

# DREISBACH

2530 East Eleventh Street P.O. Box 7509 Oakland, CA 94601-0509  
Voice 510/523/8600 Fax 510/534/2316 www.dreisbach.com info@dreisbach.com

**RECEIVED**

By loprojectop at 4:29 pm, Feb 28, 2006

February 23, 2006

Mr. Jerry Wickham  
Hazardous Materials Specialist  
Alameda County Health Care Services Agency  
Environmental Health Services  
Environmental Protection  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502

**Re: Subsurface Investigation Results**  
23<sup>rd</sup> Avenue Partners  
1125 Miller Avenue, Oakland, CA  
Clearwater Project No. CB018D  
Fuel Case Leak No. RO0000294

Dear Mr. Wickham,

As the legally authorized representative of the above-referenced project location I have reviewed the attached report prepared by my consultant of record, Clearwater Group, Inc. I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document are true and correct to the best of my knowledge.

Sincerely,



Mr. Allen Pelton



February 28, 2006

Mr. Jerry Wickham  
Hazardous Materials Specialist  
Alameda County Health Care Services Agency  
Environmental Health Services  
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Dear Mr. Wickham,

The Clearwater Group, Inc. (Clearwater) on behalf of Mr. Allen Pelton of 23<sup>rd</sup> Avenue Partners, is pleased to present the *Subsurface Investigation Results* prepared for the project site located at 1125 Miller Avenue, Oakland, Alameda County, California (**Figure 1**).

#### **Purpose of Subsurface Investigation**

The purpose of the proposed soil borings (S5 through S7) was to evaluate the extent of the petroleum related hydrocarbon release beneath the project site. The hand augered boring (S8) proposed to approximately 4 feet below ground surface (bgs) was primarily conducted to sample soils beneath the abandoned piping at the former dispenser island inside the building (**Figure 2**).

#### **Investigation Activities – Event Preparation**

Prior to conducting field activities, Clearwater personnel submitted a request for proposal to three separate drilling companies (Fast-Tek Engineering Support Services, Precision Drilling and Gregg Drilling). The three bid request is a compliance requirement of the Underground Storage Tank Clean-up Fund (USTCF). Once all three bids were received and reviewed then a drilling company was chosen based on price and availability to complete the project in a timely fashion. Clearwater



personnel then submitted a drilling permit application to the Alameda County Department of Public Works Department (ACDPW) on October 24, 2005. The permit application was approved and a permit was issued on October 28, 2005 (**Attachment A**). Clearwater personnel prepared a site specific Health and Safety Plan for use during the onsite drilling activities (**Attachment B**). Per Underground Service Alert (USA) requirements, the proposed boring locations were marked in white marking paint on November 6, 2005 by Clearwater field personnel. Clearwater personnel contacted USA on November 14, 2005 to request that all subsurface utilities leading to the project site be marked under USA drill ticket number 437641.

### **Investigation Activities – Drilling Event**

On November 16, 2005 under the supervision of Clearwater Staff Geologist Mr. Jeremy Gekov, Fast-Tek Engineering Support Services of Pt. Richmond, California (C-57 License No. 624461) advanced each soil boring (S5-S7) using a Geoprobe® 5400 Rig outfitted with Direct Push Technology Macro-Core® Soil Sampler, which is a single rod system used for soil sampling. The target depth for three of the four soil borings (S5, S6 and S7) was approximately 15 to 20 feet bgs. Soil samples were collected continuously and sampled at five-foot depth intervals, starting at 3-feet. The soil samples were retained for laboratory analysis and for visual classification according to the Unified Soil Classification System. The soil samples were also screened with a photo-ionization detector (PID). The fourth soil boring (S8) located beneath the dispenser was originally proposed to be completed using a hand auger. However site conditions allowed for the use of the Geoprobe rig instead.

All of the soil samples were collected by transferring the soil from the Macro-Core® Soil Sampler sleeve into either a brass sleeve or glass collection jar. The soil samples were labeled, documented on a chain of custody form and placed on ice for transport to Kiff Analytical LLC a California Department of Health Services certified laboratory located in Davis, California. The soil samples were submitted for analysis of total petroleum hydrocarbons as diesel (TPHd) by EPA method 8015; benzene, toluene, ethyl benzene and total xylenes (BTEX) by EPA method 8260. The

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samples collected for analysis of BTEX were prepared in the field according to EPA Method 5035. These samples were placed on dry ice for transport to the project laboratory.

Groundwater samples were proposed to be collected from boreholes S5, S6 and S7 within the upper five feet of the saturated zone, using a disposable or clean stainless steel bailer and then decanting into laboratory supplied containers. Due to subsurface conditions encountered, a groundwater sample was only collected from borehole S5. Groundwater was first encountered between 16 and 17 feet bgs. The groundwater samples were labeled, documented on a chain-of-custody form, and placed on ice in a cooler for transport to the project laboratory. After the collection of the groundwater sample from the S5 location, each borehole was then sealed to the surface with a neat cement grout.

All field personnel on-site reviewed and signed the site Health and Safety plan, prepared in accordance with OSHA 1910.120, at the start of the field day. All fieldwork was conducted in accordance with Clearwater's Field Procedures (**Attachment C**).

## **Investigation Activities – Results**

Borings S5 and S7 were completed to the target depth of 20 feet bgs. Groundwater was first encountered at 17 feet bgs in S5 and 16 feet in S7. Five separate attempts were made to complete S6 to the target depth. With each attempt, the driller encountered refusal at approximately 3 feet bgs with the exception of attempt number 3 which was completed to a depth of approximately 5 feet bgs. Further attempts to complete boring S6 were abandoned. The soil sample collected within the first five feet of drilling S6 was retained for analysis of TPHd, there was not enough soil sample collected to analyze for concentrations of BTEX. Boring S8 was completed to the target depth of 4 feet bgs and a soil sample was collected for analysis of TPHd and BTEX. Boring logs for each soil boring are included as Attachment D.

Three attempts were made to collect a groundwater sample from boring S7. Each time the driller removed the direct push rods from the borehole to set the temporary well casing, the sides of the boring collapsed. After three failed efforts, no further attempt was made to collect a groundwater

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sample from S7. According to Cross Section A-A' (**Figure 3**) the subsurface is mainly comprised of clayey gravel.

The laboratory did not report any detectable concentrations of BTEX in any of the soil samples submitted for analysis (Table 1). Concentrations of TPHd were detected in the soil samples collected from locations S5, S7 and S8. The concentration of TPHd ranged in value from 5.8 milligrams per Kilogram (mg/Kg) in S5-20 to 1,200 mg/Kg in S7-15. Atypical concentrations of TPHd were reported in S5-5, S7-5, S6-6 and S7-10. Clearwater personnel contacted the project laboratory to determine the nature of the atypical concentrations. The laboratory stated that the atypical concentrations were representative of either asphalt or lubricating oils.

The groundwater sample collected from S5 contained reportable concentrations of TPHd above the laboratory reporting limit of 50 micrograms per liter ( $\mu\text{g/L}$ ) at 890  $\mu\text{g/L}$ . No other constituent of concern was reported for the groundwater sample (**Table 2**). A copy of Kiff Analytical report number 46981 is included as **Attachment E**.

## Recommendations

Based on site conditions and analytical results from both the soil and groundwater samples collected during the subsurface investigation event, Clearwater recommends that a workplan be prepared for the project site. The focus of the workplan would be the installation of at least three groundwater monitoring wells using an air-rotary or hollow stem auger drill rig. Following installation of the groundwater monitoring well network, Clearwater recommends that a groundwater monitoring program be implemented for a minimum of one year prior to further evaluating the project site.

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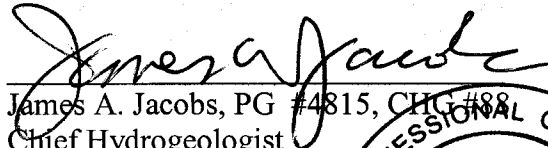
## CERTIFICATION

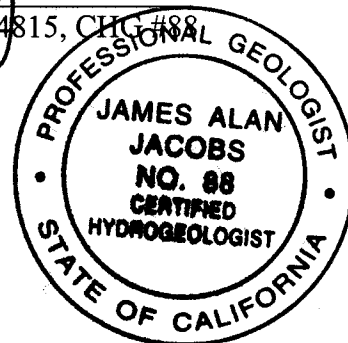
This report was prepared under the supervision of a Professional Geologist in the State of California. All statements, conclusions and recommendations are based solely upon reported results from previous work, field observations by Clearwater and analyses performed by a California State-certified laboratory related to the work performed by Clearwater. Information and interpretation presented herein is for the sole use of the client and regulating agency. A third party should not rely upon the information contained in this document. The service performed by Clearwater has been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of this profession currently practicing under similar conditions in the area of the site. No other warranty, expressed or implied, is made.

Sincerely,

**CLEARWATER GROUP**

  
Jessica Chiaro-Moreno  
Project Manager

  
James A. Jacobs, PG #4815, CHG #88  
Chief Hydrogeologist





**FIGURES:**

- Figure 1: Site Location Map
- Figure 2: Site Plan
- Figure 3: Cross Section A-A'

**TABLES:**

- Table 1: Soil Sampling Analytical Results
- Table 2: Groundwater Analytical Results

**ATTACHMENTS:**

- Attachment A: Alameda County Department of Public Works Permit
- Attachment B: Health and Safety Plan
- Attachment C: Clearwater Group's Protocols
- Attachment D: Boring Logs (S5 through S8)
- Attachment E: Kiff Analytical Report No. 46981

cc: Mr. Allen Pelton  
23<sup>rd</sup> Avenue Partners  
P.O. Box 7509  
Oakland, CA 94601

# FIGURES



122°16.000' W      122°15.000' W      122°14.000' W      WGS84 122°13.000' W

37°48.000' N

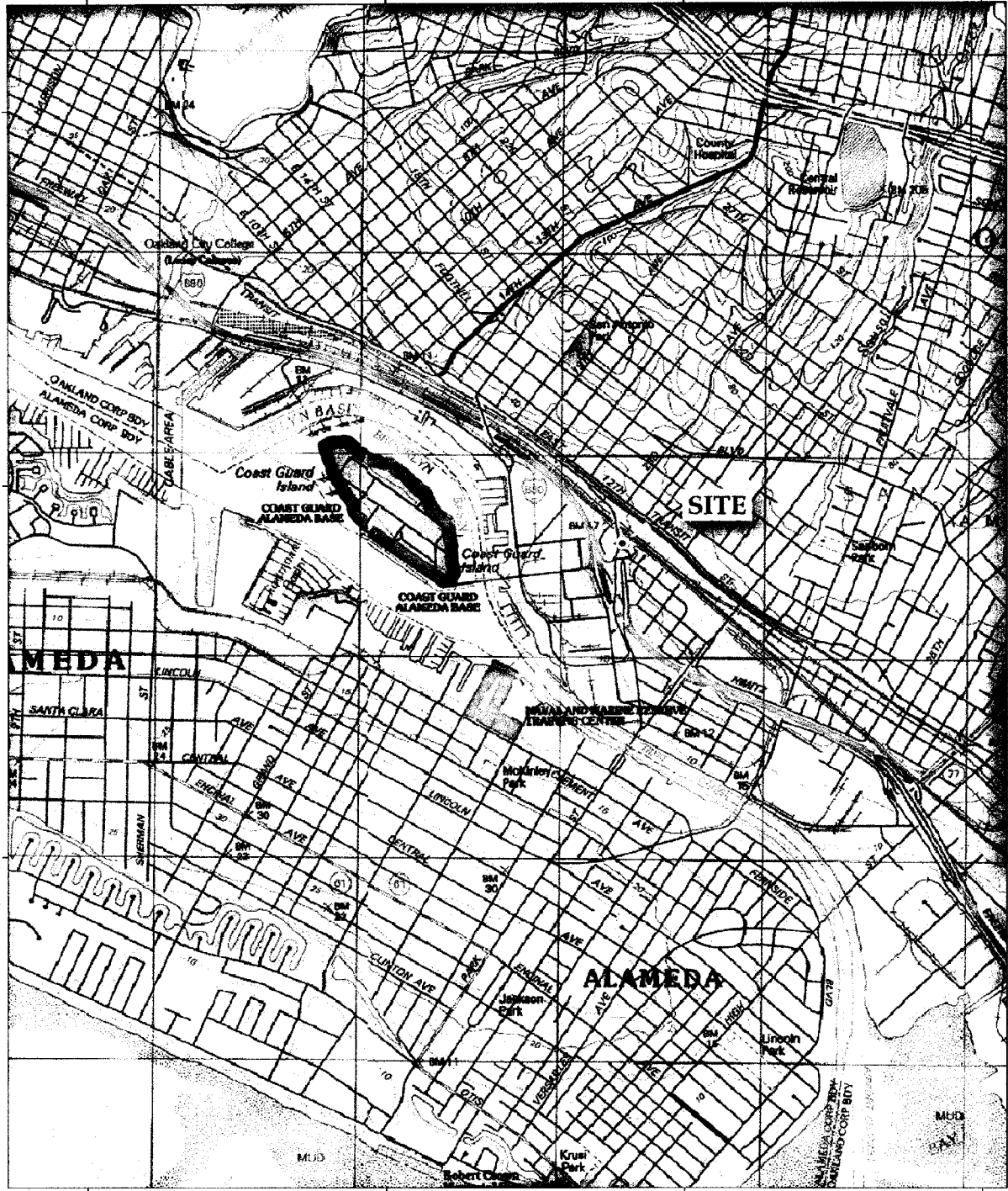
37°48.000' N

37°47.000' N

37°47.000' N

37°46.000' N

37°46.000' N

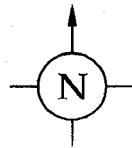


122°16.000' W      122°15.000' W      122°14.000' W      WGS84 122°13.000' W

TN  
15°



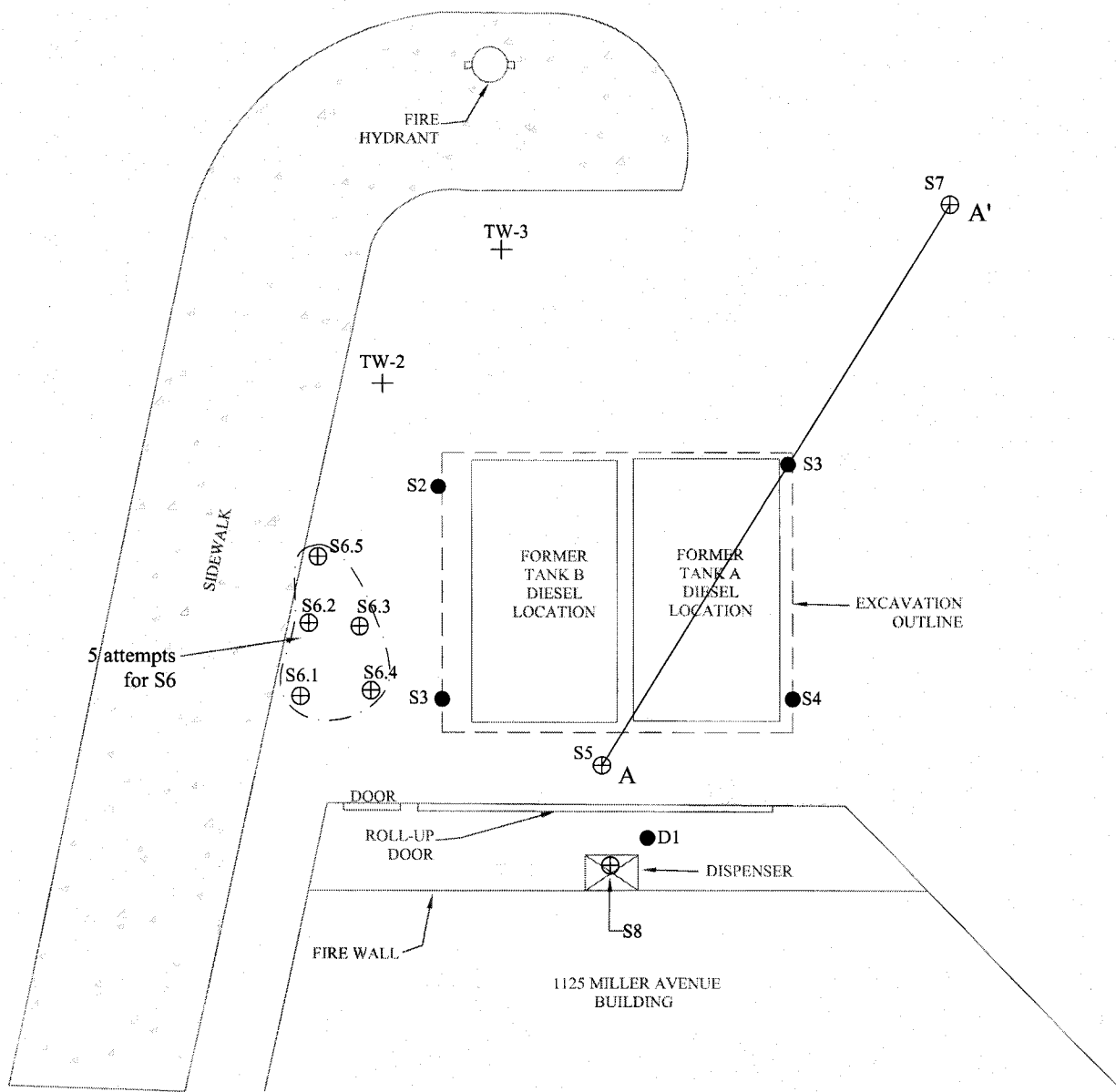
Map created with TOPO!® ©2002 National Geographic (www.nationalgeographic.com/topo)




