minimize environmental liability. This letter report summarizes the findings of the investigation; the complete Environmental Subsurface Investigation report will be delivered under separate cover.

Previous subsurface sampling had been completed at the Site by AEI Consultants, Inc., Walnut Creek, California on May 11, 2005. The AEI borings were completed as a Phase II Environmental Site Assessment after evidence of an underground fuel storage tank that had been closed in place on the premises was discovered during an earlier Phase I Environmental Site Assessment. The tank was reportedly located at the northeasterly corner of the building, and two boreholes were advanced: one near the tank location and one to the south, near the roll door entrance. Groundwater from the borehole nearest the tank was found to be contaminated with petroleum hydrocarbon constituents as follows:

TPH-gasoline: 780 parts per billion (ppb)  
TPH-diesel: 420 ppb  
Benzene: 53 ppb  
Toluene: 9 ppb  
Ethylbenzene: 35 ppb  
Xylenes: 100 ppb

The values for TPH-gasoline, Benzene, and Xylenes exceed the Environmental Screening Limits (ESL) established by the Regional Water Quality Control Board. The ESLs are

Findings of Environmental Subsurface Investigation  
325 Martin Luther King Way / Oakland, CA

considered to be conservative. Under most circumstances, and within certain limitations, the presence of a chemical in soil, soil gas or groundwater at concentrations below the corresponding ESL can be assumed to not pose a significant, long-term (chronic) threat to human health and the environment. Additional evaluation will generally be necessary at sites where a chemical is present at concentrations above the corresponding ESL. Active remediation may or may not be required, however, depending on site-specific conditions and considerations.

The groundwater from the borehole completed by AEI nearest the roll door was non-detect for all analyzed petroleum hydrocarbon constituents except for a trace amount of Xylenes.

**Findings of Present Investigation**

Terra Firma Consulting LLC advanced four additional borings at the Site to further characterize the horizontal and vertical extent of the petroleum hydrocarbon contamination that had been detected by the AEI Phase II Investigation. The attached Site Plan shows the locations of the borings and documents the laboratory analysis results for groundwater at each boring. The analytical results indicate that a contaminant plume containing TPH-gasoline, TPH-diesel, and the BTEX compounds extends westward from the underground storage tank location for a distance of at least 50 feet. The plume is approximately 30 feet wide. The range of analytical results from the four boreholes advanced on September 8, 2005 is as follows:

TPH-gasoline: 550 to 20,000 ppb .....	<b>(500 ppb)</b>
TPH-diesel: 230 to 3,600 ppb .....	<b>(640 ppb)</b>
Benzene: 6 to 990 ppb .....	<b>(46 ppb)</b>
Toluene: 7.5 to 3,100 ppb .....	<b>(130 ppb)</b>
Ethylbenzene: 19 to 590 ppb .....	<b>(290 ppb)</b>
Xylenes: 56 to 2,300 ppb .....	<b>(13 ppb)</b>
Lead: Non-detect to 310 ppb .....	<b>(2.5 ppb)</b>

The values in bold at the right margin are the respective Environmental Screening Level values for each constituent in groundwater. As can be seen, the upper limits of the respective ranges greatly exceed the ESL values for each of the constituents.

Based on the professional experience of TFC, the local environmental regulatory agency will require remediation at the subject property, particularly for the excessive concentrations of the petroleum hydrocarbon volatiles (BTEX compounds). Although the groundwater contaminant plume has not been definitively characterized, it appears to be approximately 30 feet in width by 50 feet in length, and is likely to be several feet in depth, from about 17 feet below ground surface to perhaps 20 feet below ground surface. Based on a similar site in Oakland recently evaluated by TFC, the remedial costs for excavation and disposal of the contaminated saturated zone is estimated to be \$ 500,000 to \$ 600,000. Other remedial procedures could be employed at the Site, however, excavation and disposal is generally the quickest and most effective procedure to obtain case closure from the lead regulatory agency.

Findings of Environmental Subsurface Investigation  
325 Martin Luther King Way / Oakland, CA

### Conclusions

Groundwater adjacent to the abandoned underground fuel storage tank at the subject property is significantly contaminated with petroleum hydrocarbon constituents. In the professional opinion of Terra Firma Consulting LLC, the contaminated zone will require remediation subsequent to disclosure of the Environmental Subsurface Investigation findings to the local environmental regulatory agency as required by statute.

### Limitations

This report was prepared solely for the use of *Unity Properties*. The content and conclusions provided by Terra Firma Consulting LLC in this assessment are based on information collected during our investigation, which may include, but not limited to, visual site inspections, interviews with the site owner, regulatory agencies and other pertinent individuals; review of available public documents, subsurface exploration and our professional judgement based on said information at the time of preparation of this document. Any subsurface sample results and observations presented herein are considered to be representative of the area of investigation; however, geological conditions may vary between borings and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which vary from these findings, the newly-revealed conditions must be evaluated and may invalidate the findings of this report.

