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2005 ANNUAL GROUNDWATER MONITORING REPORT

SOUTH OAKLAND MAINTENANCE STATION 1112 29TH AVENUE OAKLAND, CALIFORNIA

PREPARED FOR:
CALIFORNIA DEPARTMENT OF TRANSPORTATION
DISTRICT 4
OFFICE OF ENVIRONMENTAL ENGINEERING
111 GRAND AVENUE
OAKLAND, CALIFORNIA

PREPARED BY:
GEOCON CONSULTANTS, INC.
2356 RESEARCH DRIVE
LIVERMORE, CALIFORNIA

CALTRANS CONTRACT NO. 04A1862
TASK ORDER NO. 18

GEOCON PROJECT NO. E8220-06-18

June 2005

GEOCON
CONSULTANTS, INC.
GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

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ENVIRONMENTAL ■ GEOTECHNICAL ■ MATERIALS

Project No. E8220-06-18
June 20, 2005

Mr. Bahram Sazegar
California Department of Transportation - District 4
111 Grand Avenue, 14th Floor
Post Office Box 23660
Oakland, California 94623-0660

Subject: 2005 ANNUAL GROUNDWATER MONITORING REPORT
SOUTH OAKLAND MAINTENANCE STATION – 1112 29TH AVENUE
OAKLAND, CALIFORNIA
CONTRACT NO. 04A1862
TASK ORDER NO.18

Dear Mr. Sazegar:

In accordance with California Department of Transportation (Caltrans) Contract No. 04A1862 and Task Order No. 18, Geocon has performed environmental engineering services at the project site. The project site consists of the South Oakland Maintenance Station located at 1112 29th Avenue in Oakland, California.

The accompanying report summarizes the services performed consisting of the collection of groundwater samples and laboratory analyses.

The contents of this report reflect the views of Geocon, who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the State of California or the Federal Highway Administration. This report does not constitute a standard, specification, or regulation.

If there are any questions concerning the contents of this report, or if Geocon may be of further service, please contact the undersigned at your convenience.

Sincerely,

GEOCON CONSULTANTS, INC.

John Love, PG
Sr. Project Geologist

RJW:RWD:rjk

(5) Addressee

PROFESSIONAL GEOLOGIST
JOHN W. LOVE
No. 6315
Expires 11-30-06
STATE OF CALIFORNIA

For Richard W. Day, CEG, CHG
Regional Manager

TABLE OF CONTENTS

1.0 INTRODUCTION

This Groundwater Monitoring Report for the California Department of Transportation (Caltrans) South Oakland Maintenance Station was prepared under Caltrans Contract No. 4A1862 and Task Order (TO) No. 18.

1.1 Site Description

The subject site is located at 1112 29th Avenue in Oakland, California. The site is used by Caltrans to store and service maintenance vehicles and equipment. The approximate location of the site is depicted on the attached Vicinity Map presented as Figure 1. The approximate site boundaries and existing structures are depicted on the Site Plan presented as Figure 2.

1.2 Background

One 4,000-gallon underground storage tank (UST) and one 2,000-gallon gasoline UST were removed from the site on March 11, 1997. The tank pit was over-excavated and confirmation soil samples were collected. Total petroleum hydrocarbon compounds as gasoline (TPHg) and as diesel fuel (TPHd) were reported as high as 380 and 21 milligrams per kilogram (mg/kg), respectively. Benzene, toluene, ethylbenzene, total xylenes (BTEX compounds) were reported as high as 48 mg/kg and methyl tertiary butyl ether (MTBE) was reported as high as 9.15 mg/kg.

On April 6 and 7, 1999, soil and groundwater samples were collected from six soil borings installed at the site. Soil sample results indicated that TPHg and MTBE were detected in one sample location at concentrations of 13 mg/kg and 0.16 mg/kg, respectively. No other contaminants were reported above the laboratory method detection limit concentrations in soil samples collected from the other soil borings. Groundwater sample results indicated that TPHg was present at concentrations of 520 micrograms per liter (ug/l) in two boring locations, and it was reported as non-detect in the other four soil boring locations. Benzene was detected at 6.3 ug/l at one location, above its maximum contaminant level (MCL) of 1 ug/l. MTBE was detected above its MCL of 13 ug/l at two locations, with reported concentrations of 6,600 ug/l and 24 ug/l.

On August 13, 1999, three additional soil borings were drilled at the site along the property boundary. Results indicated that MTBE was present in groundwater in two sample locations at concentrations of 5,600 and 9.0 ug/l.

In June and July 2000, Professional Service Industries (PSI) completed a supplemental investigation that included the installation of four monitoring wells (MW-1 through MW-4). Analytical laboratory results of groundwater samples collected from MW-1 through MW-4 indicated that TPHg and BTEX compounds were present at low concentrations in monitoring wells MW-1 and MW-3, and MTBE was present in groundwater samples collected from all four monitoring wells at concentrations ranging from 18 ug/l to 5,000 ug/l. Monitoring well locations are shown on the Site Plan, Figure 2.

In August 2001, PSI drilled three offsite soil borings. The borings were positioned in the downgradient groundwater flow direction at the All-Aboard Mini-Storage property. Analytical laboratory results of groundwater samples collected from the three temporary boring locations indicated that MTBE was not present in groundwater at concentrations that exceeded the MCL. Based on these results, PSI recommended no further investigation downgradient of the South Oakland Maintenance Station.

Quarterly groundwater sampling of monitoring wells MW-1 through MW-4 was conducted at the site from June 2000 through September 2002. The monitoring wells were also sampled in May 2004.

2.0 SCOPE OF SERVICES

The following scope of services was performed:

- Collected depth to groundwater measurements and groundwater samples from four monitoring well locations;
- Submitted groundwater samples for laboratory analysis; and
- Prepared Groundwater Monitoring Report.

3.0 INVESTIGATIVE METHODS

3.1 Groundwater Sampling

Groundwater sampling was performed on May 12, 2005. Prior to purging each monitoring well, depths to groundwater were determined using an electronic water level indicator (accurate to 0.01ft). Groundwater was purged from each well using a using a centrifugal pump fitted with 3/8-inch diameter disposable polyethylene tubing. At least three well-casing-volumes of groundwater were purged from each well prior to sample collection. Field parameters such as temperature, conductivity and pH were monitored after each casing volume had been removed to insure groundwater from the surrounding formation had entered the well casing prior to sample collection. The water level in each well was allowed to recover approximately 80% prior to sampling. Groundwater samples were collected using disposable polyethylene bailers. A new bailer was used to collect samples from each well. Monitoring well sampling data sheets are included as Appendix A.

Groundwater samples were collected in laboratory-provided containers, labeled and placed in a chilled container and transported to Sparger Technology, Inc. using chain-of-custody protocol. The purged groundwater from the sampling event was containerized and transported back to Geocon's warehouse for temporary storage.

3.2 Laboratory Analyses

Geocon instructed the analytical laboratory to conduct the following laboratory analyses:

- TPHg following EPA Test Method 8015B Modified; and
- BTEX and fuel oxygenate compounds (FOCs) following EPA Test Method 8260B.

Prior to submitting the groundwater samples to the laboratory, the chain-of-custody documentation was reviewed for accuracy and completeness. A copy of the laboratory report and chain of custody documentation is presented as Appendix B.

4.0 FIELD OBSERVATIONS AND INVESTIGATIVE RESULTS

4.1 Site Hydrogeology

On May 12, 2005, depth to groundwater ranged from 7.65 feet to 9.15 feet below the top of casing (TOC).

Historic depth to groundwater data are presented in Table 1. The calculated groundwater flow direction as shown on Figure 3, Groundwater Contour Map, is toward the southwest at approximately 0.01 feet per foot.