**Site Vicinity Map**  
1125 Miller Avenue  
Oakland, California


**CLEARWATER GROUP**


Project No. <b>CB018</b>	Figure Date <b>9/05</b>	Figure <b>1</b>
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**LEGEND**

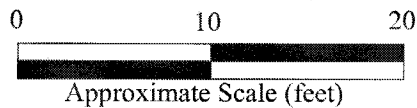
S1-S4  Soil Boring Location (12/2/98)

S5-S8  Soil Boring Location (11/16/05)

D1  Soil Sample Location (10/24/00)

TW-3  Temporary Well (10/24/00)

A — A'  Line of Cross Section



\*Note: Five attempts to bore S6 met refusal at 4-6' due to subsurface debris

**SITE MAP**

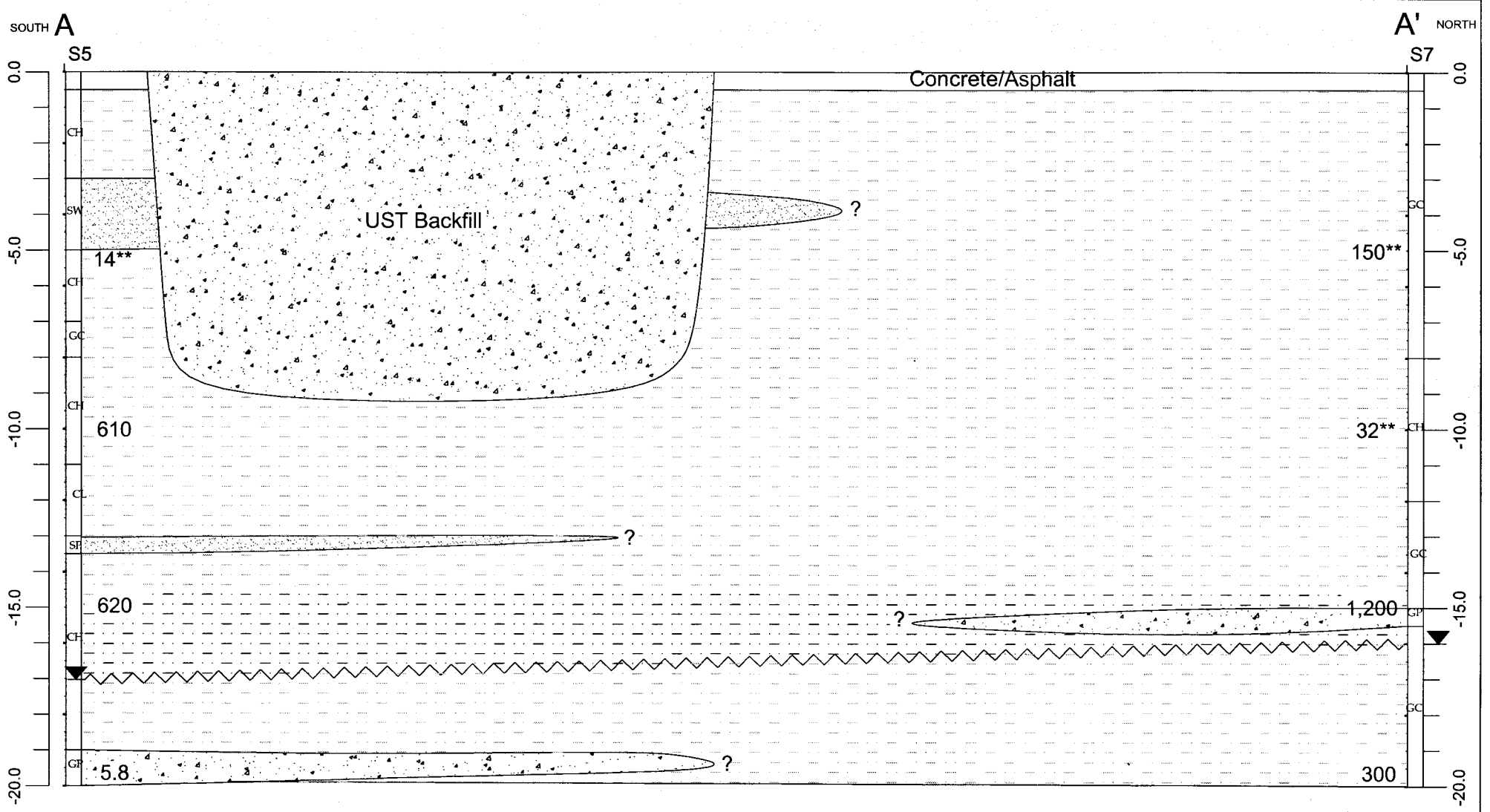
1125 Miller Avenue  
Oakland, California

**CLEARWATER GROUP**

Project No.  
CB018D

Figure Date  
12/05

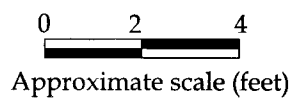
Figure  
2



**LEGEND**

- High Permeability: GW-GP
- Moderate Permeability: SW-SM-SP
- Low Permeability: GC-SC-ML-CH-CL
- First Encountered Water Level
- Water Table During Drilling
- 620** TPH-d concentration (mg/kg) per analytical results

Notes: -Ground Surface Elevations are approximated to be equal  
 -Boring Depth Tick Marks Indicate Depth From Ground Surface  
 (TPH-d) Total petroleum hydrocarbons as diesel reported in milligrams per kilogram  
 \*\*concentration reported is atypical for diesel, these hydrocarbons have a higher boiling point



**CROSS SECTION A-A'**  
 1125 Miller Avenue  
 Oakland, California

**CLEARWATER GROUP**

Project No. CB018D	Figure Date 1/06	Drawn By: JCG	Figure 3
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# TABLES

**TABLE 1**  
**SOIL SAMPLING ANALYTICAL RESULTS**  
 23rd Avenue Partners  
 1125 Miller Avenue  
 Oakland, CA  
 Clearwater Project No. CB018

Sample (#)	Sampling Date	TPHd (mg/Kg)	B (mg/Kg)	T (mg/Kg)	E (mg/Kg)	X (mg/Kg)	MTBE (mg/Kg)
TW2 -16.5	24-Oct-00	4,200	1.4	ND	ND	ND	ND
TW3-17	24-Oct-00	2,700	ND	ND	ND	ND	ND
D1-3	24-Oct-00	3,400	ND	ND	ND	ND	ND
D1-8	24-Oct-00	34	ND	ND	ND	ND	ND
S5-5	16-Nov-05	14**	<0.0050	<0.0050	<0.0050	<0.0050	****
S5-10	16-Nov-05	610	<0.0050	<0.0050	<0.0050	<0.0050	****
S5-15	16-Nov-05	620	<0.0050	<0.0050	<0.0050	<0.0050	****
S5-20	16-Nov-05	5.8	<0.0050	<0.0050	<0.0050	<0.0050	****
S7-5	16-Nov-05	150* <sup>1</sup>	<0.0050	<0.0050	<0.0050	<0.0050	****
S6-6	16-Nov-05	1800* <sup>1</sup>	NA* <sup>2</sup>	NA* <sup>2</sup>	NA* <sup>2</sup>	NA* <sup>2</sup>	****
S7-10	16-Nov-05	32* <sup>1</sup>	<0.0050	<0.0050	<0.0050	<0.0050	****
S7-15	16-Nov-05	1,200	<0.0050	<0.0050	<0.0050	<0.0050	****
S7-20	16-Nov-05	300	<0.0050	<0.0050	<0.0050	<0.0050	****
S8-4	16-Nov-05	92	<0.0050	<0.0050	<0.0050	<0.0050	****

**NOTES: SOIL SAMPLES**

TPHd	Total petroleum hydrocarbons as diesel using EPA Method 8015/8020(modified)
B	Benzene using EPA Method 8015/8020 (modified)
T	Toluene using EPA Method 8015/8020 (modified)
E	Ethyl benzene using EPA Method 8015/8020 (modified)
X	Xylenes using EPA Method 8015/8020 (modified)
MTBE	Methyl tertiary-butyl ether using EPA Method 8260
mg/Kg	Milligrams per kilogram (approximately equal to parts per million)
NA	Not analyzed
ND	Not detected/below laboratory reporting limits
TW3-17	Temporary well number and depth sampled
S5-5	Soil boring and depth sampled.
<0.0050	Not detected in concentrations exceeding the indicated laboratory reporting limit

\*<sup>1</sup> Concentration reported is atypical for diesel, these hydrocarbons have a higher boiling point

\*<sup>2</sup> Analysis not performed due to lack of sample volume.

\*\*\*\* Analysis of MTBE not required by ACHCS.

Analytical results reported in italics are from the December 31, 2001 *Subsurface Exploration Report* prepared by Environmental Bio-Systems.

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS**

23rd Avenue Partners  
1125 Miller Avenue  
Oakland, CA  
Clearwater Project No. CB018

Sample (#)	Sampling Date	TPHd (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
TW2	24-Oct-00	660	65	2.4	ND	3.2	ND
TW3	24-Oct-00	800	0.9	ND	ND	ND	ND
S5	16-Nov-05	890	<0.50	<0.50	<0.50	<0.50	NA

**NOTES:**

TPHd	Total petroleum hydrocarbons as diesel using EPA Method 8015/8020(modified)
B	Benzene using EPA Method 8020
T	Toluene using EPA Method 8020
E	Ethylene using EPA Method 8020
X	Xylenes using EPA Method 8020
MTBE	Methyl tertiary-butyl ether using EPA Method 8260
µg/L	Micrograms per liter (approximately equal to parts per billion: ppb)
NA	Not analyzed
ND	Not detected or below laboratory reporting limits
<###	Not detected in concentrations exceeding the indicated laboratory reporting limit

Analytical results reported in italics are from the December 31, 2001 *Subsurface Exploration Report* prepared by Environmental Bio-Systems.

# ATTACHMENT A

**Jessica Chiaro**

**From:** wells@acpwa.org  
**Sent:** Friday, October 28, 2005 2:57 PM  
**To:** jmoreno@clearwatergroup.com  
**Subject:** Alameda County PWA Permits Application Confirmation

Thank you for your Permit Application.  
 Your Application Confirmation Id is: 1130536639714  
 Submit Date is: Fri Oct 28 14:57:19 PDT 2005  
 Project Site City/Location: Oakland / 1125 Miller Avenue, Oakland, CA 94601  
 Project Start Date: 11/16/2005 Completion Date: 11/16/2005

NOTE: This only confirms receipt of the application, this is NOT an approved Permit.  
 REMINDER: We must receive a site map from you or your permit will not be approved.  
*If you have already submitted your site map and required documents, please disregard the reminder.  
 You will be notified separately once the receipt of your map is logged.*

If any required documents are missing, you will be contacted by the Water Resources Unit.

To view your application status, go to the Tracking page.  
 \*\*If above 'Tracking' link does not work for you, copy and paste this url directly to browser:  
[https://acweb.acgov.org/pwapermitscomm\\_app/TrackAppServlet?](https://acweb.acgov.org/pwapermitscomm_app/TrackAppServlet?email=jmoreno@clearwatergroup.com&appid=1130536639714)  
[email=jmoreno@clearwatergroup.com&appid=1130536639714](mailto:jmoreno@clearwatergroup.com&appid=1130536639714)

If you need further assistance regarding your permit, please visit our website at: <http://www.acgov.org/pwa/wells/> or contact us at wells@acpwa.org, and include your application id number.

Thank you,  
 Public Works Agency - Water Resources

Your Application:

**Project Information**

**City of Project Site:** Oakland **Site Location:** 1125 Miller Avenue, Oakland, CA 94601  
**Start Date:** 11/16/2005 **Completion Date:** 11/16/2005

**Applicant Information**

**Business / Name:** Clearwater Group - Jessica Moreno **Phone Number:** 510-590-1096  
**Address:** 229 Tewksbury Avenue  
 Pt Richmond, CA 94801

**Work Applying for Permit**

Work Type	Driller	# of Wells	Fees	Cost
Borehole(s) for Investigation-Contamination Study	Fast-Tek Engineering - Lic# 624461	4	\$ 200.00 per site	\$ 200.00
			<b>Application Total:</b>	<b>\$ 200.00</b>

2/16/2006



# 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: 10/28/2005 By jamesy**  
**Permits Issued: W2005-1049**

**Receipt Number: WR2005-2167**  
**Permits Valid from 11/16/2005 to 11/16/2005**

**Application Id:** 1130536639714  
**Site Location:** 1125 Miller Avenue, Oakland, CA 94601  
**Project Start Date:** 11/16/2005

**City of Project Site:** Oakland

**Completion Date:** 11/16/2005

**Applicant:** Clearwater Group - Jessica Moreno  
229 Tewksbury Avenue, Pt Richmond, CA 94801  
**Property Owner:** Al Pelton, 23rd Avenue Partners  
PO Box 7509, Oakland, CA 94601  
**Client:** \*\* same as Property Owner \*\*

**Phone:** 510-590-1096

**Phone:** 510-533-3982

**Total Due:** \$200.00  
**Total Amount Paid:** \$200.00  
**Paid By:** CHECK **PAID IN FULL**

## Works Requesting Permits:

Borehole(s) for Investigation-Contamination Study - 4 Boreholes  
Driller: Fast-Tek Engineering - Lic #: 624461 - Method: other

**Work Total: \$200.00**

### Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2005-1049	10/28/2005	02/14/2006	4	2.00 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. Applicant shall contact James Yoo for an inspection time at 510-670-6633 at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
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.
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

# Alameda County Public Works Agency - Water Resources Well Permit

Inspector does not have to be present for grout inspection.

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# PROGRAMS AND SERVICES

## Well Standards Program

The Alameda County Public Works Agency, Water Resources is located at:

399 Elmhurst Street

Hayward, CA 94544

For Driving Directions or General Info, Please Contact 510-670-5480 or wells@acpwa.org

For Drilling Permit information and process contact James Yoo at

Phone: 510-670-6633

FAX: 510-782-1939

Email: Jamesy@acpwa.org

Alameda County Public Works is the administering agency of General Ordinance Code, Chapter 6.88. The purpose of this chapter is to provide for the regulation of groundwater wells and exploratory holes as required by California Water Code. The provisions of these laws are administered and enforced by Alameda County Public Works Agency through its Well Standards Program.