This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the owner to properly dispose of any hazardous materials or hazardous wastes left onsite, in accordance with existing laws and regulations.

This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature. Terra Firma Consulting LLC is not responsible for the accuracy or completeness of information provided by other individuals or entities which is used in this report. This report presents our professional judgement based upon data and findings identified in this report and interpretation of such data based upon our experience and background, and no warranty, either express or implied, is made. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.

MAY-8-2006 03:16 FROM: ALLEN

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TO: 15103393807

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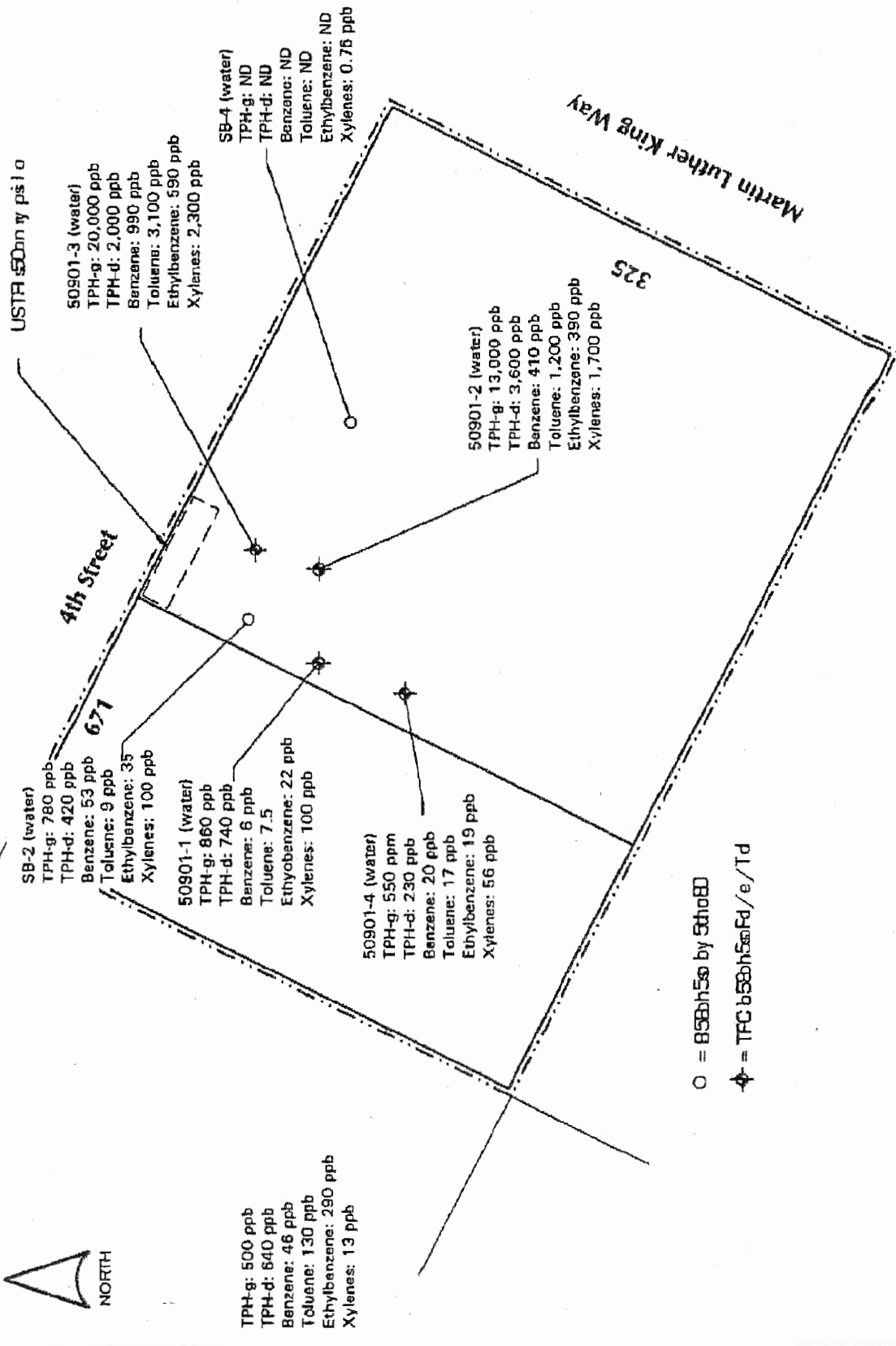
Findings of Environmental Subsurface Investigation:  
325 Martin Luther King Way / Oakland, CA

Thank you for using the environmental consulting services of Terra Firma Consulting LLC.  
Please contact us at 415-381-0855 with any questions regarding this report or for additional services.

Cabe C. Silverhame  
Professional Geologist 6201



Friday, September 16, 2005



○ = BSBh50 by Gtho80  
 ◆ = TFC b58h50Fd/e/Td

# site plan

325 martin luther king  
 oakland, california

SCALE 1" = 25'