4.2 Analytical Results

TPHg was reported at concentrations of 0.19 mg/l in MW-1 and 1.3 mg/l in MW-3. Benzene was reported at a concentration 40 ug/l in the groundwater sample collected from MW-3, and ethylbenzene was reported at a concentration of 1.2 ug/l in the groundwater sample collected from MW-1.

MTBE was detected in monitoring wells MW-1, MW-2 and MW-3 at concentrations of 140 ug/l, 11 ug/l, and 3,200 ug/l, respectively. Tert-butanol (TBA) was detected in groundwater samples collected from MW-1 and MW-3 at concentrations of 50 ug/l and 890 ug/l.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Historical groundwater sample results and flow directions indicate the petroleum hydrocarbon plume has migrated southwest from the former UST excavation towards MW-3. During the recent sample event, MTBE was reported at a concentration of 3,200 ug/l in MW-3; and it was reported at a concentration of 11 ug/l in MW-2 and non-detect in MW-4, indicating the plume is situated between these two monitoring wells. MTBE was reported at a concentration of 140 ug/l in MW-1; however, this well is located adjacent to the former UST excavation in the immediate upgradient groundwater flow direction. Migration of contaminants from the former UST excavation northeast beyond MW-1 in the upgradient direction should be minimal.

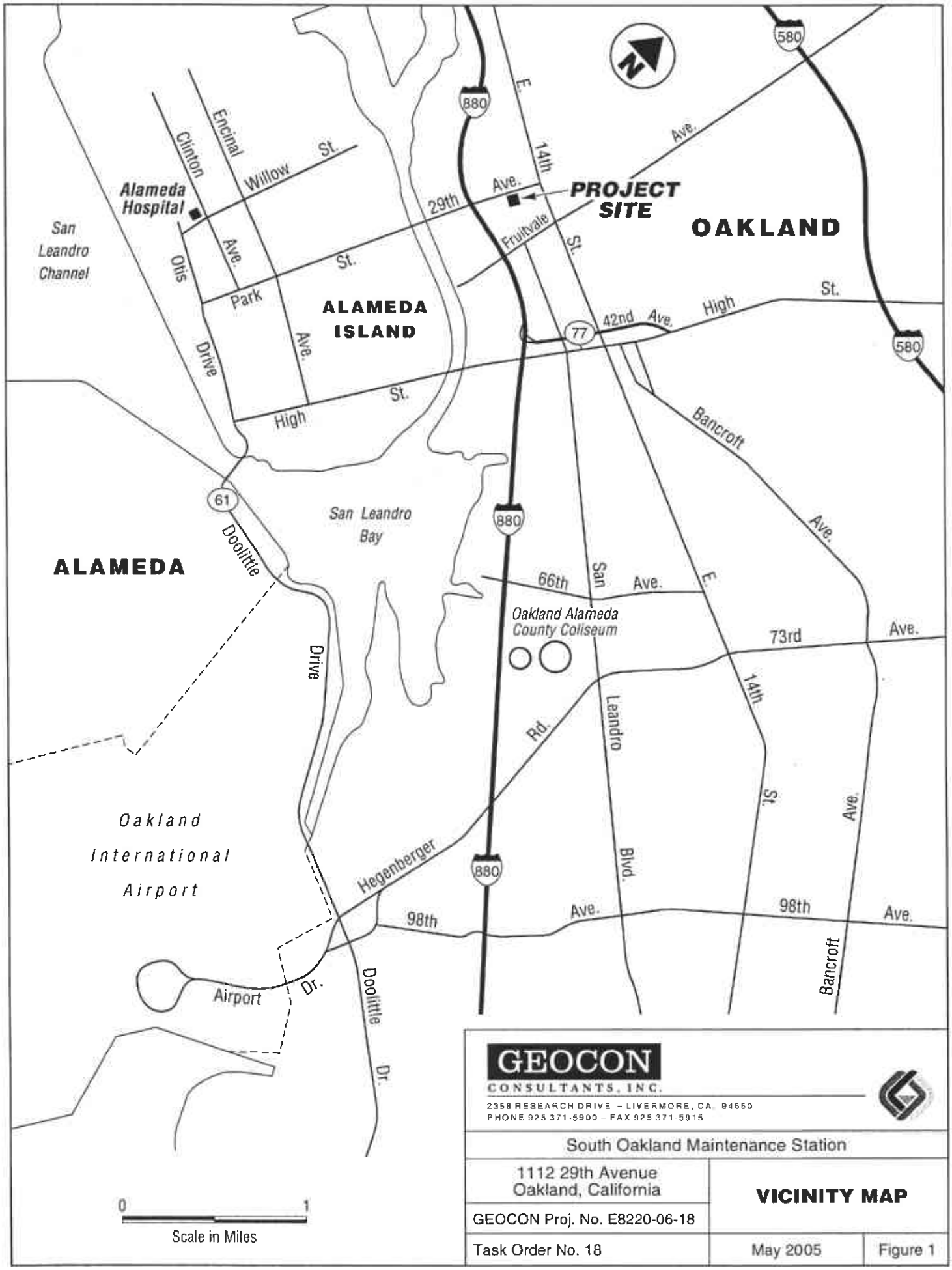
MTBE and benzene have been detected in groundwater samples collected from MW-3 at concentrations that exceed their respective MCLs. Most recently, MTBE was reported at a concentration of 3,200 ug/l and benzene was reported at a concentration of 40 ug/l in MW-3. Both of these concentrations are within historical levels (see Table 1). Although these concentrations exceed MCLs established for drinking water, shallow groundwater in the vicinity of the site is not used for drinking water purposes, and the highest concentrations of MTBE and benzene previously reported at the site are below the Tier 1 Environmental Screening Levels (ESLs) established by the Regional Water Quality Control Board – San Francisco Bay Region (RWQCB) for volatilization of compounds from shallow groundwater to indoor air, the only viable exposure pathway at the site.

Based on the results of this and previous groundwater monitoring events, it appears the lateral extent of petroleum hydrocarbon impacts to groundwater southwest of MW-3 has not been defined. Therefore, Geocon recommends advancing three soil borings along the southwest property boundary inside the warehouse to further define the lateral extent of groundwater impacts beyond MW-3. Should the results of the additional investigation establish the southwest downgradient extent of the plume, and continued groundwater monitoring confirms that the plume is stable, then the Alameda County Department of Environmental Health Services may consider the site for case closure as a low risk groundwater site.

6.0 REPORT LIMITATIONS

This report has been prepared exclusively for Caltrans. The information contained herein is only valid as of the date of the report, and will require an update to reflect additional information obtained.

This report is not a comprehensive site characterization and should not be construed as such. The findings as presented in this report are predicated on the results of the limited sampling and laboratory testing performed. In addition, the information obtained is not intended to address potential impacts related to sources other than those specified herein. Therefore, the report should be deemed conclusive with respect to only the information obtained. We make no warranty, express or implied, with respect to the content of this report or any subsequent reports, correspondence or consultation. Geocon strived to perform the services summarized herein in accordance with the local standard of care in the geographic region at the time the services were rendered.