**Drilling Permit Jurisdictions in Alameda County:** There are four jurisdictions in Alameda County.

Location:	Agency with Jurisdiction	Contact Number
Berkeley	City of Berkeley	Ph: 510-981-7460 Fax: 510-540-5672
Fremont, Newark, Union City	Alameda County Water District	Ph: 510-668-4460 Fax: 510-651-1760
Pleasanton, Dublin, Livermore, Sunol	Zone 7 Water Agency	Ph: 925-454-5000 Fax: 510-454-5728

The Alameda County Public Works Agency, Water Resources has the responsibility and authority to issue drilling permits and to enforce the County Water Well Ordinance 73-68. This jurisdiction covers the western Alameda County area of **Oakland, Alameda, Piedmont, Emeryville, Albany, San Leandro, San Lorenzo, Castro Valley, and Hayward**. The purpose of the drilling permits are to ensure that any new well or the destruction of wells, including geotechnical investigations and environmental sampling within the above jurisdiction and within Alameda County will not cause pollution or contamination of ground water or otherwise jeopardize the health, safety or welfare of the people of Alameda County.

**Permits** are required for all work pertaining to wells and exploratory holes at any depth within the jurisdiction of the Well Standards Program. A completed permit application (30 Kb)\*, along with a site map, should be submitted at least **ten (10) working days** prior to the **planned start of work**. Submittals should be sent to the address or fax number provided on the application form. When submitting an application via fax, please use a high resolution scan to retain legibility.

Complete Permit Application Check List (24 Kb)\*

### **Fees**

**Beginning April 11, 2005**, the following fees shall apply:

A permit to construct, rehabilitate, or destroy wells, including cathodic protection wells, but excluding dewatering wells, shall cost \$300.00 per well.

A permit to bore exploratory holes, including temporary test wells, shall cost \$200 per site. A site includes the project parcel as well as any adjoining parcels.

Please make checks payable to: **Treasurer, County of Alameda**

**Permit Fees are exempt to State & Federal Projects**

Applicants shall submit a letter from the agency requesting the fee exemption.

**Scheduling Work/Inspections:**

Alameda County Public Works Agency (ACPWA), Water Resources Section requires scheduling and inspection of permitted work. All drilling activities must be scheduled in advance. Availability of inspections will vary from week to week and will come on a first come, first served bases. To ensure inspection availability on your desired or driller scheduled date, the following procedures are required:

Please contact **George Bolton** at **510-670-5594** to schedule the inspection date and time (You must have drilling permit approved prior to scheduling).

Schedule the work as far in advance as possible (at least 5 days in advance); and confirm the scheduled drilling date(s) at least 24 hours prior to drilling.

Once the work has been scheduled, an ACPWA Inspector will coordinate the inspection requirements as well as how the Inspector can be reached if they are not at the site when inspection is required. Expect for special circumstances given, all work will require the inspection to be conducted during the working hours of 8:30am to 2:30pm., Monday to Friday, excluding holidays.

**Request for Permit Extension:**

Permits are only valid from the start date to the completion date as stated on the drilling permit application and Conditions of Approval. To request an extension of a drilling permit application, applicants must request in writing prior to the completion date as set forth in the Conditions of Approval of the drilling permit application. Please send fax or email to Water Resources Section, Fax 510-782-1939 or email at wells@acpwa.org. There are no additional fees for permit extensions or for re-scheduling inspection dates. You may not extend your drilling permit dates beyond 90 days from the approval date of the permit application. **NO refunds** shall be given back after 90 days and the permit shall be deemed voided.

**Cancel a Drilling Permit:**

Applicants may cancel a drilling permit only in writing by mail, fax or email to Water Resources Section, Fax 510-782-1939 or email at wells@acpwa.org. If you do not cancel your drilling permit application before the drilling completion date or notify in writing within 90 days, Alameda County Public Works Agency, Water Resources Section may void the permit and No refunds may be given back.

**Refunds/Service Charge:**

A service charge of \$25.00 dollars for the first check returned and \$35.00 dollars for each subsequent check returned.

Applicants who cancel a drilling permit application **before** we issue the approved permit(s), will receive a **FULL** refund (at any amount) and will be mailed back within two weeks.

Applicants who cancel a drilling permit application **after** a permit has been issued will then be charged a service fee of \$50.00 (fifty Dollars). To collect the remaining funds will be determined by the amount of the refund to be refunded (see process below).

Board of Supervisors Minute Order, File No. 9763, dated January 9, 1996, gives blanket authority to the Auditor-Controller to process claims, from all County departments for the refund of fees which do not exceed \$500 (Five Hundred Dollars)(with the exception of the County Clerk whose limit is \$1,500).

Refunds over the amounts must be authorized by the Board of Supervisors Minute Order, File No. 9763 require specific approval by the Board of Supervisors.

The forms to request for refunds under \$500.00 (Five Hundred Dollars) are available at this office or any County Offices.

If the amount is exceeded, a Board letter and Minute Order must accompany the claim. Applicant shall fill out the request form and the County Fiscal department will process the request.

## **Enforcement**

**Penalty.** Any person who does any work for which a permit is required by this chapter and who fails to obtain a permit shall be guilty of a misdemeanor punishable by fine not exceeding Five Hundred Dollars (\$500.00) or by imprisonment not exceeding six months, or by both such fine and imprisonment, and such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any such violation is committed, continued, or permitted, and shall be subject to the same punishment as for the original offense. (Prior gen. code §3-160.6)

**Enforcement actions will be determined by this office on a case-by-case basis**

Drilling without a permit shall be the cost of the permit(s) and a fine of \$500.00 (Five Hundred Dollars).

**Well Completion Reports** (State DWR-188 forms) must be filed with the Well Standards Program within 60 days of completing work. Staff will review the report, assign a state well number, and then forward it to the California Department of Water Resources (DWR). Drillers should not send completed reports to DWR directly. Failure to file a Well Completion Report or deliberate falsification of the information is a misdemeanor; it is also grounds for disciplinary action by the Contractors' State License Board. Also note that filed Well Completion Reports are considered private record protected by state law and can only be released to the well owner or those specifically authorized by government agencies. Links to pertinent forms are provided below.

Well Completion Report Form\*

Well Owner's Request Form for Previously Filed Forms (41Kb)\*

Government Authorization Form for the Release of Forms (46 Kb)\*

Site Hazard Information Form (51 Kb)\*

\* Adobe PDF Reader is Required.

# ATTACHMENT B

# CLEARWATER GROUP SITE SAFETY PLAN

CLIENT: Mr. Allen Pelton (23<sup>RD</sup> Avenue Partners) CLIENT No: 0675

CITY: Oakland, CA Job No: CB018D

ADDRESS: 1125 Miller Ave

CLIENT CONTACT No: 510-533-6600

ON-SITE MANAGER: \_\_\_\_\_ CONTACT No: \_\_\_\_\_ Fax No. \_\_\_\_\_

### SCOPE OF WORK (Check all that apply):

- Soil Stockpile Sampling (S).....
- Monitoring Well Sampling.(M).....
- Soil Boring Installation (MW) .....
- System Operation and Maintenance (O&M).....

FIELD DATE(S):

TYPE OF WORK

SSO

<u>11/16/05</u>	S	M	<u>MW</u>	O&M	<u>Jeremy Gekow</u>
<u>11/16/05</u>	S	M	<u>MW</u>	O&M	<u>Eric V. Austin</u>
_____	S	M	MW	O&M	_____
_____	S	M	MW	O&M	_____
_____	S	M	MW	O&M	_____
_____	S	M	MW	O&M	_____
_____	S	M	MW	O&M	_____
_____	S	M	MW	O&M	_____
_____	S	M	MW	O&M	_____

*Eric V. Austin*  
FAST-TEK.

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### FIGURES

Figure 1: Site Location Map

Figure 2: Site Plan

### ATTACHMENT

Attachment 1: Hospital Location Map and Driving Directions

Attachment 2: Incident/Accident Report Form



## 1.0 PURPOSE

This Site Safety Plan (SSP) establishes the basic safety guidelines and requirements for the above scope(s) of work at the above site (see Site Location Map - Figure 1). This SSP addresses the expected potential hazards that may be encountered during this project.

The provisions set-forth in this SSP will apply to Clearwater Group, Inc. (CGI) employees and any subcontractors working for CGI at the job site. All personnel working for CGI, including subcontractors, at the job site must read this SSP, and sign the attached Compliance Agreement, Section 11.0 on Page 15, before entering the work area.

## 2.0 FACILITY BACKGROUND

### 2.1 Site Layout and History (Site vicinity - Fig. 1, site plan - Fig. 2)

Previous Site Operations: Tank Removal From: 12/98 To: 12/98  
Well Install From: \_\_\_\_\_ To: \_\_\_\_\_  
Boreholes From: \_\_\_\_\_ To: \_\_\_\_\_

Is site currently active?  Yes  No

Work surface is:  Asphalt  Concrete  Gravel/Dirt

ASTs/USTs present?:  Yes  No Location: \_\_\_\_\_

Number of USTs removed: 2 Location: see Figure 2 Date removed: 12/98

### 2.2 Soil Contamination

Maximum TPHd concentration in soil: 1,800 mg/kg Location: Sample S2

Maximum TPHg concentration in soil: \_\_\_\_\_ Location: \_\_\_\_\_

Maximum MTBE concentration in soil: \_\_\_\_\_ Location: \_\_\_\_\_

Maximum Xylene concentration in soil: 0.51 mg/kg Location: Sample S2

### 2.3 Ground Water Wells and Contamination

Number of active monitoring wells at the site: 0

Maximum TPHg concentration in groundwater to date: \_\_\_\_\_ Location: \_\_\_\_\_

Maximum MTBE concentration in groundwater to date: \_\_\_\_\_ Location: \_\_\_\_\_

Maximum Benzene concentration in groundwater to date: \_\_\_\_\_ Location: \_\_\_\_\_

### 2.4 Remediation

Previous remedial system operation: \_\_\_\_\_ From \_\_\_\_\_ To: \_\_\_\_\_

Active remediation: \_\_\_\_\_

Number of SVE wells: \_\_\_\_\_ AS wells: \_\_\_\_\_ GWE wells: \_\_\_\_\_

Other (trenches, sumps,...): \_\_\_\_\_  
Remediation equipment on site: \_\_\_\_\_  
\_\_\_\_\_

### 3.0 JOB HAZARD ANALYSIS

#### 3.1 Chemical Hazards

The contaminants expected to be encountered on-site are diesel and gasoline and their hydrocarbon constituents. The potential levels of exposure are not expected to reach the permissible exposure limits (PEL) or the threshold limit values (TLV). The potential exposure pathways are inhalation and skin contact. Protective clothing specified in this Plan will be mandatory for field personnel. In addition, respirators should be within easy reach in case odors reach irritating levels or irritation of the respiratory tract occurs.

The anticipated contaminants of concern are described briefly below. Information regarding the physical characteristics, incompatibilities, toxic effects, routes of entry, and target organs has been summarized from the NIOSH Pocket Guide to Chemical Hazards (February 2004).

BENZENE: Benzene is colorless, aromatic liquid that may create an explosion hazard. It is incompatible with strong oxidizers, chlorine, and bromine with iron. Benzene is irritating to the eyes, nose, and respiratory system. Prolonged exposure may result in giddiness, headache, nausea, staggering gait, fatigue, bone marrow depression, or abdominal pain. Routes of entry include inhalation, absorption, ingestion, and skin or eye contact. Its targets are blood, the central nervous system, skin, bone marrow, eyes, and respiratory system. Benzene is carcinogenic.

TOLUENE: Toluene is a colorless, aromatic liquid that may create an explosion hazard. It is incompatible with strong oxidizers. Prolonged exposure may result in fatigue, confusion, euphoria, dizziness, headache, dilation of pupils, eye tearing, insomnia, dermatitis, or photophobia. Routes of entry are inhalation, absorption, ingestion, and skin or eye contact. The target organs are the central nervous system, liver, kidneys, and skin.

ETHYLBENZENE: Ethylbenzene is a colorless aromatic liquid that may create an explosion hazard. It is incompatible with strong oxidizers and irritates the eyes and mucous membranes. Prolonged exposure may result in headache, dermatitis, narcosis, or coma. Routes of entry include inhalation, ingestion, and skin or eye contact. The target organs are the eyes, upper respiratory system, skin, and the central nervous system.

XYLENES: Xylenes are a colorless, aromatic liquid that may create an explosion hazard. It is incompatible with strong oxidizers and irritates the eyes, nose, and throat. Prolonged exposure may result in dizziness, excitement, drowsiness, staggering gait, corneal vacuolization, vomiting, abdominal pain, or dermatitis. Routes of entry are inhalation,

absorption, ingestion, and skin or eye contact. Its targets are the central nervous system, eyes, gastrointestinal tract, blood, liver, kidneys, and skin.

### 3.1.1 Permissible exposure limits

The following are time weighted average exposure limits (TWAs) based upon that exposure incurred in an average 8-hour day. The numbers referenced below were taken from "The Hazardous Chemical Desk Reference", 5<sup>th</sup> edition by Richard J. Lewis Sr. (2002).

- TPHd: none listed 8-hour max for 24 hours
- TPHg: 300-ppm 8 hour max for 24 hours
- benzene: 10-ppm 8-hour max for 24 hours
- toluene: 200-ppm 8-hour max for 24 hours
- ethylbenzene:100-ppm 8-hour max for 24 hours
- xylems: 100-ppm 8-hour max for 24 hours

The use of respiratory protection is required once these thresholds have been reached.

### 3.1.2 Exposure Controls

Field personnel shall be cautioned to inform each other of non-visual effects of the presence of toxins described above. The controls to limit potential for exposure to chemical hazards are addressed below:

- o **Inhalation** of contaminants will be controlled by continuous air monitoring of breathing zones with the use of a photo ionization detector (PID). The use of a half face respirator equipped with organic vapor cartridges is required if/when PID level exceeds 300ppm. Engineering controls such as high volume air moving fans and mixing equipment can be used to minimize exposure.
- o **Ingestion** of contaminants will be controlled by prohibiting eating, drinking, smoking, and chewing gum/tobacco or other foreign body while working. In addition, workers shall wash their hands and face before engaging in any of the activities performed in the work zone (see Section 3.2) and listed on page 1.
- o **Absorption** of contaminants will be controlled by wearing protective clothing such as shirts with long sleeves, long legged trousers, gloves, steel-toed boots, hard hats, and tyvek coveralls when deemed necessary.
- o **Injection** of contaminants will be controlled for skin protection by wearing heavy work or latex gloves and when required tyvek coveralls in the work area.

## **3.2 Physical Hazards**

The potential physical hazards expected at the job site are addressed below:

- o The potential for physical injury exists from the **operation of moving equipment** such as drill rigs, forklifts and trucks. Moving equipment may cause injury by crushing, falling objects, hurtling objects, penetration of subsurface utilities or structures. Use of steel toe boots, hard hats, and safety glasses will be required when in the work area. The work area perimeter shall be explicitly defined with the use of cones/barricades (15 feet radius from borehole/work area) and caution tape/work area signage. The perimeter will be moved along with the work area and only authorized personnel will be allowed within the work perimeter. Backup alarms are required on all trucks and forklifts. No person other than the equipment operator shall approach within 5-feet of equipment at any time.
- o The potential for physical injury exists from **public traffic** on the site. The project location is open to public vehicles. Work will be performed in the public right-of-way. However, the public will be prohibited from entering designated work areas by establishing and monitoring the work area perimeter.
- o The potential for **burns from hot surfaces** may exist from the operation of an internal combustion engine. Exhaust air piping will burn exposed flesh. All hot surfaces shall be allowed to cool and/or be handled with thick cloth work gloves.
- o Personnel should be cognizant of the fact that when protective equipment such as respirators, gloves, and/or protective clothing is worn, **visibility**, hearing, and manual dexterity are impaired. With a "two-deep" work team, each member is responsible for the awareness/safety of the other team member(s).

