ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
OFFICE OF THE DIRECTOR
1131 HARBOR BAY PARKWAY
ALAMEDA, CA 94502
(510) 567-6777
FAX (510) 337-9135

August 24, 2010

Michael Rabanal
1077 Mississippi St.
San Francisco, CA 94107

Setareh Sarrafan and Luella Penserga
387 Orange St. #2
Oakland, CA 94610

Mary Kranz as Administrator of the Estate of David Sabino Ulibarri
10106 Coronado Ave., NE,
Albuquerque, NM 87122

Subject: Monitoring Well Destruction for Case Closure of Fuel Leak Case No. RO0002921 Global ID # T06019730058, Ulibarri Property, 387 Orange Street, Oakland, CA 94610

Dear Ladies and Gentlemen:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37[h]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Health (ACEH) is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed.

SITE INVESTIGATION AND CLEANUP SUMMARY

Please be advised that the following conditions exist at the site:

- Residual pollution remaining in soil beneath the site includes TPH as diesel at concentrations of up to 85 ppm, TPH as motor oil at up to 110 ppm and TPH as gasoline at up to 8.8 ppm.
- Maximum concentrations of up to 2,600 ppb TPH as diesel and 1,100 ppb TPH as motor oil remain in groundwater beneath the site.

If you have any questions, please call Barbara Jakub at (510) 639-1287. Thank you.

Sincerely,

Donna L. Drogos, P.E.
LOP and Toxics Program Manager

Enclosures:
1. Remedial Action Completion Certificate
2. Case Closure Summary

cc: Cherie McCaulou SF- Regional Water Quality Control Board (w/enc) (via electronic mail: cmccaulou@waterboards.ca.gov)
Leroy Griffin Oakland Fire Department (w/enc via electronic mail: lgriffin@oaklandnet.com)
Barbara Jakub (w/ enc via e-mail), D. Drogos (w/ enc via e-mail), T. LeKhan (w/orig enc)

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REMEDIAL ACTION COMPLETION CERTIFICATE

Subject: Monitoring Well Destruction for Case Closure of Fuel Leak Case No. RO0002921 Global ID # T06019730058, Ulibarri Property, 387 Orange Street, Oakland, CA 94610

Dear Ladies and Gentlemen:

This letter confirms the completion of a site investigation and remedial action for the underground storage tanks formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank(s) are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25299.37 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.77 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

This notice is issued pursuant to subdivision (h) of Section 25299.37 of the Health and Safety Code.

Please contact our office if you have any questions regarding this matter.

Sincerely,

Ariu Levi
Director
Alameda County Environmental Health

CASE CLOSURE SUMMARY
LEAKING UNDERGROUND FUEL STORAGE TANK - LOCAL OVERSIGHT PROGRAM

I. AGENCY INFORMATION

Date: June 2, 2010

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 639-1287
Responsible Staff Person: Barbara Jakub	Title: Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: Ulibarri Property		
Site Facility Address: 387 Orange St., Oakland, CA 94610		
RB Case No.: NA	Local Case No.: NA	LOP Case No.: RO0002921
URF Filing Date: 3/23/06	Geotracker ID: T06019730058	APN: 10-794-6

Responsible Parties	Addresses	Phone Numbers
David Ulibarri Heir of Estate, Mary Kranz	10106 Coronado Ave., NE, Albuquerque, NM 87122	(505)342-7617
Setareh Sarrafan, Luella Penserga, Michael Rabanal	387 Orange St., #2, Oakland, CA 94610	---

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
1	1,000	Heating Oil	Removed	8/27/07
Piping			Fill pipe removed with tank. Rest of piping left in place	8/27/07

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Tank leak and pipe leak		
Site characterization complete? No	Date Approved By Oversight Agency: -----	
Monitoring wells installed? Yes	Number: 1	Proper screened interval? Yes*
Highest GW Depth Below Ground Surface: 16.06 ft bgs	Lowest Depth: 26.98	Flow Direction: West to southwest**
Most Sensitive Current Use: Potential drinking water source.		