GEOCON
CONSULTANTS, INC.
2356 RESEARCH DRIVE – LIVERMORE, CA. 94550
PHONE 925 371-5900 – FAX 925 371-5915

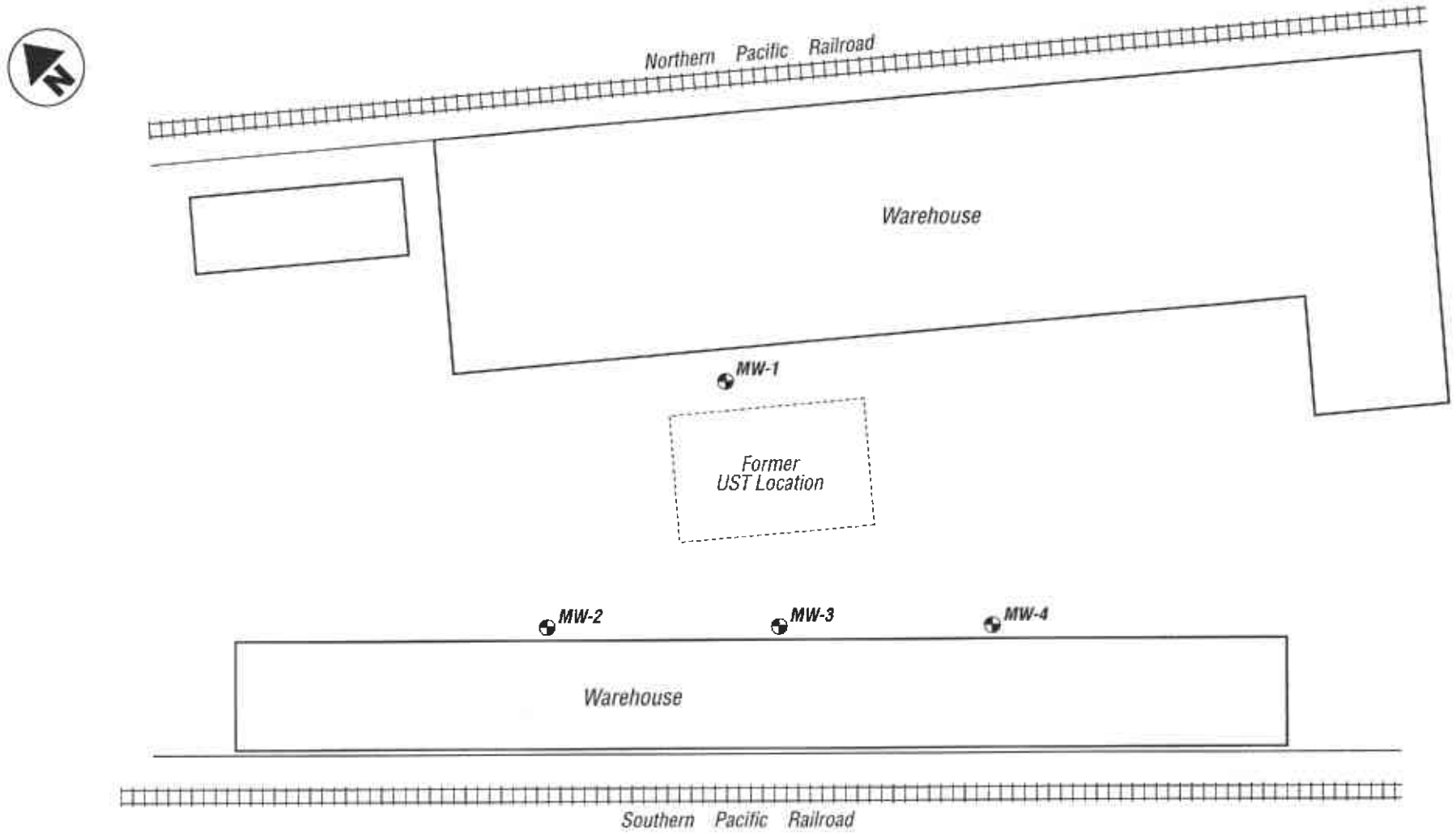
South Oakland Maintenance Station

1112 29th Avenue
Oakland, California

VICINITY MAP

GEOCON Proj. No. E8220-06-18

Task Order No. 18 | May 2005 | Figure 1



LEGEND:

MW-1 Approximate Monitoring Well Location

0 40

Scale in Feet

GEOCON
CONSULTANTS, INC.
2356 RESEARCH DRIVE – LIVERMORE, CA. 94550
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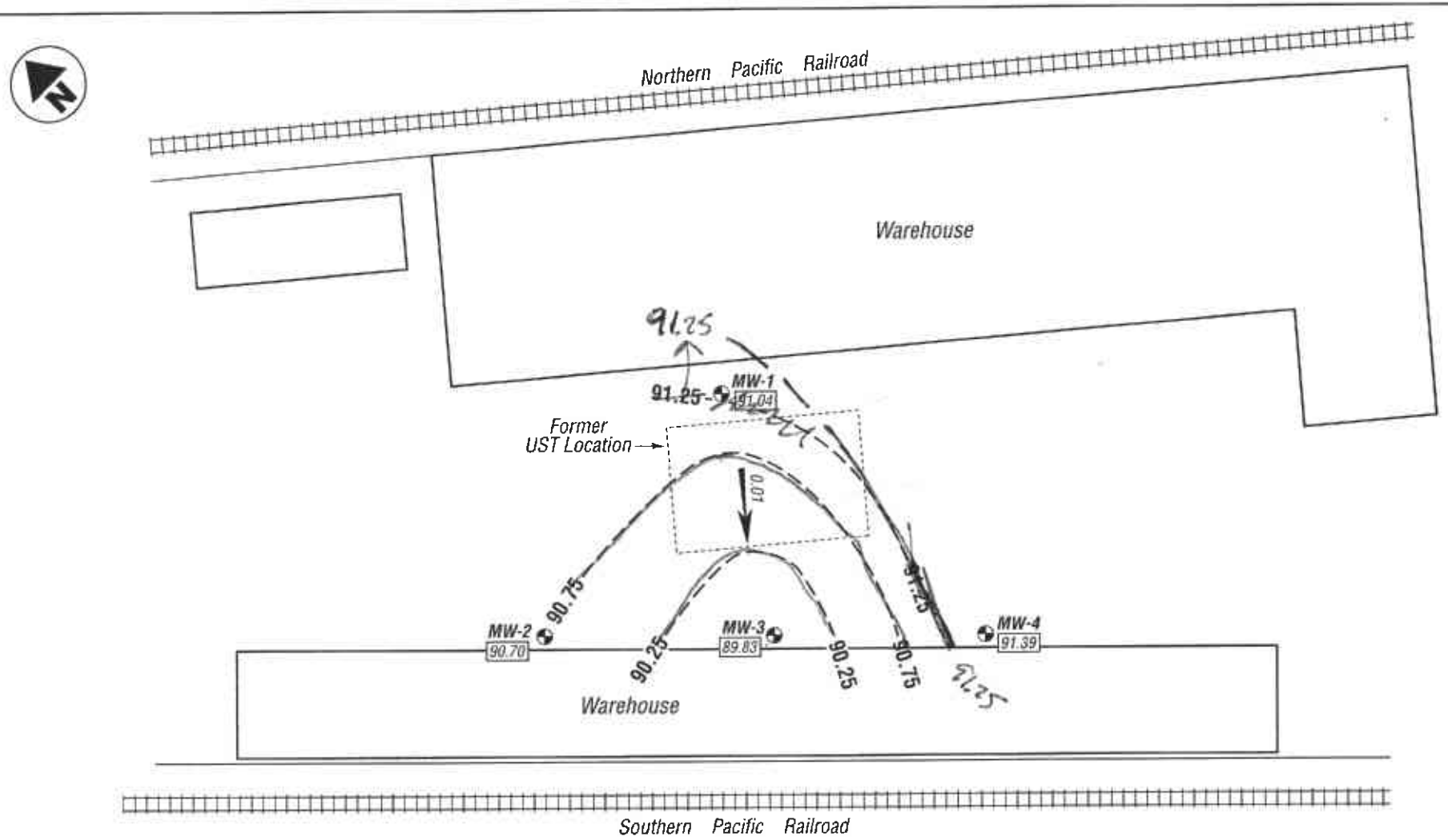
Oakland, California

SITE PLAN

GEOCON Proj. No. E8220-06-18

Task Order No. 18 | May 2005 | Figure 2



LEGEND:

MW-1 Approximate Monitoring Well Location

Groundwater Elevation Contour (Interval = 0.50 Ft.)