### 3.3 Heat Stress:

The potential for heat stress is present if the temperature exceeds **80°F**, **clothing prevents sweat from evaporating**, and **shade is not available**. Some signs and symptoms of heat stress are presented below:

- Heat rash may result from continuous exposure to heat or humid air.
- Heat cramps are caused by heavy sweating with inadequate electrolyte replacement. Signs and symptoms include: muscle spasms, heavy sweating, dizziness, nausea and fainting.
- Heat exhaustion occurs from increased stress on various body organs including inadequate blood circulation due to cardiovascular insufficiency or dehydration. Signs and symptoms include: pale, cool, moist skin; heavy sweating; dizziness; nausea and fainting.
- Heat stroke is the most serious form of heat stress. Temperature regulation fails and the body temperature rises to critical levels. Immediate action must be taken to cool the body before serious injury and death occurs. Competent medical help must be obtained. Signs and symptoms are: red, hot, unusually dry skin; lack of or reduced perspiration; nausea; dizziness and confusion; strong, rapid pulse and coma.

### 3.3.1 Heat Stress Monitoring

All personnel (including subcontractors) working for CGI at the job site shall be monitored for heat stress. Because workers at the job site are expected to be wearing permeable clothing (e.g. standard cotton or synthetic work clothes), monitoring for heat stress will consist of personnel constantly observing each other for any of the heat stress symptoms discussed above. The on-site Safety Officer shall mandate work slowdowns as needed.

### 3.3.2 Heat Stress Prevention

Heat stress can be avoided by taking the following precautionary measures:

- Adequate liquid intake
- Cooling by water misting
- Shade
- Work early and/or late in the day

### **3.4 Fire Hazards:**

The potential for fire or explosion exists whenever flammable liquids or vapors are present above lower explosions limit (LEL) concentrations and sufficient oxygen is present to support combustion. These potential fire hazards are addressed below:

- The potential exists for petroleum hydrocarbon vapors to exceed LEL concentrations within the wells with the lid bolted tightly. When removing the lid stand back so vapors escaping prior to initiating groundwater elevation measuring and sampling. However, groundwater monitoring well gas generally does not contain sufficient oxygen to support combustion.
- In addition to the above, an operative fire extinguisher will be provided by CGI in each vehicle at the site. All personnel shall be familiar with its location and use.

In the event of a fire or explosion, call 911 to summon the local fire department. Be prepared to give the following information: location, nature, and identification of any hazardous materials on site.

If it is safe to do so, site personnel may:

- Use fire fighting equipment available on site to control or extinguish the fire
- Remove or isolate flammable or other hazardous materials which may contribute to the fire

Otherwise, immediate evacuation of the area is indicated. In the event of an explosion, all personnel shall be evacuated and the fire department notified. No one shall re-enter the area until it has been cleared by explosives safety personnel.

### **3.5 Electrical Hazards:**

No electrical enclosures will be opened unless power is disconnected. Power will be verified disconnected with a meter prior to working on any circuits.

### **3.6 Biological Hazards**

The potential for biological hazards such as insect and/or animal bites and exposure to poisonous plants are more prevalent in rural areas. Personnel shall use caution when entering areas that may shelter indigenous creatures such as snakes, spiders, ticks and/or rodents. Proper precautions shall be taken against exposure to poisonous plants like poison oak by wearing protective clothing and washing exposed skin areas with Tecnu™.

## **4.0 EMERGENCY RESPONSE PROCEDURES**

The Site Manager, with assistance from the SSO, has responsibility and authority for coordinating all emergency response activities until proper authorities arrive and assume control.

### **4.1 Emergency Medical Procedures**

For severe injuries, illnesses, or overexposure:

- Remove the injured or exposed person(s) from immediate danger
- If possible, at least partial decontamination should be completed. Wash, rinse, and/or cut off protective clothing and equipment and redress the victim in clean coveralls.
- If decontamination cannot be done, wrap the victim in blankets or plastic sheeting to reduce contamination of other personnel.
- Render emergency first aid and call an ambulance for transport to the local hospital immediately.
- Evacuate other personnel on site to a safe place until the SSO determines that it is safe to resume work.

For minor injuries or illnesses:

- Complete a full decontamination.
- Administer first aid. Minor injuries may be treated on site, but trained medical personnel will examine all injuries. Victims of serious bites or stings will be taken to a medical center.
- Notify the PM and SSO immediately.

For Field Staff by self:

- Verbally call for help.
- If possible, render emergency first aid and call an ambulance for transport to the local hospital immediately if injury is severe.
- Notify the PM and SSO immediately.

### **4.2 First Aid – Chemical Injury**

If the injury to the worker is chemical in nature (e.g. overexposure), the following first aid procedures are to be initialized as soon as possible:

**Eye Exposure** If contaminated solid or liquid gets into the eyes, wash eyes immediately with sterile saline solution, lifting the lower and upper lids occasionally. Continue eye wash for 15 minutes. Cover the eye with a dry pad and obtain medical attention immediately.

**Skin Exposure** If contaminated solid or liquid gets on the skin, promptly wash contaminated skin for 15 minutes using soap or mild detergent and water. If solids or liquids penetrate the clothing, remove the clothing immediately and wash the skin using soap or mild detergent and water. Obtain medical attention immediately if symptoms warrant.

#### **4.3 First Aid – Physical Injury**

**Animal Bites** Thoroughly wash the wound with soap and water. Flush the area with running water and apply a sterile dressing. Immobilize affected part until a physician has attended the victim. See that the animal is kept alive and in quarantine. Obtain name and address of the owner of the animal.

**Burns (minor)** Do not Vaseline or grease of any kind. Apply cold water until pain subsides. Cover with a wet sterile gauze dressing. Do not break blisters or remove tissues. Seek medical attention.

**Burns (severe)** Do not remove adhered particles of clothing. Do not apply ice or immerse in cold water. Do not apply ointment, grease or Vaseline. Cover burns with thick sterile dressings. Keep burned feet or legs elevated. Seek medical attention immediately.

**Cuts** Apply pressure with sterile gauze dressing and elevate the area until bleeding stops. Apply a bandage and seek medical attention.

**Eyes** Keep the victim from rubbing the eye. Flush the eye with water. If flushing fails to remove the object, apply a dry, protective dressing and consult a physician.

**Fainting** Keep the victim lying down with feet elevated. Loosen tight clothing. If victim vomits, roll him/her onto his/her side or turn his/her head to the side. If necessary wipe out his/her mouth. Maintain an open airway. Bathe his face gently with cool water. Unless recovery is prompt, seek medical attention.

**Fracture** Deformity of an injured part usually means a fracture. If fracture is suspected, splint the part as it lies. Do not attempt to move the injured part of the person. Seek medical attention immediately.

Snake Bites	Submerge the bite area in ice water or cover the bite area with ice. Keep bite area as low as possible. Transport the victim immediately to a medical facility.
Insect Bites	Remove "stinger" if present. Keep affected part down below the level of the heart. Apply ice bag. For minor bites and stings apply soothing lotions, such as calamine.
Puncture Wounds	If puncture wound is deeper than skin surface, seek medical attention. Serious infection can arise unless proper treatment is received.
Sprains	Elevate injured part and apply ice bag or cold packs. Do not soak in hot water. If pain and swelling persist, seek medical attention.
Unconsciousness	Do not attempt to give any fluid or solid by mouth. Keep victim flat maintain an open airway. If victim is not breathing, provide artificial respiration by mouth-to-mouth breathing and call for an ambulance immediately.

## 5.0 PERSONAL PROTECTIVE EQUIPMENT

Level D personal protection equipment is expected to be the highest protective level required completing the field activities for this project. Modified Level C protection will be in site vehicles and may also be required at the discretion of the Site Safety Officer. The following lists summarize the personal protective equipment that shall be available to all field personnel working in the work area:

### Level D Protection (shall be worn at all times)

- Boots, steel toe
- Safety glasses
- Chemical splash goggles or face shield for Geoprobe rig operator
- Hardhat
- Latex gloves required when handling samples
- Long leg trousers
- Long sleeves required optional

### Modified Level C Protection (available at all times.)

- Hearing protection



## 6.0 TRAINING REQUIREMENTS

All site personnel will be required to have completed the 40 hours of basic OSHA-SARA training for personnel assigned to hazardous waste sites in compliance with OSHA Standard 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response, and all are required to participate in the annual OSHA-SARA 8-hour refresher courses.

## 7.0 MEDICAL SURVEILLANCE PROGRAM

CGI personnel engaged in field operations shall be participants in their company Medical Surveillance program consisting of a preliminary physical followed by annual physicals, and must be cleared by the examining physician(s) to wear respiratory protection devices and protective clothing for working with hazardous materials. Respiratory fit testing for CGI personnel shall be completed every six months. Respirators shall be supplied to CGI employees as needed. The applicable requirements under California Administrative Code (CAC) Title 8, Section 5216, which is available at the CGI office for review, shall be observed.

## 8.0. EMERGENCY RESPONSE PLAN

In the event of an accident resulting in physical injury, first aid (limited by vehicle kit and knowledge base of employees) will be administered and the most able-bodied and immediately available person will transport the injured worker to the nearest hospital emergency room:

Alameda Hospital: Emergency Room

2070 Clinton Ave, Alameda, CA  
510-523-4357

In the event of a fire or explosion, local fire or response agencies will be called by dialing 9-1-1. The Project Manager shall also be notified. The Project Manager in turn will notify the CGI CEO.

### Emergency Telephone Numbers:

Fire and Police.....911  
Hospital..... (510) 523-4357.....

Directions to Hospital: See Figure 3

**Head South from Miller Avenue**

**Turn Right at E 11<sup>th</sup> St.**

**Turn Left at 23<sup>rd</sup> Ave.**

**Bear Right at 29<sup>th</sup> Ave.**

**Continue on Park St**

**Turn Right at Clinton Ave.**

**Arrive at 2070 Clinton Ave.**

A fire extinguisher will be located within company vehicle while on-site during all installation, testing and servicing activities.

Additional Contingency Telephone Numbers:

**CLEARWATER.....Olivia Jacobs.....(510) 307-9943 ext 223.....(cell)..(510) 590-1099**

**Project Manager.....Jessica Moreno.....(510) 590-1096**

**Sharon Hardin.....(510) 307-9943 ext 221**

All cases where an accident has occurred will require filling out an incident / accident report and submitting immediately up to within 48 hours of the accident. Incident /accident forms (**Attachment 2**) are maintained in each company vehicle.

**9.0 KEY SAFETY PERSONNEL AND RESPONSIBILITIES**

All personnel working for CGI at the job site are responsible for project safety. Specific individual responsibilities are listed below:

**Project Manager: Jessica Moreno**

The Project Manager is responsible for preparation of this SSP. He/she has the authority to provide for the auditing of compliance with the provisions of this SSP, suspend or modify work practices, and to report to Olivia Jacobs CEO any individuals whose conduct does not meet the provisions presented in this SSP. The Project Manager can be reached at (510) 307-9943 ext 232.

**Site Safety Officer: \_\_\_\_\_**

**Date: \_\_\_\_\_**

**Site Safety Officer: \_\_\_\_\_**

**Date: \_\_\_\_\_**

**Site Safety Officer: \_\_\_\_\_**

**Date: \_\_\_\_\_**

**Site Safety Officer: \_\_\_\_\_**

**Date: \_\_\_\_\_**

**Site Safety Officer: \_\_\_\_\_**

**Date: \_\_\_\_\_**

**Site Safety Officer: \_\_\_\_\_**

**Date: \_\_\_\_\_**

The Site Safety Officer (SSO) is responsible for the dissemination of the information contained in this SSP to all CGI personnel working at the job site, and to the responsible representative(s) of each subcontractor firm working for CGI at the job site. Please note that when the Field Technician by default becomes own SSO when by self.

The SSO is responsible for ensuring the following items are adequately addressed and documenting when these items have been addressed:

- Inspection of tools, drilling equipment and safety equipment
- Safety supplies & equipment inventory
- Site-specific training/hazard communication
- Accident/incident reporting
- Decontamination/contamination reduction procedures

The Site Safety Officer shall be responsible to take necessary steps to ensure that employees are protected from physical hazards, which could include;

- Falling objects such as tools or equipment
- Fall from elevations
- Tripping over hoses, pipes, tools, or equipment
- Slipping on wet or oily surfaces
- Insufficient or faulty protective equipment
- Insufficient or faulty operations, equipment, or tools
- Noise
- Mobile objects such as spinning augers that may have become dislodged.

The SSO has the authority to suspend work anytime he/she determines the safety provisions set-forth in this SSP are inadequate to ensure worker safety. **The SSO or Project Manager must be present during all phases of the site work.**

## 10.0 DOCUMENTATION

All personnel shall sign the compliance agreement (Section 11.0).

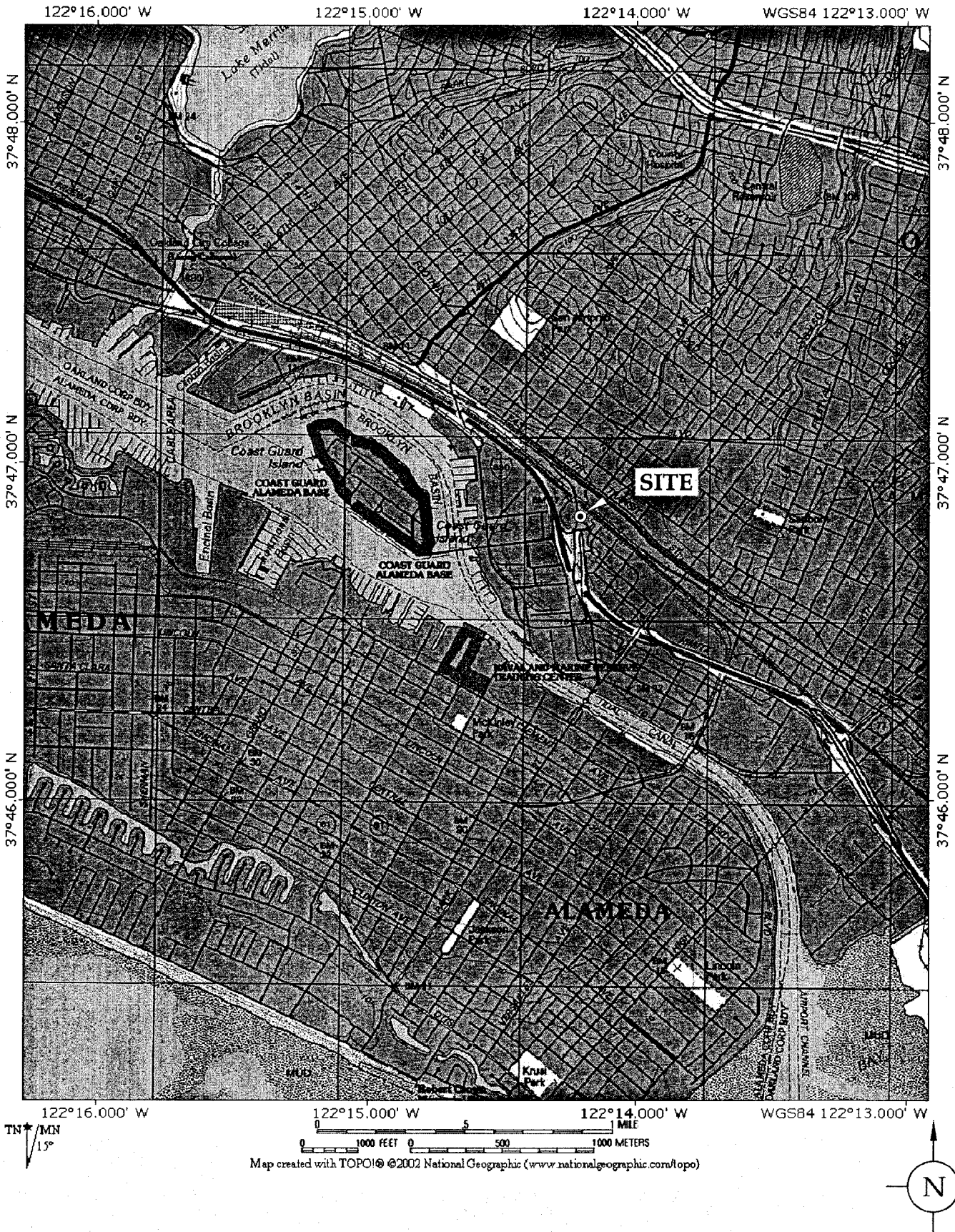
A daily log, completed by the Site Safety Officer in his/her field notebook, shall provide daily documentation. The Site Safety Officer shall record the names of all personnel working for Clearwater Group and any site visitor(s). (S) he shall also record accidents, illness and other safety related matters. In the case of an accident, or injury, during field operations, (s)he will prepare and submit an Incident/Accident Report (**Attachment 1**).