* Well properly screened prior to 2009 sampling events, well screens submerged by up to 5 feet after 2009.
** Only one groundwater monitoring well installed, gradient from adjacent site RO#456

Summary of Production Wells in Vicinity: A well survey performed for a site approximately 1,100 feet to the northeast did not identify any irrigation, domestic or production wells within a half-mile radius.	
Are drinking water wells affected? No	Aquifer Name: East Bay Plain
Is surface water affected? No	Nearest SW Name: Glen Echo Creek 1,500 feet N/NW
Off-Site Beneficial Use Impacts (Addresses/Locations): None Identified	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health and City of Oakland Fire Department

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL

Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	1-1,000-gallon	Ecology Control Industries 255 Parr St., Richmond, CA	8/27/07
Piping	Unreported	Fill pipe removed with UST. Rest of piping remains in place.	8/27/07
Free Product	400 gallons	Alviso Independent Oil, 5002 Archer St., Alviso, CA	8/27/07
Soil	20 yd^3	Newby Island, 1601 Dixon Landing Rd., Milpitas, CA	8/27/07
Groundwater	None reported	---	---

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP
(Please see Attachments 1 through 6 for additional information on contaminant locations and concentrations)

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	8.8	8.8	NA	NA
TPH (Diesel)	15,000 (T2-13.5-14')	85	2,400,000	2,600
TPH (Motor Oil)	110	110	1,100	1,100
Oil and Grease	NA	NA	NA	NA
Benzene	<0.005	<0.005	<0.5	<0.5
Toluene	<0.005	<0.005	<0.5	<0.5
Ethylbenzene	0.034	<0.005	<0.5	<0.5
Xylenes	0.12	0.011	<0.5	<0.5
Heavy Metals (Cd, Cr, Pb, Ni, Zn)	4.2^	4.2^	NA	NA
MTBE	<0.0045*	<0.0045*	<2.0**	<0.5***
Other (8240/8270)	NA	NA	NA	NA

NA Not anlayzed

^ 4.2 ppm Pb: Cd, Cr, Ni and Zn not analyzed.

* <4.5 µg/kg MTBE; <91 µg/kg TBA, <4.5 µg/kg TAME, <4.5 µg/kg ETBE, <4.5 µg/kg DIPE, <910 µg/kg EtOH, <4.5 µg/kg EDB, and <4.5 µg/kg EDC

** <2.0 ppb MTBE; <10 ppb TBA, <0.5 ppb TAME, <0.5 ppb ETBE, <0.5 ppb DIPE, <1000 ppb EtOH, <0.5 ppb EDB, and <0.5 ppb EDC

*** <0.5 ppb MTBE; <10 ppb TBA, <0.5 ppb TAME, <0.5 ppb ETBE, <0.5 ppb DIPE, <1000 ppb EtOH, <0.5 ppb EDB, and <0.5 ppb EDC

Site History and Description of Corrective Actions:

The site is a residential building (Four-plex) located in a residential neighborhood.

An investigation occurred in 2006 in which three borings (T1 through T-3) were advanced at the site to obtain soil samples after discovery of a fill pipe in the sidewalk. The maximum concentrations were 15,000mg/kg TPHd from near the UST and 96 TPHd from beneath the piping.

On April 19, 2007, four borings (B-1 through B-4) were advanced in the vicinity of the UST. Groundwater was encountered in two borings at approximately 21 feet bgs and maximum hydrocarbon concentrations were indicative of free product at 2,400,000 µg/L TEHd. No BTEX, oxygenates, or lead scavengers were detected in groundwater or soil samples. The maximum hydrocarbon concentration in soil was detected at 18 ft bgs in B-1 at 100 mg/kg.