90.70 MSL Elevation of Groundwater Measured 5/12/05

0.01 Approximate Groundwater Direction & Gradient

0 40

Scale in Feet

GEOCON
CONSULTANTS, INC.
2356 RESEARCH DRIVE – LIVERMORE, CA 94550
PHONE 925 371-5900 – FAX 925 371-5915

South Oakland Maintenance Station

1112 29th Avenue
Oakland, California

GROUNDWATER ELEVATION MAP- MAY 2005

GEOCON Proj. No. E8220-06-18

Task Order No. 18 | May 2005 | Figure 3

TABLE 1
HISTORICAL DEPTH TO GROUNDWATER AND SAMPLE RESULTS
SOUTH OAKLAND MAINTENANCE STATION

Well	Date	*TOC Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	TPHg (mg/l)	Benzene (ug/l)	Toluene (ug/l)	Ethyl-benzene (ug/l)	Xylenes (ug/l)	MTBE (ug/l)	ETBE (ug/l)	TAME (ug/l)	TBA (ug/l)	DIPE (ug/l)
MW1	6/27/2000	99.57	9.13	90.44	0.85	20	< 1.0	< 1.0	19	880	---	< 5.0	< 50	---
	9/11/2000	99.57	9.52	90.05	0.92	14	< 1.0	1.6	3.6	860	---	< 5.0	190	---
	11/28/2000	99.57	9.62	89.95	< 0.5	3.6	< 2.5	< 2.5	< 7.5	610	---	< 25	< 250	---
	3/27/2001	99.57	8.79	90.78	< 0.2	<0.5	<0.5	<0.5	< 1.0	29	< 5.0	< 5.0	< 200	< 5.0
	6/26/2001	99.57	9.80	89.77	0.24	<0.5	<0.5	<0.5	< 1.0	200	< 5.0	< 5.0	< 200	< 5.0
	8/24/2001	---	---	---	<0.5	<25	<25	<25	<75	520	---	<50	<1,200	---
	12/5/2001	99.57	8.32	91.25	0.388	3.5	<0.3	2.4	15.4	505	---	<0.5	<100	---
	3/4/2001	99.57	8.66	90.91	0.69	<0.5	<0.5	<0.5	<1.0	55	<0.5	<0.5	<50	<0.5
	6/14/2002	99.57	9.53	90.04	<0.5	<0.5	<0.5	<0.5	<1.0	5.3	<0.5	<0.5	<0.5	<0.5
	9/24/2002	99.57	10.06	89.51	0.166	<0.5	<0.5	0.5	1.6	60.0	<0.5	<0.5	<50	<0.5
	5/5/2004	99.57	9.06	90.51	<0.05	0.5	<0.5	0.6	1.7	201	<0.5	<0.5	<50	<0.5
	5/12/2005	99.57	8.53	91.04	0.19	<1.0	<1.0	1.2	<1.0	140	<1.0	<1.0	50	<1.0
MW2	6/27/2000	98.91	9.05	89.86	< 0.5	< 1.0	< 1.0	< 1.0	< 3.0	86	---	< 5	< 50	---
	9/11/2000	98.91	9.95	88.96	< 0.5	< 1.0	< 1.0	< 1.0	< 3.0	110	---	< 5	< 50	---
	11/28/2000	98.91	9.94	88.97	< 0.5	< 1.0	< 1.0	< 1.0	< 3.0	130	---	< 5	< 50	---
	3/27/2001	98.91	8.35	90.56	< 0.2	<0.5	<0.5	<0.5	< 1.0	110	< 5.0	< 5.0	< 200	< 5.0
	6/26/2001	98.91	10.76	88.15	0.11	<0.5	<0.5	<0.5	< 1.0	51	< 5.0	< 5.0	< 200	< 5.0
	8/24/2001	---	---	---	<0.5	<2.0	<2.0	<2.0	<6.0	36	---	<4	<100	---
	12/5/2001	98.91	8.53	90.38	0.06	<0.3	<0.3	<0.3	<0.6	79	---	<0.5	<100	---
	3/4/2001	98.91	8.25	90.66	<0.5	<0.5	<0.5	<0.5	<1.0	9	<0.5	<0.5	<50	<0.5
	6/14/2002	98.91	9.50	89.41	<0.5	<0.5	<0.5	<0.5	<1.0	25.0	<0.5	<0.5	<0.5	<0.5
	9/24/2002	98.91	10.31	88.60	<0.05	<0.5	<0.5	<0.5	<1.0	34.6	<0.5	<0.5	<50	<0.5
	5/5/2004	98.91	8.46	90.45	<0.05	<0.5	<0.5	<0.5	<1.0	13.5	<0.5	<0.5	<50	<0.5
	5/12/2005	98.91	8.21	90.70	<0.05	<1.0	<1.0	<1.0	<1.0	11	<1.0	<1.0	<1.0	<1.0
MW3	6/27/2000	98.98	8.76	90.22	2.7	73	1.7	1.2	4.6	5,000	---	11	1,500	---
	9/11/2000	98.98	9.28	89.70	1.9	19	< 1.0	< 1.0	< 3.0	2,700	---	10	310	---
	11/28/2000	98.98	9.36	89.62	1.7	27	92	< 10	< 30	2,500	---	< 100	< 1,000	---
	3/27/2001	98.98	8.35	90.63	5.2	220	5.9	2.2	< 1.0	5,500	< 5.0	12	270	< 5.0
	6/26/2001	98.98	10.51	88.47	2.5	20	<0.5	<0.5	< 1.0	2,800	< 5.0	12	230	< 5.0
	8/24/2001	---	---	---	1.7	<100	<100	<100	<300	2,800	---	<200	<5,000	---
	12/5/2001	98.98	8.05	90.93	1.86	18.3	0.3	1.2	1.0	2,240	---	<200	<5,000	---

TABLE 1
HISTORICAL DEPTH TO GROUNDWATER AND SAMPLE RESULTS
SOUTH OAKLAND MAINTENANCE STATION

Well	Date	*TOC Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	TPHg (mg/l)	Benzene (ug/l)	Toluene (ug/l)	Ethyl-benzene (ug/l)	Xylenes (ug/l)	MTBE (ug/l)	ETBE (ug/l)	TAME (ug/l)	TBA (ug/l)	DIPE (ug/l)
MW3	3/4/2001	98.98	8.05	90.93	3.23	94.2	0.8	2.4	6.9	7,520	<0.5	11	<50	<0.5
	6/14/2002	98.98	9.35	89.63	2.32	3.6	<0.5	<0.5	<1.0	5,290	<0.5	8.9	<0.5	<0.5
	9/24/2002	98.98	10.28	88.70	2.06	24.0	0.5	1.2	3.4	2,020	<0.5	7.6	<50	<0.5
	5/5/2004	98.98	8.88	90.10	0.27	32.2	<0.5	0.8	4.8	4,420	<0.5	<0.5	<50	<0.5
	5/12/2005	98.98	9.15	89.83	1.3	40	<5.0	<5.0	<5.0	3,200	<5.0	<5.0	890	<5.0
MW4	6/27/2000	99.04	8.74	90.30	< 0.5	< 1.0	< 1.0	< 1.0	< 3.0	18	---	< 5	< 50	---
	9/11/2000	99.04	9.30	89.74	< 0.5	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	---	< 5	< 50	---
	11/28/2000	99.04	9.32	89.72	< 0.5	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	---	< 5	< 50	---
	3/27/2001	99.04	7.96	91.08	< 0.2	<0.5	<0.5	<0.5	< 1.0	< 5.0	< 5.0	< 5.0	< 200	< 5.0
	6/26/2001	99.04	9.56	89.48	< 0.05	<0.5	<0.5	<0.5	< 1.0	< 5.0	< 5.0	< 5.0	< 200	< 5.0
	8/24/2001	---	---	---	<0.5	<1.0	<1.0	<1.0	<3.0	<2	---	<4	<100	---
	12/5/2001	99.04	8.58	90.46	<0.05	<0.3	<0.3	<0.3	<0.6	<0.3	---	<0.5	<100	---
	3/4/2001	99.04	8.00	91.04	<0.5	0.5	<0.5	<0.5	<1.0	5.00	<0.5	<0.5	<0.5	<0.5
	6/14/2002	99.04	8.79	90.25	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5
	9/24/2002	99.04	9.75	89.29	<0.05	<0.5	<0.5	<0.5	<1.0	1.3	<0.5	<0.5	<50	<0.5
	5/5/2004	99.04	8.55	90.49	<0.05	<0.5	<0.5	<0.5	<1.0	2.2	<0.5	<0.5	<50	<0.5
	5/12/2005	99.04	7.65	91.39	<0.05	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<10	<1.0