SSP prepared by: Jeremy Gekov Date: 10/07/2005

SSP Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



## FIGURES



**Site Vicinity Map**

1125 Miller Avenue  
Oakland, California

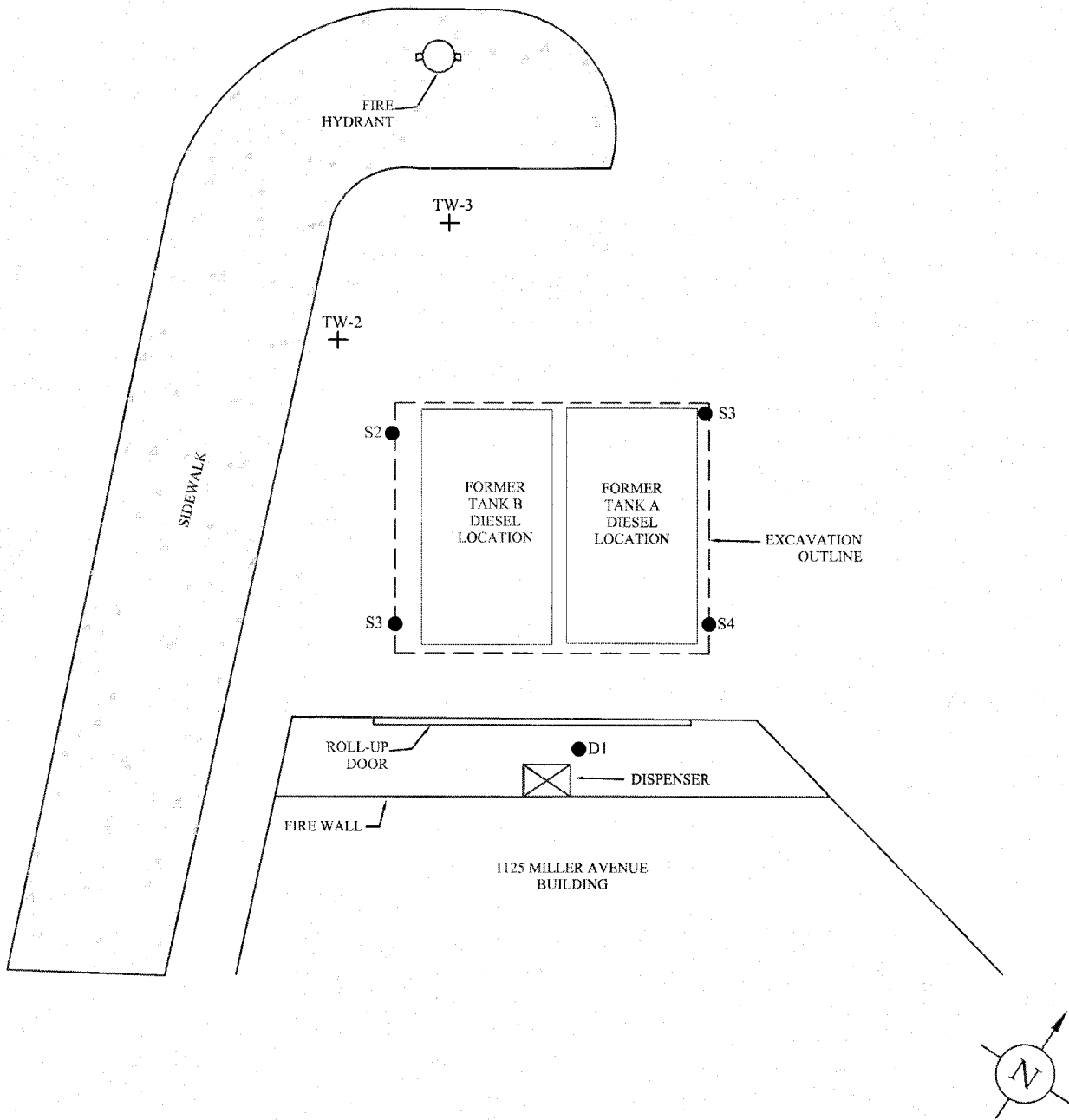
**CLEARWATER GROUP**

Project No.  
**CB018**

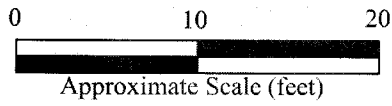
Figure Date  
**9/05**

Figure  
**1**

# ATTACHMENT 1

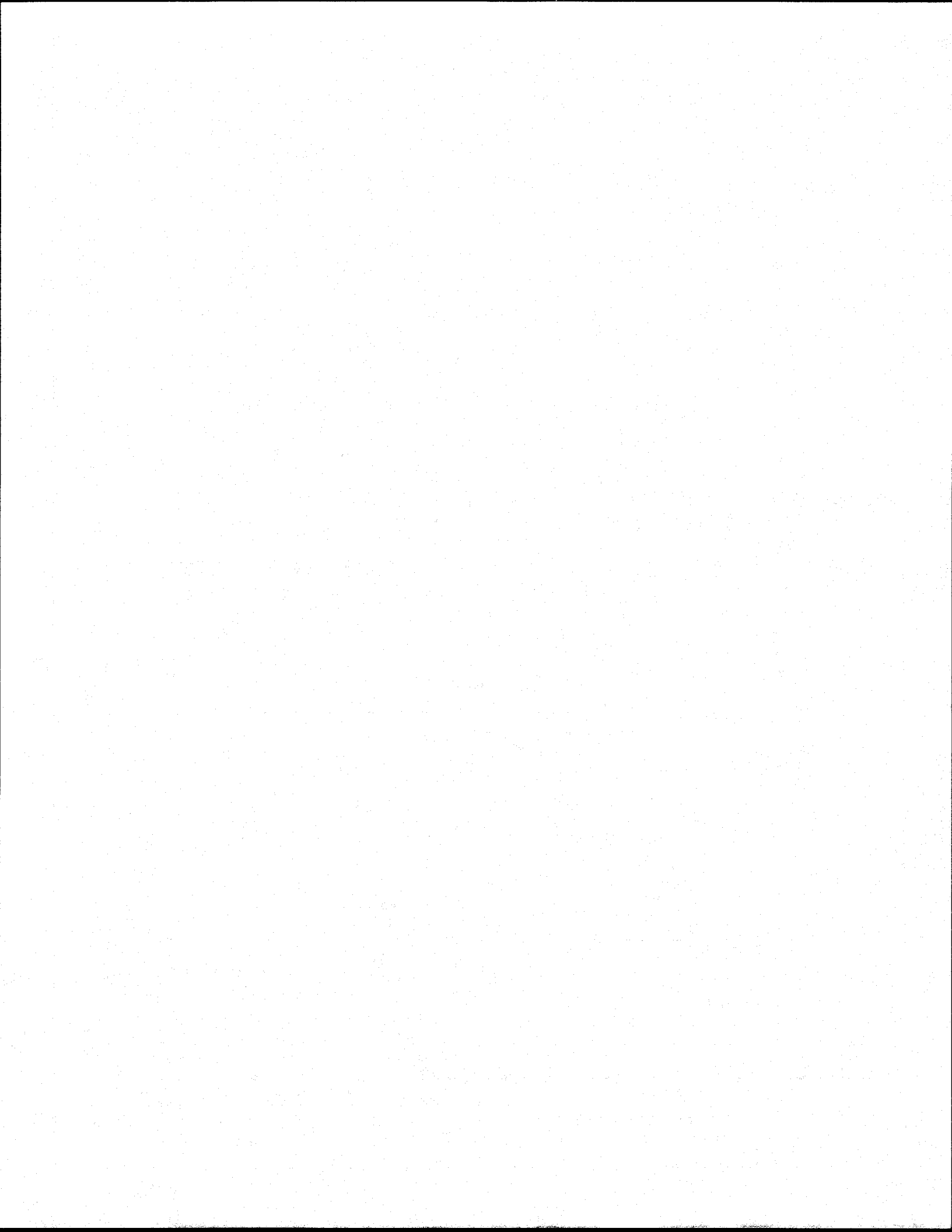


LEGEND	
+	TW-3 Temporary Monitoring Well Location
●	S4 Soil Sample Location



SITE MAP	CLEARWATER GROUP		
	1125 Miller Avenue Oakland, California	Project No. <b>CB018D</b>	Figure Date 9/05





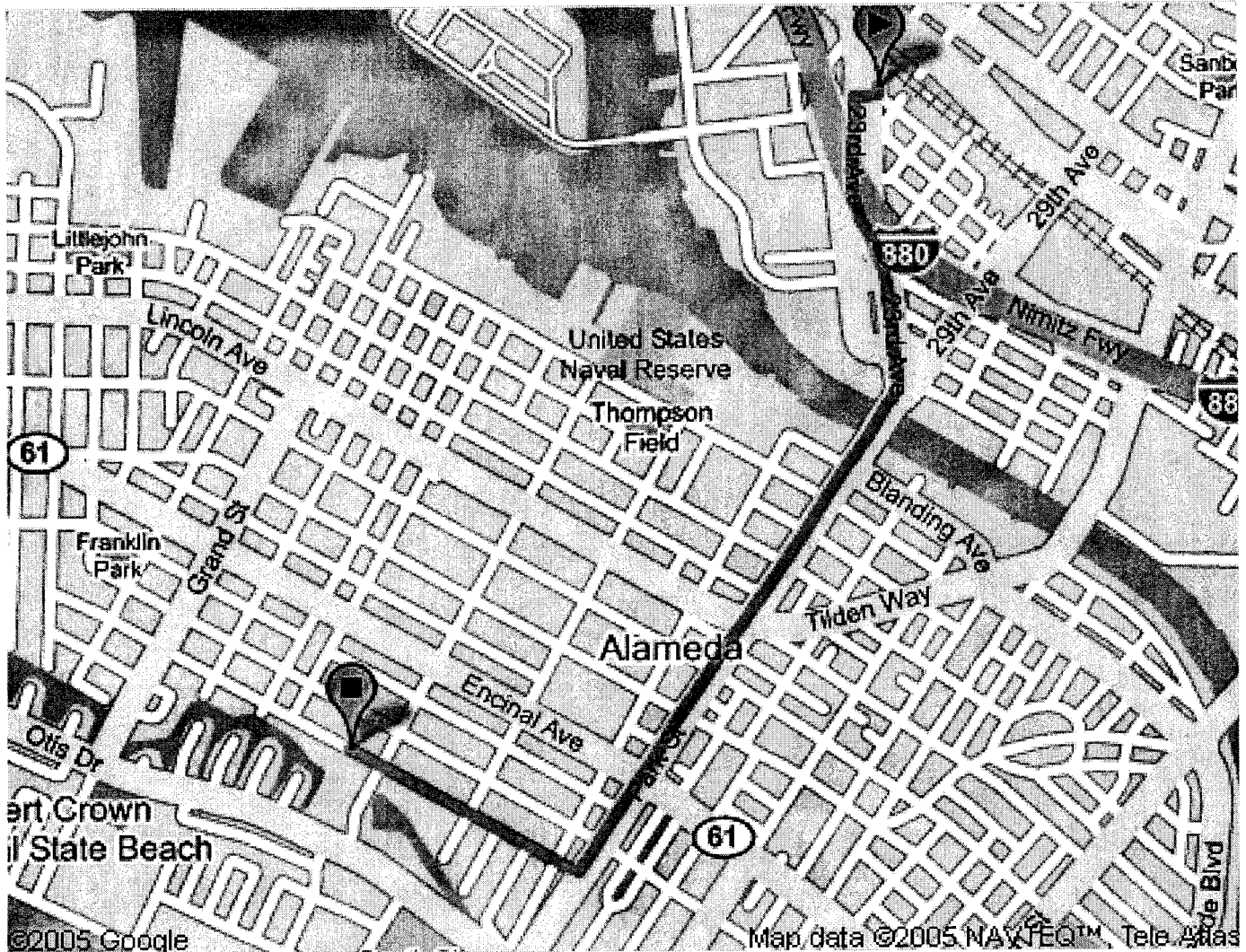
Alameda Hospital  
(510)-523-4357



**Directions**

Start address: **1125 Miller Ave, Oakland, CA 94601**

End address: **2070 Clinton Ave, Alameda, CA 94501**



Start address: 1125 Miller Ave  
Oakland, CA 94601

End address: 2070 Clinton Ave  
Alameda, CA 94501

Distance: 2.1 mi (about 5 mins)

1. Head **south** from **Miller Ave** - go **0.0 mi**
2. Turn **right** at **E 11th St** - go **0.0 mi**
3. Turn **left** at **23rd Ave** - go **0.6 mi**
4. Bear **right** at **29th Ave** - go **0.1 mi**
5. Continue on **Park St** - go **0.9 mi**
6. Turn **right** at **Clinton Ave** - go **0.5 mi**

These directions are for planning purposes only. You may find that construction projects, traffic, or other events may cause road conditions to

**ATTACHMENT 2**

## **Accident/Investigation Report, Operating Procedure No. HS-502**

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### **502.1 Incident Reports**

All health and safety incidents that occur during field and laboratory activities associated with investigations and remediation of sites containing hazardous materials must be reported to management.

### **502.2 Definitions**

A health and safety incident is any event listed below:

- Illness resulting from chemical exposure or unknown causes
- Physical injury, including those that do not require medical attention
- Fire, explosions, and flashes resulting from activities performed by the RFI contractor and its subcontractors
- Property damage resulting from activities performed by the RFI contractor and its subcontractors
- Vehicular accidents occurring on site or while traveling to and from sites
- Infractions of safety rules and requirements
- Unexpected chemical exposures (indicated by irritation of eyes, nose, throat, or skin)

### **502.3 Reporting Procedures**

#### **502.3.1 Reporting Format**

Incident reports shall be prepared by completing Form HS-502, a copy of which is attached at the end of this section. This form may be obtained from the health and safety officer.

#### **502.3.2 Responsible Party**

Reports of incidents occurring in the field shall be prepared by the site safety officer or, in the absence of the site safety officer, the supervising field engineer, witness, or injured/exposed individual.

#### **502.3.3 Filing**

A report must be submitted to the health and safety officer of the business unit to which the project manager belongs within 24 hours of each incident involving medical treatment. In turn, the health and safety officer must distribute copies of the report to the corporate health and safety administrator and the corporate health and safety officer. When an injury or illness is reported, the business unit health and safety officer must deliver a copy of the report to the individual in charge of personnel affairs so that a Worker's Compensation Insurance Report can be filed if necessary. Reports must be received by personnel within 48 hours of each qualifying incident.

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## HEALTH AND SAFETY INCIDENT REPORT

Project Name: \_\_\_\_\_

TYPE OF INCIDENT (Check all applicable items)

Project Number: \_\_\_\_\_

Illness

Fire, explosion, flash

Date of Incident: \_\_\_\_\_

Injury

Unexpected exposure

Time of Incident: \_\_\_\_\_

Property Damage

Vehicular Accident

Location: \_\_\_\_\_  
\_\_\_\_\_

Health & Safety Infraction

Other (describe) \_\_\_\_\_

**DESCRIPTION OF INCIDENT** (Describe what happened and possible cause. Identify individual involved, witnesses, and their affiliations; and describe emergency or corrective action taken. Attach additional sheets, drawings, or photographs as needed.)

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Reporter: \_\_\_\_\_  
Print Name

\_\_\_\_\_ Signature

\_\_\_\_\_ Date

Reporter must deliver this report to the Operating Unit Health & Safety Officer within 24 hours of the reported incident for medical treatment cases and within five days for other incidents.

Reviewed by: \_\_\_\_\_  
Operating Unit Health & Safety Officer

\_\_\_\_\_ Date

Distribution by HSO:

- Corporate Health and Safety Officer
- Project Manager
- Personnel Office (medical treatment cases only)

## HEALTH AND SAFETY INCIDENT REPORT

Project Name: \_\_\_\_\_

Project Number: \_\_\_\_\_

Date of Incident: \_\_\_\_\_

Time of Incident: \_\_\_\_\_

Location: \_\_\_\_\_  
\_\_\_\_\_

TYPE OF INCIDENT (Check all applicable items)

Illness

Fire, explosion, flash

Injury

Unexpected exposure

Property Damage

Vehicular Accident

Health & Safety Infraction

Other (describe) \_\_\_\_\_

**DESCRIPTION OF INCIDENT** (Describe what happened and possible cause. Identify individual involved, witnesses, and their affiliations; and describe emergency or corrective action taken. Attach additional sheets, drawings, or photographs as needed.)

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Reporter: \_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Reporter must deliver this report to the Operating Unit Health & Safety Officer within 24 hours of the reported incident for medical treatment cases and within five days for other incidents.

Reviewed by: \_\_\_\_\_  
Operating Unit Health & Safety Officer

\_\_\_\_\_  
Date

Distribution by HSO:

- Corporate Health and Safety Officer
- Project Manager
- Personnel Office (medical treatment cases only)

## HEALTH AND SAFETY INCIDENT REPORT

Project Name: \_\_\_\_\_

Project Number: \_\_\_\_\_

Date of Incident: \_\_\_\_\_

Time of Incident: \_\_\_\_\_

Location: \_\_\_\_\_  
\_\_\_\_\_

TYPE OF INCIDENT (Check all applicable items)

Illness                       Fire, explosion, flash

Injury                          Unexpected exposure

Property Damage      Vehicular Accident

Health & Safety Infraction

Other (describe) \_\_\_\_\_

DESCRIPTION OF INCIDENT (Describe what happened and possible cause. Identify individual involved, witnesses, and their affiliations; and describe emergency or corrective action taken. Attach additional sheets, drawings, or photographs as needed.)

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Reporter: \_\_\_\_\_  
                  Print Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Reporter must deliver this report to the Operating Unit Health & Safety Officer within 24 hours of the reported incident for medical treatment cases and within five days for other incidents.

Reviewed by: \_\_\_\_\_  
                  Operating Unit Health & Safety Officer

\_\_\_\_\_  
Date

Distribution by HSO:

- Corporate Health and Safety Officer
- Project Manager
- Personnel Office (medical treatment cases only)

# ATTACHMENT C



## CLEARWATER GROUP

### Direct-Push Drilling Investigation Procedures

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The direct push method of soil boring has several advantages over hollow-stem auger drill rigs. The direct push method produces no drill cuttings and is capable of 150 to 200 feet of boring or well installation per work day. Direct push can be used for soil gas surveys, soil sampling, groundwater sampling, installation of small-diameter monitoring wells, and components of remediation systems such as air sparge points. The equipment required to perform direct push work is varied ranging from a roto-hammer and operator to a pickup truck-mounted rig capable of substantial static downward force combined with percussive force. This method allows subsurface investigation work to be performed in areas inaccessible to conventional drill rigs such as in basements, beneath canopies, or below power lines. Direct push equipment is ideal at sites with unconsolidated soil or overburden, and for sampling depths of less than 30 feet. This method is not appropriate for boring through bedrock or gravelly soils.

#### **Permitting and Site Preparation**

Prior to direct push boring work, Clearwater Group will obtain all necessary permits and locate all underground and above ground utilities through Underground Service Alert (USA) and a thorough site inspection. All drilling equipment will be inspected daily and will be maintained in safe operating condition. All down-hole drilling equipment will be cleaned prior to arriving on-site. Working components of the rig near the borehole, as well as driven casing and sampling equipment will be thoroughly decontaminated between each boring location by either steam cleaning or washing with an Alconox® solution. All drilling and sampling methods will be consistent with ASTM Method D-1452-80 and county, state and federal regulations.

#### **Boring Installation and Soil Sampling**

Direct push uses a 1.5-inch outer barrel with an inner rod held in place during pushing. Soil samples are collected by penetrating to the desired depth, retracting the inner rod and attaching a spoon sampler. The sampler is then thrust beyond the outer barrel into native soil. Soil samples are recovered in brass or stainless containers lining the spoon.

Soil removed from the upper tube section is used for lithologic descriptions (according to the unified soil classification system) and for organic vapor field analysis. If organic vapors will be analyzed in the field, a portion of each soil sample will be placed in a plastic zip-lock bag. The bag will be sealed and warmed for approximately 10 minutes to allow vapors to be released from the soil sample and diffuse into the head space of the bag. The bag is then pierced with the probe of a calibrated organic vapor detector. The results of the field testing will be noted with the lithologic descriptions on the field exploratory soil boring log. Soil samples selected for laboratory analysis will be covered on both ends with Teflon™ tape and plastic end caps. The samples will then be labeled, documented on a chain-of-custody form and placed in a cooler for transport to a state certified analytical laboratory.

## Temporary Well Installation and Groundwater Sampling

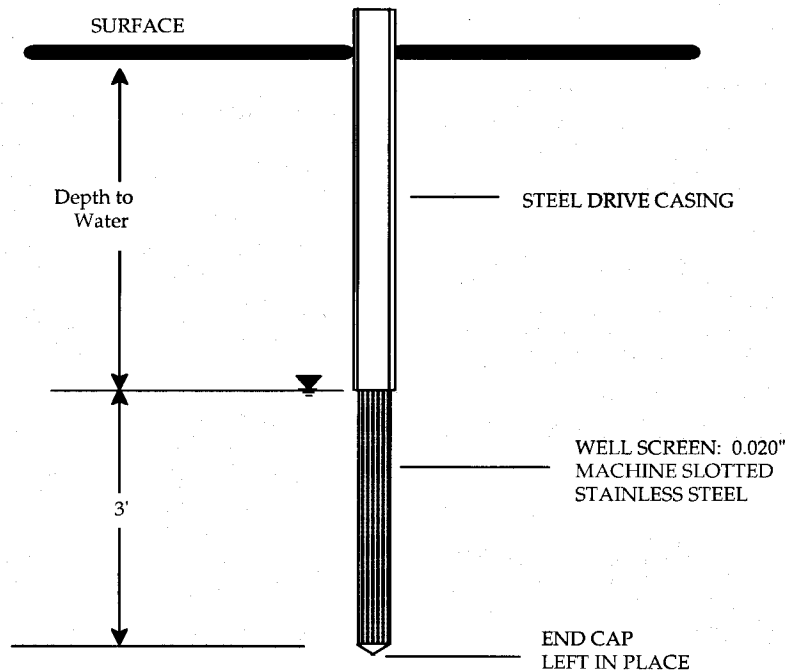


Figure 1

Groundwater samples are collected by removing the inner rod and attaching a 4-foot stainless steel screen with a drive point at the end (Figure 1). The screen and rod are then inserted in the outer barrel and driven to the desired depth where the outer rod is retracted to expose the screen. If enough water for sampling is not produced through the stainless well screen, a 1-inch PVC screen can be installed in the boring and the outer rod retracted to leave a temporary well point for collecting groundwater samples or water levels.

### Monitoring Well Installation and Development

Permanent small-diameter monitoring wells are installed by driving the outer barrel and inner rod as described above. Upon reaching the desired depth the system is removed and 2-inch OD (1/2-inch ID) pre-packed PVC piping is installed. The well plug is created using granular bentonite. The well seal is constructed of cement and sealed at the surface with a conventional "Christy® Box" or similar vault. Monitoring wells are developed by surging the well with a small diameter bailer and removing 3 to 5 casing volumes of water until the produced water is clear.

### Groundwater Sample Collection and Water Level Measurement

Prior to collecting groundwater from the wells the water levels are measured in all wells using an electronic water level gauge. Monitoring wells are prepared for sampling by purging three well bore volumes of water. Water is removed using small diameter bailers, a peristaltic pump, or manually using tubing with a check valve at the bottom. During removal of each volume, the temperature, pH and conductivity are measured and recorded on the field sampling form. Successive well volumes are removed until the parameters have stabilized or the well has gone dry. Prior to sampling, the well is allowed to recover to within 90% of the stabilized water levels.

Groundwater samples<sup>1</sup> are collected using small diameter bailers. The samples are decanted into laboratory supplied containers, labeled, recorded on a chain-of-custody form and placed on ice for transport to a certified laboratory.

<sup>1</sup> Small diameter wells often produce small sample quantities and are appropriate for analysis of volatile and aromatic compounds and dissolved metals analysis using VOA vials. Obtaining liter-size samples can be difficult and time consuming. Monitoring wells installed by the direct push method are most effective at sites where the subsurface soils are more coarse than silt, gasoline components are the key contaminants of concern, and water levels are not more than 25 feet below ground surface.

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body of the 5035SC™ Sampler, pushing the plunger back to its rear position. The patented plunger stop of the 5035SC™ Sampler sleeve prevents the plunger from exiting the body of the sampler. The filled soil sampler containing 5 grams of soil is then removed from the soil and the airtight plastic cap is pushed over the open end of the sampler.

The soil sample is then either placed into specially prepared 40 ml glass VOAs for chemical preservation (see below) or placed into a hermetically sealed reclosable polyethylene-shipping bag. Once the 5035SC™ Sampler is placed in the sampler-shipping bag and is tagged with the waterproof label, it is ready to be placed into the cooler with the dry ice to be kept at <-7° C. Chain-of-custody procedures are used to accompany the samples to the laboratory.

### **SCREENING OF SOIL SAMPLES**

In order to provide valuable soil analysis data, lithologic variations and heterogeneity, both vertically and laterally must be well characterized and understood so that representative soil samples are collected. Soil samples should be screened in the field with a meter that measures organic vapors, such as a photoionization detector (PID). Field screening gives a rough estimate of VOC concentration and other factors such as visual staining, soil discoloration and professional judgment should be used to pick the samples for EPA Method 5035.

### **FIELD PRESERVATION METHODS**

There are several field preservation methods using a variety of procedures and chemicals. The preservation concepts are described below. For field preservation methods using chemicals, the 5035SC™ Sampler is then removed from the syringe and extruded into the glass VOA vial using the syringe's plunger if other field preservation methods are to be used. Please refer to USEPA, 2003 for more detailed preservation descriptions.

U.S. EPA and the California DTSC have approved the 5035SC™ Sampler for use as a soil-coring device. Field preservation methods are to be used with the 5035SC™ Sampler for EPA and DTSC sites. Many laboratories will supply consultants with the glass 40 ml VOAs with the preservation chemicals, as described below.

### **CHEMICAL PRESERVATION FOR LOW LEVEL ANALYSIS**

Low Level Analysis uses a hermetically sealed sampling container, such as the 5035SC™ Sampler, and analysis of the sample in the laboratory by a closed-system purge-and-trap process. The Low Level Analysis method uses a direct purging of the VOCs from the liquid inserted into the soil sample in the field. The liquid can be either sodium bisulfate or reagent water, the former acts as both preservative and extractant medium, while the water acts only as an extractant medium. No sample dilution is involved, giving detection limits of approximately 0.5 µg/kg.

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The 5035SC™ Sampler has been approved for use as a coring device by U.S. EPA and the California DTSC. Field preservation methods are to be used with the 5035SC™ Sampler for EPA and DTSC sites.

#### **CHEMICAL PRESERVATION FOR HIGH LEVEL ANALYSIS**

The procedures for High Level Analysis use the same procedures outlined above, except methanol is the liquid used for both preservative and extractant medium. The samples are diluted with methanol yielding detection limits of greater than 200 µg/kg.

#### **FIELD PRESERVATION BY FREEZING**

The 5035SC™ Sampler can be used with field freezing with dry ice as the preservation method. Freezing the sample in its storage device immediately after collection preserves VOC concentrations in all samples matrices (including biologically active soils that would tend to degrade BTEX compounds) and for both types of VOC analytes for up to 14 days of storage. In one study, sample integrity was maintained with less than a 5% loss of analyte concentrations even after a 14-day holding time. Freezing can be initiated in the field through the use of dry ice in well-insulated coolers. Alternatively, bags of water ice mixed with table salt may be used to achieve cooler temperatures between -12 and -4°C (Hewitt, 1999). Dry ice is recommended as being the easiest method of field freezing and preservation. The disadvantage of using ice (4°C +/- 2°C) is that the samples would be required to be analyzed within 48 hours in the laboratory, instead of the 7 days for dry ice freezing.

After collecting the 4.5 to 5.5 grams of soil samples in the pre-cleaned 5035SC™ Sampler, the sampler is sealed with an airtight inert plastic cap. The 5035SC™ Sampler is then placed into a hermetically-sealed reclosable polyethylene shipping bag, with a waterproof label with date, time, sampler's name, sample number, site location, compounds of interest, chemical preservation techniques (if any), and laboratory equipment specifications or laboratory methods.

The 5035SC Samplers are then placed in a cooler with dry ice to ensure freezing of the 5035SC™ Samplers. There must be adequate dry ice to cool the samples to <-7° C and that the temperature is maintained in the cooler during transport to the laboratory. The samples are labeled and shipped under chain-of-custody procedures to the state-approved laboratory for the requested analysis. The 5035SC™ Samplers should not be frozen below -20° C. A temperature blank should be included with the samples so that the laboratory can verify the temperature upon receipt and the arrival temperature of the samples should be noted on the chain-of-custody forms. Because the entire sampling device is to be submitted to the laboratory, a visual inspection of the seals is required to be noted on the chain-of-custody by the receiving person at the laboratory to verify that the 5035SC™ Sampler is intact and sample volatilization has not occurred.

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### **LABORATORY HOLD TIME**

The 5035SC™ Samplers preserved with dry ice the samples can be held at <-7° C for up to seven days prior to analysis from the sample collection date, providing the laboratory places the samples in a refrigerated environment or uses a chemical preservation method.

### **TEMPERATURE BLANK**

Method 5035 requires and many laboratories expect three 5035SC™ Samplers for each soil sampling point. For example, if a soil boring has 2 samples, one at 5 feet and one at 10 feet below ground surface, three 5035SC™ Samplers are needed for each soil sampling point, with a total of six 5035SC™ Samplers required for the two sampling points. On the receiving end, an infrared thermometer should be used to measure the temperature blank when the samples arrive at the laboratory.

### **REFERENCES**

Bellar, T., 1991, "Measurement of Volatile Organic Compounds in Soils Using Modified Purge-and-Trap and Capillary Gas Chromatography/Mass Spectrometry" U.S. Environmental Protection Agency, Environmental Monitoring Systems Laboratory, Cincinnati, OH, November.

Hewitt, A. D., Jenkins, T. F., Grant, C. L., 1995, "Collection, Handling and Storage: Keys to Improved Data Quality for Volatile Organic Compounds in Soil", Am Environ Lab; 7(1); 25-8.

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Hewitt, A. D., Miyares, P. H., Sletten, R. S., 1993, "Determination of Two Chlorinated Volatile Organic Compounds in Soil by Headspace Gas Chromatography and Purge-and-Trap Gas Chromatography/Mass Spectrometry", Hydrocarbon Contaminated Soils, 3; 135-45, Chelsea, MI, Lewis Publishers.

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Hewitt, A.D., 1999, "Frozen Storage of Soil Samples for VOC Analysis." *Environmental Testing and Analysis*, Sept-Oct., p. 18.

Lewis, T. E., Crockett, A. B., Siegrist, R. L., Zarrabi, K., "Soil Sampling and Analysis for Volatile Organic Compounds", *Envir Monitoring & Assessment*, 1994; 30; 213-46.

Liikala, T. L., Olsen, K. B., Teel, S. S., Lanigan, D. C., 1996, "Volatile Organic Compounds: Comparison of Two Sample Collection and Preservation Methods", *Envir Sci Technol*; 30; 3441-7.

Siegrist, R. L., Jenssen, P. D., 1990, "Evaluation of Sampling Method Effects on Volatile Organic Compound Measurements in Contaminated Soils", *Envir Sci Technol*; 24; 1387-92.

United States Environmental Protection Agency (US EPA), 2003, Guidance Document for the Implementation of United States Environmental Protection Agency Method 5035: Methodologies for Collection, Preservation, Storage, and Preparation of Soils to be Analyzed for Volatile Organic Compounds, Final Interim (Version 4,0), October, 35 p.