Notes:

TOC - Top of casing
* - Elevation measured relative to an arbitrary datum assigned a value of 100.00 feet
MTBE - methyl tertiary butyl ether
ETBE - Ethyl tertiary butyl ether
TAME - tertiary amyl methyl ether
TBA - tert-butanol
DIPE - di-isopropyl ether

APPENDIX A

GROUNDWATE MONITORING WELL PURGE/SA PLING WORK SHEET

Project Name: South Oakland Maint. Station
Address: 1112 29Th AVE
OAKLAND, CA
Well Number: MW-1
Development/Purge/Sampler(s): P. Arroyo

Project Number: E8220-06-18
Date: 5-12-05
Well Lock Number:
Well Integrity: GOOD
Ambient Conditions: Sunny

Pre-Purge DO (mg/L) N/A

WELL VOLUME CALCULATION

Well Casing Diameter (in.)	Total Well Depth (ft.)		Depth to Goundwater (GW)		Linear Feet of GW		Gallons Per Linear Foot		1 Well Volume (gal.)
(2)	25.20	-	8.53	=	16.67	X	0.17	=	2.83
3		-		=		X	0.38	=	
4		-		=		X	0.66	=	
4.5		-		=		X	0.83	=	
6		-		=		X	1.5	=	

GROUNDWATER SURFACE INSPECTION

Floating Product (ft.) (in.): NONE Sheen/Iridescence: NONE Odor: NONE

GROUNDWATER PURGING PURGE METHOD

Submersible Pump; Air Diaphragm Pump; (Honda Pump); Other

Stagnant Volumes Purged	Volume Purged (gal.)	Time	pH	Conductivity (µs/umhos)	Temp. (°C)	Color/Turbidity (other)
0	0	1319	6.63	464	27.1	CLEAR
1	3.0	1320	6.49	455	24.2	↓
2	6.0	1321	6.46	454	22.7	↓
3	9.0	1322	6.43	489	22.6	↓
4						
5						
6						
7						
8						
9						
10						

Recovery Rate:
Fast
Medium
(Slow)

GROUNDWATER SAMPLING

Sampling Equipment: Disposable Bailer

Water Level Recovery

	Depth to GW (ft.)
(I) Initially	8.53
(P) After Purging	21.40
P - 0.8 (P-I) =	11.10 80% Recovery
(S) Before Sampling	11.10
(P-S) / (P-I) X 100 =	80 % Total Recovery

Sample Containers

	No.	Preservation Method/pH
1 liter (L), amber glass		
40 ml VOA	4	HCl
500 ml polypropylene		
Trip Blank		

Sample Date/Time: 5-12-05 / 1335 Turbidity (NTU): N/A

Calibrate Date 5-12-05

PURGED WATER CONTAINMENT

Total drums at site: Water Ø Soil Ø Water pump through treatment system —

Remarks:

GROUNDWATE MONITORING WELL PURGE/SA PLING WORK SHEET

Project Name: South Oakland Maint. Station
Address: 1112 29Th AVE
OAKLAND CA
Well Number: MW-2
Development/Purge/Sampler(s): P. Arroyo

Project Number: E8220-06-18
Date: 5.12.05
Well Lock Number:
Well Integrity: Good
Ambient Conditions: Sunny.

Pre-Purge DO (mg/L) N/A

WELL VOLUME CALCULATION

Well Casing Diameter (in.)	Total Well Depth (ft.)		Depth to Goundwater (GW)		Linear Feet of GW		Gallons Per Linear Foot		1 Well Volume (gal.)
(2)	19.45	-	8.21	=	11.24	X	0.17	=	1.91
3		-		=		X	0.38	=	
4		-		=		X	0.66	=	
4.5		-		=		X	0.83	=	
6		-		=		X	1.5	=	

GROUNDWATER SURFACE INSPECTION

Floating Product (ft.) (in.): NONE Sheen/Iridescence: NONE Odor: NONE

GROUNDWATER PURGING PURGE METHOD

Submersible Pump; Air Diaphragm Pump; (Honda Pump); Other _____

Stagnant Volumes Purged	Volume Purged (gal.)	Time	pH	Conductivity (µs/umhos)	Temp. (°C)	Color/Turbidity (other)
0	0	1300	6.64	488	28.3	CLEAR
1	2.0	1301	6.51	488	24.1	↓
2	4.0	1302	6.47	500	22.5	
3	6.0	1303	6.41	514	22.1	↓
4						
5						
6						
7						
8						
9						
10						

Recovery Rate:
Fast
(Medium)
Slow

GROUNDWATER SAMPLING

Sampling Equipment: Disposable Bailer

Water Level Recovery

	Depth to GW (ft.)
(I) Initially	8.21
(P) After Purging	14.90
P - 0.8 (P-I) =	9.54 80% Recovery
(S) Before Sampling	9.54
(P-S) / (P-I) X 100 =	80 % Total Recovery

Sample Containers

	No.	Preservation Method/pH
1 liter (L), amber glass		
40 ml VOA	4	HCl
500 ml polypropylene		
Trip Blank		

Sample Date/Time: 5.12.05 / 1310 Turbidity (NTU): N/A

Calibrate Date: 5.12.05

PURGED WATER CONTAINMENT

Total drums at site: Water Ø Soil Ø Water pump through treatment system —

Remarks:

GROUNDWATE MONITORING WELL PURGE/SA LING WORK SHEET

Project Name: South Oakland Maint. Station
Address: 1112 29th AVE
Oakland, CA
Well Number: MW-3
Development/Purge/Sampler(s): P. Arroyo

Project Number: E8220-06-18
Date: 5.12.05
Well Lock Number:
Well Integrity: Good
Ambient Conditions: Sunny

Pre-Purge DO (mg/L) N/A

WELL VOLUME CALCULATION

Well Casing Diameter (in.)	Total Well Depth (ft.)		Depth to Goundwater (GW)		Linear Feet of GW		Gallons Per Linear Foot		1 Well Volume (gal.)
(2)	20.20	-	9.15	=	11.05	X	0.17	=	1.87
3		-		=		X	0.38	=	
4		-		=		X	0.66	=	
4.5		-		=		X	0.83	=	
6		-		=		X	1.5	=	

GROUNDWATER SURFACE INSPECTION

Floating Product (ft.) (in.): NONE Sheen/Iridescence: NONE Odor: NONE

GROUNDWATER PURGING PURGE METHOD

Submersible Pump; Air Diaphragm Pump; (Honda Pump); Other _____

Stagnant Volumes Purged	Volume Purged (gal.)	Time	pH	Conductivity (µs/umhos)	Temp. (°C)	Color/Turbidity (other)
0	0	1236	6.48	505	28.2	CLEAR
1	2.0	1237	6.48	514	24.1	↓
2	4.0	1238	6.43	530	22.8	↓
3	6.0	1239	6.38	520	22.3	↓
4						
5						
6						
7						
8						
9						
10						