#### **COSTS AND ORDERING INFORMATION**

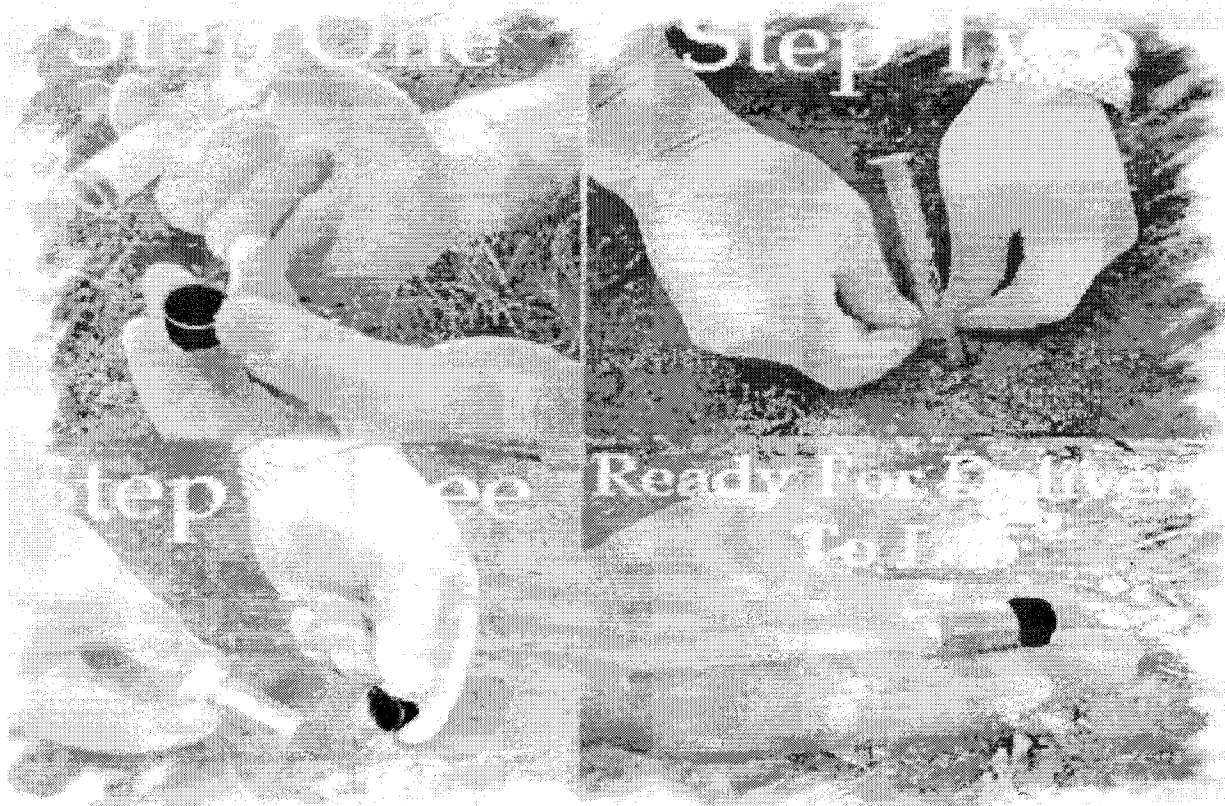
The 5035SC™ Sampler cost \$199 for a bag of 50 with a free PVC handle and free overnight shipping. California residents must pay sales tax. MasterCard and Visa accepted.

Call: 866-H2O-AIR1 or (415) 381-5195 to place an order. Contact: James A. Jacobs, R.G., C.H.G for technical questions.

#### **ENVIRONMENTAL BIO-SYSTEMS, INC.**

[www.EBSinfo.com](http://www.EBSinfo.com) Since 1989; Lic. 687236  
707 View Point Road, Mill Valley, CA 94801 USA  
Tel: 415-381-5195; Fax: 415-381-5816; email: [augerpro@sbcglobal.net](mailto:augerpro@sbcglobal.net)

Clearwater Group, Inc.  
229 Tewksbury Avenue  
Point Richmond, CA 94801  
Tel: 510-307-9943; Fax: 510-232-2823



### PHOTOS SHOWING THE 5035SC™ SAMPLER

- 1) The soil sample is collected using the 5035SC™ Sampler by removing the pre-cleaned plastic cap. The plunger will be in the forward position.
- 2) Holding the wingtips on either side of the sampler body, push the 5035SC™ Sampler into the soil to be sampled. The soil will pack tightly into the body of the 5035SC™ Sampler, pushing the plunger back to its rear position. The patented plunger stop of the 5035SC™ Sampler sleeve prevents the plunger from exiting the body of the sampler.
- 3) Remove the filled soil sampler from the soil and press the airtight plastic cap over the open end of the sampler. The soil sample is placed into a hermetically sealed reclosable polyethylene-shipping bag.
- 4) Once the 5035SC™ Sampler is placed in the sampler shipping bag and is tagged with the waterproof label, it is ready to be placed into the cooler with the dry ice to be kept at  $<-7^{\circ}\text{C}$  (7-days) or ice cooled to  $4^{\circ}\text{C}$  (48-hour preservation).

Questions: James A. Jacobs, R.G.#4815, C.H.G.#88; 415-381-5195 or [augerpro@sbcglobal.net](mailto:augerpro@sbcglobal.net)

# ATTACHMENT D



# CLEARWATER GROUP, INC.

Environmental Services

229 Tewksbury Ave, Point Richmond, California 94801

CLIENT/ 1125 Miller Ave  
LOCATION Oakland, CA

## BORING/WELL CONSTRUCTION LOG

DRILLING CONTRACTOR **Fast- Tek**  
 DRILL RIG OPERATOR **Eric Austin**  
 DRILL RIG TYPE **Geo Probe 5400**  
 LOGGED BY **JCG**  
 REVIEWED BY **Jim Jacobs**  
 PLANNED USE **soil investigation**  
 DATES DRILLED: **11/16/05**  
 DRILLING START **1030**  
 DRILLING FINISH **1215**

BORING/  
WELL NUMBER **S5**  
 PROJECT NUMBER **CB018D**  
 BORING DEPTH **20'**  
 WELL DEPTH **--**  
 SCREEN SLOT SIZE **--**  
 BORE/CASE DIAMETER **2"**  
 FILTER PACK **--**  
 WELL MATERIAL **--**  
 DEPTH TO WATER **17'**

☒ Approximate First Encountered Water Depth  
 ☒ Approximate Stabilized Water Depth

DEPTH (feet)	SAMPLING				WATER LEVEL	OVM READING (ppm)	ESTIMATED PERCENT			LITHOLOGY	USCS SYMBOL	LITHOLOGIC DESCRIPTION/ NOTES	WELL CONSTRUCTION DETAILS
	BLOWS/6" INTERVAL	INTERVAL	RECOVERY	ANALYTICAL			GRAVEL	SAND	FINES				
0											(0.0- 0.5) Concrete	0	
1						0				CH	(0.5- 3.0) Clay; dark brown; moist; dense; high plasticity	1	
2												2	
3												3	
4										SW	(3.0- 5.0) Sand; well sorted; orange/brown; moist; loose	4	
5		*5-5.5				0				CH	(5.0- 7.0) Clay; medium/dark brown; moist; dense; high plasticity	5	
6												6	
7										GC	(7.0- 8.0) Clayey Gravel; dark brown; moist; dense;	7	
8												8	
9										CH	(8.0- 11.0) Clay; green/brown; moist; dense; high plasticity	9	
10		*10-10.5				19						10	
11												11	
12						0				CL	(11.0- 13.0) Sandy Clay; orange/brown; moist; medium dense; low plasticity	12	
13										SP	(13.0- 13.5) Sand with gravel; poorly sorted; brown; moist/dry; loose;	13	
14						15					(13.5- 19.0) Clay; dark green; moist; dense; moderate to high plasticity; brown streaks; hydrocarbon odor @ 14-15'	14	
15		*15-15.5				47						15	
16										CH		16	
17					☒							17	
18						11						18	
19												19	
20										GP	(19.0- 20.0) Gravel; poorly sorted; brown/yellow; moist; medium dense; clayey	20	

Calibrated PID with iso-butane to 92ppm; Grab groundwater sample taken @ 1300hrs

\* Indicates sample sent to lab for analysis

229 Tewksbury Ave, Point Richmond, California 94801

CLIENT/ 1125 Miller Ave  
LOCATION Oakland, CA

## BORING/WELL CONSTRUCTION LOG

DRILLING CONTRACTOR **Fast- Tek**  
 DRILL RIG OPERATOR **Eric Austin**  
 DRILL RIG TYPE **Geo Probe 5400**  
 LOGGED BY **JCG**  
 REVIEWED BY **Jim Jacobs**  
 PLANNED USE **soil investigation**  
 DATES DRILLED: **11/16/05**  
 DRILLING START **1245**  
 DRILLING FINISH **1400**

BORING/  
WELL NUMBER **S6**  
 PROJECT NUMBER **CB018D**  
 BORING DEPTH **6.5'**  
 WELL DEPTH **--**  
 SCREEN SLOT SIZE **--**  
 BORE/CASE DIAMETER **2"**  
 FILTER PACK **--**  
 WELL MATERIAL **--**  
 DEPTH TO WATER **N/A**

☒ Approximate First Encountered Water Depth  
 ☒ Approximate Stabilized Water Depth

DEPTH (feet)	SAMPLING				WATER LEVEL	OVM READING (ppm)	ESTIMATED PERCENT			LITHOLOGY	USCS SYMBOL	LITHOLOGIC DESCRIPTION/ NOTES	WELL CONSTRUCTION DETAILS
	BLOWS/ 6" INTERVAL	INTERVAL	RECOVERY	ANALYTICAL			GRAVEL	SAND	FINES				
0											(0.0- 0.5) Concrete	0	
1											(0.5- 6.0) Fill- dark brown; moist; dense; gravelly; wood fragments; miscellaneous industrial debris; concrete	1	
2												2	
3												3	
4												4	
5												5	
6		*6-6.5'										6	
7												7	
8												8	
9												9	
10												10	
11												11	
12												12	
13												13	
14												14	
15												15	
16												16	
17												17	
18												18	
19												19	
20												20	

Diesel core sample taken @ 6'; too much gravel to take 5035 samples; 5/5 boring attempts met refusal between 3' and 6.5'

\* Indicates sample sent to lab for analysis

229 Tewksbury Ave, Point Richmond, California 94801

CLIENT/ 1125 Miller Ave  
LOCATION Oakland, CA

DRILLING CONTRACTOR **Fast- Tek**  
 DRILL RIG OPERATOR **Eric Austin**  
 DRILL RIG TYPE **Geo Probe 5400**  
 LOGGED BY **JCG**  
 REVIEWED BY **Jim Jacobs**  
 PLANNED USE **soil investigation**  
 DATES DRILLED: **11/16/05**  
 DRILLING START **1410**  
 DRILLING FINISH **1636**

BORING/  
WELL NUMBER **S7**  
 PROJECT NUMBER **CB018D**  
 BORING DEPTH **20'**  
 WELL DEPTH **--**  
 SCREEN SLOT SIZE **--**  
 BORE/CASE DIAMETER **2"**  
 FILTER PACK **--**  
 WELL MATERIAL **--**  
 DEPTH TO WATER **16'**

⚡ Approximate First Encountered Water Depth  
 ⚡ Approximate Stabilized Water Depth

DEPTH (feet)	SAMPLING				WATER LEVEL	OVM/ READING (ppm)	ESTIMATED PERCENT			LITHOLOGY	USCS SYMBOL	LITHOLOGIC DESCRIPTION/ NOTES	WELL CONSTRUCTION DETAILS
	BLOWS/ 6" INTERVAL	INTERVAL	RECOVERY	ANALYTICAL			GRAVEL	SAND	FINES				
0											(0.0- 0.5) Concrete	0	
1											(0.5- 8.0) Clayey Gravel; brown; moist; loose; gravel <1.75"; poor recovery	1	
2												2	
3												3	
4						0				GC		4	
5											(8.0- 12.0) Clay; green/brown; moist; dense; high plasticity; poor recovery	5	
6						0						6	
7												7	
8						0						8	
9											(12.0- 15.0) Clayey Gravel; light brown/dark brown; moist; dense; gravel <1"	9	
10						0				CH		10	
11												11	
12						0						12	
13											(15.0- 15.5) Poorly Graded Gravel; green/brown; loose; wet	13	
14										GC		14	
15										GP		15	
16											(15.5- 20.0) Clayey Gravel; dark brown; wet; sheen; slight odor; poor recovery	16	
17												17	
18						16				GC		18	
19												19	
20												20	

Boring collapsed during repeated attempts to fit tremmie pipe downhole

\* Indicates sample sent to lab for analysis

# CLEARWATER GROUP, INC.

Environmental Services

229 Tewksbury Ave, Point Richmond, California 94801

CLIENT/ 1125 Miller Ave  
LOCATION Oakland, CA

## BORING/WELL CONSTRUCTION LOG

DRILLING CONTRACTOR **Fast- Tek**  
 DRILL RIG OPERATOR **Eric Austin**  
 DRILL RIG TYPE **Geo Probe 5400**  
 LOGGED BY **JCG**  
 REVIEWED BY **Jim Jacobs**  
 PLANNED USE **soil investigation**  
 DATES DRILLED: **11/16/05**  
 DRILLING START **1645**  
 DRILLING FINISH **1700**

BORING/  
WELL NUMBER **S8**  
 PROJECT NUMBER **CB018D**  
 BORING DEPTH **4'**  
 WELL DEPTH **--**  
 SCREEN SLOT SIZE **--**  
 BORE/CASE DIAMETER **2"**  
 FILTER PACK **--**  
 WELL MATERIAL **--**  
 DEPTH TO WATER **N/A**

☒ Approximate First Encountered Water Depth  
 ▼ Approximate Stabilized Water Depth

DEPTH (feet)	SAMPLING				WATER LEVEL	OWN READING (ppm)	ESTIMATED PERCENT			LITHOLOGY	USCS SYMBOL	LITHOLOGIC DESCRIPTION/ NOTES	WELL CONSTRUCTION DETAILS
	BLOWS/ 6" INTERVAL	INTERVAL	RECOVERY	ANALYTICAL			GRAVEL	SAND	FINES				
0													0
1						6						(0.0- 4.0) Clay; dark brown; moist; dense; high plasticity; minor gravel and sand; product surrounding soil core @ 3-4'; strong diesel odor	1
2						22				CH			2
3													3
4													4
5													5
6													6
7													7
8													8
9													9
10													10
11													11
12													12
13													13
14													14
15													15
16													16
17													17
18													18
19													19
20													20

PID battery ran out @ 1700hrs and was not used to screen below 2' @ S8

\* Indicates sample sent to lab for analysis

# ATTACHMENT E



Report Number : 46981

Date : 11/29/2005

Jessica Moreno  
Clearwater Group, Inc.  
229 Tewksbury Avenue  
Point Richmond, CA 94801

Subject : 10 Soil Samples and 1 Water Sample  
Project Name : 23rd Avenue Partners  
Project Number : CB018D

Dear Ms. Moreno,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,



Joel Kiff



Report Number : 46981

Date : 11/29/2005

Subject : 10 Soil Samples and 1 Water Sample  
Project Name : 23rd Avenue Partners  
Project Number : CB018D

## Case Narrative

Hydrocarbons reported as TPH as Diesel do not exhibit a typical Diesel chromatographic pattern for samples S5-5, S7-5, S7-10 and S6-6. These hydrocarbons are higher boiling than typical diesel fuel.

Surrogate recovery for Method 8015, for sample S7-15 is above the control limit. This may indicate a bias in the analysis due to the sample's matrix or an interference with the surrogate from compounds present in the sample.

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

A handwritten signature in black ink, appearing to read "Joe Kiff", is written over a horizontal line.