Recovery Rate:
Fast
(Medium)
Slow

GROUNDWATER SAMPLING

Sampling Equipment: Disposable Bailer

Water Level Recovery

	Depth to GW (ft.)
(I) Initially	9.15
(P) After Purging	16.95
P - 0.8 (P-I) =	10.71 80% Recovery
(S) Before Sampling	10.71
(P-S) / (P-I) X 100 =	80 % Total Recovery

Sample Containers

	No.	Preservation Method/pH
1 liter (L), amber glass		
40 ml VOA	4	HCl
500 ml polypropylene		
Trip Blank		

Sample Date/Time: 5.12.05 / 1250 Turbidity (NTU): N/A

Calibrate Date 5.12.05

PURGED WATER CONTAINMENT

Total drums at site: Water Ø Soil Ø Water pump through treatment system —

Remarks:

GROUNDWATER MONITORING WELL PURGE/SAMPLING WORK SHEET

Project Name: South Oakland Maint. Station | Project Number: E8220-06-18
Address: 1112 29th AVE, Oakland, CA | Date: 5.12.05
Well Number: MW-4 | Well Lock Number:
Development/Purge/Sampler(s): P. Arroyo | Well Integrity: Good
Ambient Conditions: Sunny

Pre-Purge DO (mg/L) N/A

WELL VOLUME CALCULATION

Well Casing Diameter (in.)	Total Well Depth (ft.)		Depth to Goundwater (GW)		Linear Feet of GW		Gallons Per Linear Foot		1 Well Volume (gal.)
(2)	24.35	-	7.65	=	16.70	X	0.17	=	2.83
3		-		=		X	0.38	=	
4		-		=		X	0.66	=	
4.5		-		=		X	0.83	=	
6		-		=		X	1.5	=	

GROUNDWATER SURFACE INSPECTION

Floating Product (ft.) (in.): None | Sheen/Iridescence: None | Odor: None

GROUNDWATER PURGING PURGE METHOD

Submersible Pump; Air Diaphragm Pump; (Honda Pump); Other _____

Stagnant Volumes Purged	Volume Purged (gal.)	Time	pH	Conductivity (µs/umhos)	Temp. (°C)	Color/Turbidity (other)
0	0	1216	6.65	502	26.6	CLEAR
1	3.0	1217	6.54	442	23.6	
2	6.0	1218	6.51	449	22.7	
3	9.0	1219	6.48	457	22.2	
4						
5						
6						
7						
8						
9						
10						

Recovery Rate: (Fast) Medium Slow

GROUNDWATER SAMPLING

Sampling Equipment: Disposable Bailer

Water Level Recovery

	Depth to GW (ft.)
(I) Initially	7.65
(P) After Purging	9.80
P - 0.8 (P-I) =	8.08 80% Recovery
(S) Before Sampling	7.65
(P-S) / (P-I) X 100 =	100 % Total Recovery

Sample Containers

	No.	Preservation Method/pH
1 liter (L), amber glass		
40 ml VOA	4	HCl
500 ml polypropylene		
Trip Blank		

Sample Date/Time: 5.12.05 / 1225 | Turbidity (NTU): N/A

Calibrate Date 5.12.05

PURGED WATER CONTAINMENT

Total drums at site: Water Ø | Soil Ø | Water pump through treatment system —

Remarks:

APPENDIX B

Sparger Technology, Inc.
Environmental Laboratories

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

John Love
Geocon Consultants, Inc.
2356 Research Dr
Livermore, CA 94550

Client	Geocon Consultants, Inc.
Workorder	16880 S. Oakland Maint. Station
Received	05/13/05

The samples were received in EPA specified containers. The samples were transported and received under documented chain of custody and stored at four (4) degrees C until analysis was performed.

Sparger Technology, Inc. ID Suffix Keys - These descriptors will follow the Sparger Technology, Inc. ID numbers and help identify the specific sample and clarify the report.

DUP - Matrix Duplicate
MS - Matrix Spike
MSD - Matrix Spike Duplicate
LCS - Lab Control Sample
LCSD - Lab Control Sample Duplicate
RPD - Relative Percent Difference
QC - Additional Quality Control
DIL - Results from a diluted sample
ND - None Detected
RL - Reporting Limit

Note: In an effort to conserve paper, the results are printed on both sides of the paper.

Ray James
Laboratory Director

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Sparger Technology, Inc.
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Mobile Laboratory Division
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Test Certificate of Analysis

Client ID	Geocon Consultants, Inc.	**Workorder ID**	S. Oakland Maint. Station
Workorder #	16880	**Sampled**	05/12/05
Laboratory ID	16880001	**Received**	05/13/05
Sample ID	MW-1	**Reported**	05/25/05
Matrix	Water		

8260B Oxygenates - 8260B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Tertiary butanol	**05/24/05**	**05/24/05**	**50**	**10**	**ug/L**	**1:1**
Methyl-tert-butyl-ether	**05/24/05**	**05/24/05**	**140**	**0.50**	**ug/L**	**1:1**
Di-isopropyl ether	05/24/05	05/24/05	ND	1.0	ug/L	1:1
Ethyl tert-butyl ether	05/24/05	05/24/05	ND	1.0	ug/L	1:1
Tertiaryamyl methylether	05/24/05	05/24/05	ND	1.0	ug/L	1:1
Benzene	05/24/05	05/24/05	ND	1.0	ug/L	1:1
Toluene	05/24/05	05/24/05	ND	1.0	ug/L	1:1
Ethylbenzene	**05/24/05**	**05/24/05**	**1.20**	**1.0**	**ug/L**	**1:1**
Xylene (Total)	05/24/05	05/24/05	ND	1.0	ug/L	1:1

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	47 ug/L	94 %	(65 - 135)

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Test Certificate of Analysis

Client ID	Geocon Consultants, Inc.	**Workorder ID**	S. Oakland Maint. Station
Workorder #	16880	**Sampled**	05/12/05
Laboratory ID	16880002	**Received**	05/13/05
Sample ID	MW-2	**Reported**	05/25/05
Matrix	Water		

8260B Oxygenates - 8260B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Tertiary butanol	05/24/05	05/24/05	ND	10	ug/L	1:1
Methyl-tert-butyl-ether	**05/24/05**	**05/24/05**	**11**	**0.50**	**ug/L**	**1:1**
Di-isopropyl ether	05/24/05	05/24/05	ND	1.0	ug/L	1:1
Ethyl tert-butyl ether	05/24/05	05/24/05	ND	1.0	ug/L	1:1
Tertiaryamyl methylether	05/24/05	05/24/05	ND	1.0	ug/L	1:1
Benzene	05/24/05	05/24/05	ND	1.0	ug/L	1:1
Toluene	05/24/05	05/24/05	ND	1.0	ug/L	1:1
Ethylbenzene	05/24/05	05/24/05	ND	1.0	ug/L	1:1
Xylene (Total)	05/24/05	05/24/05	ND	1.0	ug/L	1:1

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	44 ug/L	88 %	(65 - 135)

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Test Certificate of Analysis

Client ID	Geocon Consultants, Inc.	**Workorder ID**	S. Oakland Maint. Station
Workorder #	16880	**Sampled**	05/12/05
Laboratory ID	16880003	**Received**	05/13/05
Sample ID	MW-3	**Reported**	05/25/05
Matrix	Water		