Joe Kiff

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800



Report Number : 46981

Date : 11/29/2005

Project Name : 23rd Avenue Partners

Project Number : CB018D

Sample : S5 (grab groundwater)

Matrix : Water

Lab Number : 46981-01

Sample Date :11/16/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	11/18/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	11/18/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	11/18/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	11/18/2005
Toluene - d8 (Surr)	103		% Recovery	EPA 8260B	11/18/2005
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	11/18/2005
TPH as Diesel	890	50	ug/L	M EPA 8015	11/19/2005
Octacosane (Diesel Surrogate)	102		% Recovery	M EPA 8015	11/19/2005

Sample : S5-5

Matrix : Soil

Lab Number : 46981-02

Sample Date :11/16/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/17/2005
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/17/2005
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/17/2005
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/17/2005
Toluene - d8 (Surr)	97.3		% Recovery	EPA 8260B	11/17/2005
4-Bromofluorobenzene (Surr)	105		% Recovery	EPA 8260B	11/17/2005
TPH as Diesel	14	1.0	mg/Kg	M EPA 8015	11/22/2005
1-Chlorooctadecane (Diesel Surrogate)	103		% Recovery	M EPA 8015	11/22/2005

Approved By:

Joel Kiff





Report Number : 46981

Date : 11/29/2005

Project Name : 23rd Avenue Partners

Project Number : CB018D

Sample : S5-10

Matrix : Soil

Lab Number : 46981-03

Sample Date :11/16/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/18/2005
<b>Toluene</b>	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/18/2005
<b>Ethylbenzene</b>	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/18/2005
<b>Total Xylenes</b>	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/18/2005
Toluene - d8 (Surr)	93.2		% Recovery	EPA 8260B	11/18/2005
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	11/18/2005
<b>TPH as Diesel</b>	<b>610</b>	1.0	mg/Kg	M EPA 8015	11/20/2005
1-Chlorooctadecane (Diesel Surrogate)	120		% Recovery	M EPA 8015	11/20/2005

Sample : S5-15

Matrix : Soil

Lab Number : 46981-04

Sample Date :11/16/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/23/2005
<b>Toluene</b>	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/23/2005
<b>Ethylbenzene</b>	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/23/2005
<b>Total Xylenes</b>	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/23/2005
Toluene - d8 (Surr)	85.7		% Recovery	EPA 8260B	11/23/2005
4-Bromofluorobenzene (Surr)	97.4		% Recovery	EPA 8260B	11/23/2005
<b>TPH as Diesel</b>	<b>620</b>	1.0	mg/Kg	M EPA 8015	11/20/2005
1-Chlorooctadecane (Diesel Surrogate)	125		% Recovery	M EPA 8015	11/20/2005

Approved By:

  
Joel Kiff

Project Name : **23rd Avenue Partners**

Project Number : **CB018D**

Sample : **S5-20**

Matrix : Soil

Lab Number : 46981-05

Sample Date :11/16/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	< <b>0.0050</b>	0.0050	mg/Kg	EPA 8260B	11/23/2005
<b>Toluene</b>	< <b>0.0050</b>	0.0050	mg/Kg	EPA 8260B	11/23/2005
<b>Ethylbenzene</b>	< <b>0.0050</b>	0.0050	mg/Kg	EPA 8260B	11/23/2005
<b>Total Xylenes</b>	< <b>0.0050</b>	0.0050	mg/Kg	EPA 8260B	11/23/2005
Toluene - d8 (Surr)	95.4		% Recovery	EPA 8260B	11/23/2005
4-Bromofluorobenzene (Surr)	105		% Recovery	EPA 8260B	11/23/2005
<b>TPH as Diesel</b>	<b>5.8</b>	1.0	mg/Kg	M EPA 8015	11/20/2005
1-Chlorooctadecane (Diesel Surrogate)	102		% Recovery	M EPA 8015	11/20/2005

Sample : **S7-5**

Matrix : Soil

Lab Number : 46981-06

Sample Date :11/16/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	< <b>0.0050</b>	0.0050	mg/Kg	EPA 8260B	11/23/2005
<b>Toluene</b>	< <b>0.0050</b>	0.0050	mg/Kg	EPA 8260B	11/23/2005
<b>Ethylbenzene</b>	< <b>0.0050</b>	0.0050	mg/Kg	EPA 8260B	11/23/2005
<b>Total Xylenes</b>	< <b>0.0050</b>	0.0050	mg/Kg	EPA 8260B	11/23/2005
Toluene - d8 (Surr)	94.8		% Recovery	EPA 8260B	11/23/2005
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	11/23/2005
<b>TPH as Diesel</b>	<b>150</b>	10	mg/Kg	M EPA 8015	11/22/2005
1-Chlorooctadecane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	11/22/2005

Approved By:

  
Joel Kiff



Report Number : 46981

Date : 11/29/2005

Project Name : 23rd Avenue Partners

Project Number : CB018D

Sample : S7-10

Matrix : Soil

Lab Number : 46981-07

Sample Date :11/16/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/18/2005
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/18/2005
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/18/2005
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/18/2005
Toluene - d8 (Surr)	98.9		% Recovery	EPA 8260B	11/18/2005
4-Bromofluorobenzene (Surr)	94.7		% Recovery	EPA 8260B	11/18/2005
TPH as Diesel	32	1.0	mg/Kg	M EPA 8015	11/21/2005
1-Chlorooctadecane (Diesel Surrogate)	110		% Recovery	M EPA 8015	11/21/2005

Sample : S7-15

Matrix : Soil

Lab Number : 46981-08

Sample Date :11/16/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/18/2005
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/18/2005
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/18/2005
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/18/2005
Toluene - d8 (Surr)	97.8		% Recovery	EPA 8260B	11/18/2005
4-Bromofluorobenzene (Surr)	93.9		% Recovery	EPA 8260B	11/18/2005
TPH as Diesel	1200	1.0	mg/Kg	M EPA 8015	11/20/2005
1-Chlorooctadecane (Diesel Surrogate)	138		% Recovery	M EPA 8015	11/20/2005

Approved By:

Joel Kiff



Report Number : 46981

Date : 11/29/2005

Project Name : 23rd Avenue Partners

Project Number : CB018D

Sample : S7-20

Matrix : Soil

Lab Number : 46981-09

Sample Date :11/16/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/18/2005
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/18/2005
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/18/2005
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/18/2005
Toluene - d8 (Surr)	97.8		% Recovery	EPA 8260B	11/18/2005
4-Bromofluorobenzene (Surr)	92.7		% Recovery	EPA 8260B	11/18/2005
TPH as Diesel	300	1.0	mg/Kg	M EPA 8015	11/20/2005
1-Chlorooctadecane (Diesel Surrogate)	105		% Recovery	M EPA 8015	11/20/2005

Sample : S6-6

Matrix : Soil

Lab Number : 46981-10

Sample Date :11/16/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	1800	20	mg/Kg	M EPA 8015	11/23/2005
1-Chlorooctadecane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	11/23/2005

Approved By:

Joel Kiff



Report Number : 46981

Date : 11/29/2005

Project Name : 23rd Avenue Partners

Project Number : CB018D

Sample : S8-4

Matrix : Soil

Lab Number : 46981-11

Sample Date : 11/16/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/23/2005
<b>Toluene</b>	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/23/2005
<b>Ethylbenzene</b>	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/23/2005
<b>Total Xylenes</b>	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/23/2005
Toluene - d8 (Surr)	96.5		% Recovery	EPA 8260B	11/23/2005
4-Bromofluorobenzene (Surr)	84.7		% Recovery	EPA 8260B	11/23/2005
<b>TPH as Diesel</b>	<b>92</b>	<b>1.0</b>	<b>mg/Kg</b>	<b>M EPA 8015</b>	<b>11/20/2005</b>
1-Chlorooctadecane (Diesel Surrogate)	112		% Recovery	M EPA 8015	11/20/2005

Approved By: Joel Kiff  
Joel Kiff

Report Number : 46981

Date : 11/29/2005

**QC Report : Method Blank Data**

Project Name : **23rd Avenue Partners**

Project Number : **CB018D**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	< 50	50	ug/L	M EPA 8015	11/18/2005
Octacosane (Diesel Surrogate)	91.8		%	M EPA 8015	11/18/2005
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	11/19/2005
1-Chlorooctadecane (Diesel Surrogate)	102		%	M EPA 8015	11/19/2005
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/17/2005
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/17/2005
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/17/2005
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/17/2005
Toluene - d8 (Surr)	96.0		%	EPA 8260B	11/17/2005
4-Bromofluorobenzene (Surr)	105		%	EPA 8260B	11/17/2005
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/23/2005
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/23/2005
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/23/2005
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/23/2005
Toluene - d8 (Surr)	99.3		%	EPA 8260B	11/23/2005
4-Bromofluorobenzene (Surr)	99.6		%	EPA 8260B	11/23/2005
Benzene	< 0.50	0.50	ug/L	EPA 8260B	11/18/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	11/18/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	11/18/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	11/18/2005
Toluene - d8 (Surr)	104		%	EPA 8260B	11/18/2005
4-Bromofluorobenzene (Surr)	100		%	EPA 8260B	11/18/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
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Approved By:  Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 46981

Date : 11/29/2005

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Project Name : **23rd Avenue Partners**

Project Number : **CB018D**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH as Diesel	Blank	<50	1000	1000	970	958	ug/L	M EPA 8015	11/18/05	97.0	95.8	1.28	70-130	25
TPH as Diesel	46981-10	590	20.0	20.0	511	435	mg/Kg	M EPA 8015	11/19/05	84.0	71.5	16.1	60-140	25
Benzene	46988-04	<0.0050	0.0394	0.0391	0.0406	0.0397	mg/Kg	EPA 8260B	11/17/05	103	102	1.55	70-130	25
Toluene	46988-04	<0.0050	0.0394	0.0391	0.0381	0.0374	mg/Kg	EPA 8260B	11/17/05	96.7	95.8	0.920	70-130	25
Methyl-t-Butyl Ether	46988-04	<0.0050	0.0394	0.0391	0.0458	0.0426	mg/Kg	EPA 8260B	11/17/05	116	109	6.54	70-130	25
Benzene	47055-06	<0.0050	0.0372	0.0374	0.0326	0.0341	mg/Kg	EPA 8260B	11/23/05	87.8	91.0	3.60	70-130	25
Toluene	47055-06	<0.0050	0.0372	0.0374	0.0315	0.0332	mg/Kg	EPA 8260B	11/23/05	84.8	88.7	4.41	70-130	25
Methyl-t-Butyl Ether	47055-06	<0.0050	0.0372	0.0374	0.0313	0.0327	mg/Kg	EPA 8260B	11/23/05	84.1	87.4	3.79	70-130	25
Benzene	46977-07	1.6	40.0	40.0	42.5	42.1	ug/L	EPA 8260B	11/18/05	102	101	1.16	70-130	25
Toluene	46977-07	<0.50	40.0	40.0	42.0	41.6	ug/L	EPA 8260B	11/18/05	105	104	1.09	70-130	25



Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 46981

Date : 11/29/2005

**QC Report : Laboratory Control Sample (LCS)**

Project Name : **23rd Avenue Partners**

Project Number : **CB018D**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
TPH as Diesel	20.0	mg/Kg	M EPA 8015	11/19/05	89.6	70-130
Benzene	0.0394	mg/Kg	EPA 8260B	11/17/05	104	70-130
Toluene	0.0394	mg/Kg	EPA 8260B	11/17/05	98.1	70-130
Methyl-t-Butyl Ether	0.0394	mg/Kg	EPA 8260B	11/17/05	111	70-130
Benzene	0.0370	mg/Kg	EPA 8260B	11/23/05	90.8	70-130
Toluene	0.0370	mg/Kg	EPA 8260B	11/23/05	88.8	70-130
Methyl-t-Butyl Ether	0.0370	mg/Kg	EPA 8260B	11/23/05	89.7	70-130
Benzene	40.0	ug/L	EPA 8260B	11/18/05	106	70-130
Toluene	40.0	ug/L	EPA 8260B	11/18/05	108	70-130

KIFF ANALYTICAL, LLC

Approved By:

  
Joe Kiff

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800





2795 2nd Street, Suite 300  
 Davis, CA 95616  
 Lab: 530.297.4800  
 Fax: 530.297.4802

SRG # / Lab No. 46981

Project Contact (Hardcopy or PDF to): jmoreno@clearwatergroup.com California EDF Report?  Yes  No

Company Address: 229 Lewisburg Ave, Pt. Richmond CA Sampling Company Log Code: CLWGO

Phone #: (510) 307-9943 Fax #: \_\_\_\_\_ Global ID: 70600177455

Project #: CB0180 P.O. #: \_\_\_\_\_ EDF Deliverable To (Email Address): jmoreno@clearwatergroup.com

Project Name: 23rd Avenue Partners Sampler Signature: [Signature]

Project Address: 1125 Miller Ave Oakland, CA

Sample Designation	Sampling		Container				Preservative			Matrix			Analysis Request	TAT	
	Date	Time	40 ml VOA	Sleeve	Poly	Glass	Tedlar	HCl	HNO <sub>3</sub>	None	Water	Soil			Air
S6-6	11/16/05	1330	X							X					<input checked="" type="checkbox"/> 12 hr
S8-4	11/16/05	1705	X			X			X		X				<input type="checkbox"/> 24 hr
															<input type="checkbox"/> 48 hr
															<input type="checkbox"/> 72 hr

Relinquished by: [Signature] Date: 11/17/05 Time: 1030 Received by: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date: 11/17/05 Time: 1040 Received by Laboratory: Michelle Spences KIFF Analytical

Chain-of-Custody Record and Analysis Request

Analysis Request												TAT			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	For Lab Use Only
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Remarks: \_\_\_\_\_

Bill to: \_\_\_\_\_

For Lab Use Only: Sample Receipt					
Temp °C	Initials	Date	Time	Therm. ID #	Coolant Present
					Yes / No



2795 2nd Street, Suite 300  
 Davis, CA 95616  
 Lab: 530.297.4800  
 Fax: 530.297.4802

SRG # / Lab No. 46981

Project Contact (Hardcopy or PDF To):  
 jmoreno@clearwatergroup.com

California EDF Report?  Yes  No

Company / Address:  
 229 Tewkesbury Ave Pt Richmond, CA

Sampling Company Log Code:  
 CW60

Phone #: (510) 307-9943 Fax #: (510) 307-9943 Global ID: T0600177455

Project #: CB0180 P.O. #: EDF Deliverable To (Email Address): jmoreno@clearwatergroup.com

Project Name: 23rd Avenue Partners Sampler Signature: *Jenny Helmer*

Chain-of-Custody Record and Analysis Request

Sample Designation	Sampling		Container				Preservative			Matrix			MTBE (EPA 8260B) per EPA 8021 level @ 5.0 ppb	MTBE (EPA 8260B) @ 0.5 ppb	BTEX (EPA 8260B)	TPH Gas (EPA 8260B)	5 Oxygenates (EPA 8260B)	7 Oxygenates (EPA 8260B)	Lead Scav (1,2 DCA & 1,2 EDB-EPA 8260B)	Volatile Halocarbons (EPA 8260B)	Volatile Organics Full List (EPA 8260B)	Volatile Organics (EPA 524.2 Drinking Water)	TPH as Diesel (EPA 8015M)	TPH as Motor Oil (EPA 8015M)	Total Lead (EPA 6010)	W.E.T. Lead (STLC)	TAT	For Lab Use Only	
	Date	Time	40 ml VOA	Sleeve	Poly	Glass	Tedlar	SO3S	HCl	HNO3	None	Water															Soil		Air
S5 (grab groundwater)	11/16/05	1300	X					X	X	X	X			X									X						01
S5-5		1100	X					X	X	X	X			X									X						02
S5-10		1120																											03
S5-15		1145																											04
S5-20		1210																											05
S7-5		1445																											06
S7-10		1505																											07
S7-15		1525																											08
S7-20		1545																											09

Relinquished by: *Jenny Helmer* Date: 11/17/05 Time: 1030 Received by: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date: 11/17/05 Time: 1040 Received by Laboratory: *Michelle Spencer* KIFF Analytical

Remarks: \_\_\_\_\_

Temp °C: 2.0 Initials: MAS Date: 11/17/05 Time: 1425 Therm. ID #: IR-1 Coolant Present:  Yes  No