8260B Oxygenates - 8260B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Tertiary butanol	**05/24/05**	**05/24/05**	**890**	**50**	**ug/L**	**1:5**
Methyl-tert-butyl-ether	**05/24/05**	**05/24/05**	**3200**	**2.5**	**ug/L**	**1:5**
Di-isopropyl ether	05/24/05	05/24/05	ND	5.0	ug/L	1:5
Ethyl tert-butyl ether	05/24/05	05/24/05	ND	5.0	ug/L	1:5
Tertiaryamyl methylether	05/24/05	05/24/05	ND	5.0	ug/L	1:5
Benzene	**05/24/05**	**05/24/05**	**40.0**	**5.0**	**ug/L**	**1:5**
Toluene	05/24/05	05/24/05	ND	5.0	ug/L	1:5
Ethylbenzene	05/24/05	05/24/05	ND	5.0	ug/L	1:5
Xylene (Total)	05/24/05	05/24/05	ND	5.0	ug/L	1:5

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	42 ug/L	84 %	(65 - 135)

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Test Certificate of Analysis

Client ID	Geocon Consultants, Inc.	**Workorder ID**	S. Oakland Maint. Station
Workorder #	16880	**Sampled**	05/12/05
Laboratory ID	16880004	**Received**	05/13/05
Sample ID	MW-4	**Reported**	05/25/05
Matrix	Water		

8260B Oxygenates - 8260B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Tertiary butanol	05/24/05	05/24/05	ND	10	ug/L	1:1
Methyl-tert-butyl-ether	05/24/05	05/24/05	ND	0.50	ug/L	1:1
Di-isopropyl ether	05/24/05	05/24/05	ND	1.0	ug/L	1:1
Ethyl tert-butyl ether	05/24/05	05/24/05	ND	1.0	ug/L	1:1
Tertiaryamyl methylether	05/24/05	05/24/05	ND	1.0	ug/L	1:1
Benzene	05/24/05	05/24/05	ND	1.0	ug/L	1:1
Toluene	05/24/05	05/24/05	ND	1.0	ug/L	1:1
Ethylbenzene	05/24/05	05/24/05	ND	1.0	ug/L	1:1
Xylene (Total)	05/24/05	05/24/05	ND	1.0	ug/L	1:1

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	43 ug/L	86 %	(65 - 135)

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Test Certificate of Analysis

Client ID Geocon Consultants, Inc.
Workorder # 16880 **Workorder ID** S. Oakland Maint. Station

Parameter TPHgas
Method 8015M DHS

Lab ID	Sample ID	Result	RL	Units	Collected	Analyzed	Matrix	Dilution
16880001	MW-1	190	50	ug/L	05/12/05	05/23/05	Water	1:1
16880002	MW-2	ND	50	ug/L	05/12/05	05/23/05	Water	1:1
16880003	MW-3	1300	50	ug/L	05/12/05	05/23/05	Water	1:1
16880004	MW-4	ND	50	ug/L	05/12/05	05/23/05	Water	1:1

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Method Blank Report

Client ID	Geocon Consultants, Inc.
Workorder ID	S. Oakland Maint. Station
Laboratory ID	68904
Sample ID	MB for HBN 266350 [VGXV/2696]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	05/23/05	05/23/05	ND	50	ug/L	1:1

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Lab Control Sample Report

Client ID	Geocon Consultants, Inc.
Workorder ID	S. Oakland Maint. Station
Laboratory ID	68905
Sample ID	LCS for HBN 266350 [VGXV/2696]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	05/23/05	05/23/05	1010	50	ug/L	1:1

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Lab Control Sample Duplicate Report

Client ID	Geocon Consultants, Inc.
Workorder ID	S. Oakland Maint. Station
Laboratory ID	68906
Sample ID	LCSD for HBN 266350 [VGXV/2696
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	05/23/05	05/23/05	1080	50	ug/L	1:1

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Matrix Spike Report

Client ID	Geocon Consultants, Inc.
Workorder ID	S. Oakland Maint. Station
Laboratory ID	68907
Sample ID	MS for HBN 266350 [VGXV/2696]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	05/23/05	05/23/05	900	50	ug/L	1:1

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Matrix Spike Duplicate Report

Client ID	Geocon Consultants, Inc.
Workorder ID	S. Oakland Maint. Station
Laboratory ID	68908
Sample ID	MSD for HBN 266350 [VGXV/2696]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	05/23/05	05/23/05	1020	50	ug/L	1:1

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Method Blank Report

Client ID	Geocon Consultants, Inc.
Workorder ID	S. Oakland Maint. Station
Laboratory ID	68909
Sample ID	MB for HBN 266353 [VGXV/2697]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	05/23/05	05/23/05	ND	50	ug/L	1:1

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Lab Control Sample Report

Client ID	Geocon Consultants, Inc.
Workorder ID	S. Oakland Maint. Station
Laboratory ID	68910
Sample ID	LCS for HBN 266353 [VGXV/2697]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	05/23/05	05/23/05	1010	50	ug/L	1:1

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Lab Control Sample Duplicate Report

Client ID	Geocon Consultants, Inc.
Workorder ID	S. Oakland Maint. Station
Laboratory ID	68911
Sample ID	LCSD for HBN 266353 [VGXV/2697
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	05/23/05	05/23/05	1080	50	ug/L	1:1

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Matrix Spike Report

Client ID	Geocon Consultants, Inc.
Workorder ID	S. Oakland Maint. Station
Laboratory ID	68912
Sample ID	MS for HBN 266353 [VGXV/2697]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	05/23/05	05/23/05	816	50	ug/L	1:1

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Matrix Spike Duplicate Report

Client ID	Geocon Consultants, Inc.
Workorder ID	S. Oakland Maint. Station
Laboratory ID	68913
Sample ID	MSD for HBN 266353 [VGXV/2697]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	05/23/05	05/23/05	825	50	ug/L	1:1

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Method Blank Report

Client ID	Geocon Consultants, Inc.
Workorder ID	S. Oakland Maint. Station
Laboratory ID	68919
Sample ID	MB for HBN 266550 [VMXV/2564]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Tertiary butanol	8260B	05/24/05	05/24/05	ND	10	ug/L	1:1
Methyl-tert-butyl-ether	8260B	05/24/05	05/24/05	ND	0.50	ug/L	1:1
Di-isopropyl ether	8260B	05/24/05	05/24/05	ND	1.0	ug/L	1:1
Ethyl tert-butyl ether	8260B	05/24/05	05/24/05	ND	1.0	ug/L	1:1
Tertiaryamyl methylether	8260B	05/24/05	05/24/05	ND	1.0	ug/L	1:1

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	44 ug/L	88 %	(65 - 135)

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Lab Control Sample Report

Client ID	Geocon Consultants, Inc.
Workorder ID	S. Oakland Maint. Station
Laboratory ID	68920
Sample ID	LCS for HBN 266550 [VMXV/2564]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Tertiary butanol	8260B	05/24/05	05/24/05	55	10	ug/L	1:1
Methyl-tert-butyl-ether	8260B	05/24/05	05/24/05	51	0.50	ug/L	1:1
Di-isopropyl ether	8260B	05/24/05	05/24/05	53	1.0	ug/L	1:1
Ethyl tert-butyl ether	8260B	05/24/05	05/24/05	54	1.0	ug/L	1:1
Tertiaryamyl methylether	8260B	05/24/05	05/24/05	55	1.0	ug/L	1:1

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Lab Control Sample Duplicate Report

Client ID	Geocon Consultants, Inc.
Workorder ID	S. Oakland Maint. Station
Laboratory ID	68921
Sample ID	LCSD for HBN 266550 [VMXV/2564
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Tertiary butanol	8260B	05/24/05	05/24/05	60	10	ug/L	1:1
Methyl-tert-butyl-ether	8260B	05/24/05	05/24/05	59	0.50	ug/L	1:1
Di-isopropyl ether	8260B	05/24/05	05/24/05	54	1.0	ug/L	1:1
Ethyl tert-butyl ether	8260B	05/24/05	05/24/05	58	1.0	ug/L	1:1
Tertiaryamyl methylether	8260B	05/24/05	05/24/05	59	1.0	ug/L	1:1

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Matrix Spike Report

Client ID	Geocon Consultants, Inc.
Workorder ID	S. Oakland Maint. Station
Laboratory ID	68922
Sample ID	MS for HBN 266550 [VMXV/2564]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Tertiary butanol	8260B	05/24/05	05/24/05	48	10	ug/L	1:1
Methyl-tert-butyl-ether	8260B	05/24/05	05/24/05	50	0.50	ug/L	1:1
Di-isopropyl ether	8260B	05/24/05	05/24/05	45	1.0	ug/L	1:1
Ethyl tert-butyl ether	8260B	05/24/05	05/24/05	51	1.0	ug/L	1:1
Tertiaryamyl methylether	8260B	05/24/05	05/24/05	51	1.0	ug/L	1:1

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Sparger Technology, Inc.
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Matrix Spike Duplicate Report

Client ID	Geocon Consultants, Inc.
Workorder ID	S. Oakland Maint. Station
Laboratory ID	68923
Sample ID	MSD for HBN 266550 [VMXV/2564]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Tertiary butanol	8260B	05/24/05	05/24/05	55	10	ug/L	1:1
Methyl-tert-butyl-ether	8260B	05/24/05	05/24/05	54	0.50	ug/L	1:1
Di-isopropyl ether	8260B	05/24/05	05/24/05	54	1.0	ug/L	1:1
Ethyl tert-butyl ether	8260B	05/24/05	05/24/05	57	1.0	ug/L	1:1
Tertiaryamyl methylether	8260B	05/24/05	05/24/05	62	1.0	ug/L	1:1

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Environmental Laboratories

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

QC SUMMARY

Client ID	Geocon Consultants, Inc.		
Workorder ID	S. Oakland Maint. Station		
QC Batch	VGX 2809	**Original**	16888001
Matrix	Water	**Samples**	Matrix Spike [68907]
			Matrix Spike Duplicate [68908]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
TPHgas	90	102	(65-135)	13	(20 MAX)

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Sparger Technology, Inc.
Environmental Laboratories

QC SUMMARY

Client ID	Geocon Consultants, Inc.
Workorder ID	S. Oakland Maint. Station
QC Batch	VGX 2810
Matrix	Water
Original Samples	16880004 Matrix Spike [68912] Matrix Spike Duplicate [68913]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
TPHgas	82	82	(65-135)	00	(20 MAX)

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Sparger Technology, Inc.
Environmental Laboratories

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

QC SUMMARY

Client ID Geocon Consultants, Inc.
Workorder ID S. Oakland Maint. Station
QC Batch VMX 2615
Matrix Water

Original Samples 16875001
Matrix Spike [68922]
Matrix Spike Duplicate [68923]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
Tertiary butanol	96	110	(76-135)	14	(20 MAX)
Methyl-tert-butyl-ether	100	108	(76-135)	7.7	(20 MAX)
Di-isopropyl ether	90	108	(76-135)	18	(20 MAX)
Ethyl tert-butyl ether	102	114	(76-135)	11	(20 MAX)
Tertiaryamyl methylether	102	124	(76-135)	19	(20 MAX)

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Sparger Technology, Inc.
Environmental Laboratories

QC SUMMARY

Client ID Geocon Consultants, Inc.
Workorder ID S. Oakland Maint. Station
QC Batch VGX 2809
Matrix Water

Samples Lab Control Sample [68905]
Lab Control Sample Duplicate [68906]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
TPHgas	101	108	(65-135)	6.7	(20 MAX)

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Sparger Technology, Inc.
Environmental Laboratories

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

QC SUMMARY

Client ID Geocon Consultants, Inc.
Workorder ID S. Oakland Maint. Station
QC Batch VGX 2810
Matrix Water

Samples Lab Control Sample [68910]
Lab Control Sample Duplicate [68911]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
TPHgas	101	108	(65-135)	6.7	(20 MAX)

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Sparger Technology, Inc.
Environmental Laboratories

QC SUMMARY

Client ID Geocon Consultants, Inc.
Workorder ID S. Oakland Maint. Station
QC Batch VMX 2615
Matrix Water

Samples Lab Control Sample [68920]
Lab Control Sample Duplicate [68921]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
Tertiary butanol	110	120	(76-135)	8.7	(20 MAX)
Methyl-tert-butyl-ether	102	118	(76-135)	15	(20 MAX)
Di-isopropyl ether	106	108	(76-135)	1.9	(20 MAX)
Ethyl tert-butyl ether	108	116	(76-135)	7.1	(20 MAX)
Tertiaryamyl methylether	110	118	(76-135)	7.0	(20 MAX)

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RGER TECHNOLOGY, INC. RLLD

ytical Laboratory

e Circle, #112 Sacramento, CA 95827

Phone: (916) 362-8947

FAX: (916) 362-0947

CHAIN OF CUSTODY RECORD

C.O.C. No. 13425

Page 1 of 1

STAL Invoice Number: 16880

any: GEOCON

Phone: (925) 371-5900

Manager: John Love

FAX: (925) 371-5915

Address: Billing Name & Address:

... Research Dr. Livermore, CA 94550

Name: South Oakland Maint. Station

Project/Job#: S8220-06-13

Location: Oakland, CA

P.O.#:

ANALYSIS REQUEST

REMARKS:

Sampler's Name: P. Ainge

		All OK	None OK	Some OK
Cooler Temp.	°C			
Sample Condition				
pH				

WET(STLC) | TCLP | Total

SAMPLE ID	Sampling: Date	Sampling: Time	Container: 40 mL VOA	Container: Brass Sleeve	Container: 1 L amber bottle	Container: 250 mL Plastic	Container: Other:	Preservative Used: HCl/HNO3/ICE	Preservative Used: None	Preservative Used: Other:	Matrix: Water	Matrix: Soil	Matrix: Air	Matrix: Other:	TCLP: BTEX (602/8020)503.1 8021B	TCLP: BTEX/TPHgas (602/8020/8015) M	TCLP: TPHdiesel/TPHmotor oil/kerosene(8015)	TCLP: EPA 601/8010/502.2/504	TCLP: EPA 602/8020	TCLP: EPA 608/8080 (Pesticides)/505/508	TCLP: EPA 608/8080 (PCB'S)	TCLP: EPA 624/8240/524.2	TCLP: EPA 625/8270/525	TCLP: Total Oil & Grease (5520)	TCLP: Non-Polar O & G/TRPH (418.1)	TCLP: Organic Lead	TCLP: RCI	TCLP: FO's (8260)	Total: CAM-17 Metals	Total: CAM-5 Metals (Cd, Cr, Pb, Ni, Zn)	Total: Lead	Total:	TAT: Standard	TAT: Rush Services (72hr / 48hr / 24hr / 12hr)
MW-1	5/12/05	1335	4					X			X				X	X												X						
MW-2	↓	1310	↓					X			X				X	X												X						
MW-3	↓	1250	↓					X			X				X	X												X						
MW-4	↓	1225	↓					X			X				X	X												X						

Relinquished by:	Received by:	Relinquished by:	Received by:
[signature]	[signature]	[signature]	
Date: 5/12/05 Time:	Date: 5/13/05 Time: 12:20	Date: 5/13/05 Time: 12:20	Date: Time:

PLEASE READ REVERSE SIDE FOR TERMS AND CONDITIONS

To: From: DES 40 Tue 8 Jul 2003 13:23:55 Page: 2