The 1,000-gallon heating oil UST was removed on August 27, 2007. The UST was removed and soil was overexcavated to 15 feet bgs. Soil samples collected from the bottom of the excavation contained maximum concentrations of 85 ppm TEHd, 8.8 ppm TVHg, 110 ppm TVHmo and 4.2 ppm lead.

On November 17, 2008 monitoring well MW-1 was installed in the planter area next to the sidewalk that previously contained the heating oil UST and close to boring B-1. At this time, 75 pounds of oxygen releasing compound (ORC) was injected adjacent and in the middle of the tank pit at three injection locations.

Groundwater monitoring was conducted for an additional 5 quarters. Dissolved oxygen levels remain elevated in the subsurface.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes		
Does corrective action protect public health for current land use? Alameda County Environmental Health staff does not make specific determinations concerning public health risk. However, based upon the information available in our files to date, it does not appear that the release would present a risk to human health based upon current land use and conditions.		
Site Management Requirements: None.		
Should corrective action be reviewed if land use changes? No		
Was a deed restriction or deed notification filed? No		Date Recorded: ---
Monitoring Wells Decommissioned: No	Number Decommissioned: 0	Number Retained: 1
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: None		

V. ADDITIONAL COMMENTS, DATA, ETC.

Considerations and/or Variances:

- Overexcavation of contaminated soil limited to a maximum depth of 15 feet due to presence of overhead lines.

Conclusion:

Alameda County Environmental Health staff believe that the levels of residual contamination do not pose a significant threat to water resources, public health and safety, and the environment based upon the information available in our files to date. No further investigation or cleanup for the fuel leak case is necessary. ACEH staff recommend case closure for this fuel leak site.

VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Barbara J. Jakub, P.G.	Title: Hazardous Materials Specialist
Signature: Barbara J. Jakub	Date: 6/2/10
Approved by: Donna L. Drogos, P.E.	Title: Division Chief
Signature: Donna L. Drogos	Date: 06/02/10

This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions.

VII. REGIONAL BOARD NOTIFICATION

Regional Board Staff Name: Cherie McCaulou	Title: Engineering Geologist
Notification Date: 6/2/2010	

VIII. MONITORING WELL DECOMMISSIONING

Date Requested by ACEH: 7/12/10	Date of Well Decommissioning Report: 8/18/10	
All Monitoring Wells Decommissioned: Yes No	Number Decommissioned: 1	Number Retained: 0
Reason Wells Retained: — —		
Additional requirements for submittal of groundwater data from retained wells: — —		
ACEH Concurrence - Signature: Barbara J. Jakub		Date: 8/26/10

Attachments:

1. Site Vicinity Map (A pp1)
2. Site Plans (B pps 2-3)
3. Soil Analytical Data (C pps 4-6)
4. Groundwater Analytical Data (D pps 7-8)
5. Boring Logs (E pps 9-15)
6. Cross Section (F pp 16)

This document and the related CASE CLOSURE LETTER & REMEDIAL ACTION COMPLETION CERTIFICATE shall be retained by the lead agency as part of the official site file.

Jakub, Barbara, Env. Health

From: Jakub, Barbara, Env. Health
Sent: Wednesday, June 02, 2010 3:19 PM
To: 'Cherie MCcaulou'
Subject: RO2921 Closure
Attachments: RO2921_CLOS_L_2010-06-02.pdf

Cherie,

Attached is a closure summary for RO0002921: Ulibarri Property located at 387 Orange Street, Oakland to comply with the RWQCB's 30-day review period. If no comments are received within the 30-day period, ACEH will proceed with case closure.

Please contact me should you have any comments or questions regarding the subject site.

Regards,

Barbara Jakub, P.G.
Alameda County Environmental Health
(510) 639-1287 (direct)
(510) 337-9335 (fax)
barbara.jakub@acgov.org

Online case files are available at the website below
http://www.acgov.org/aceh/lop/resources.htm

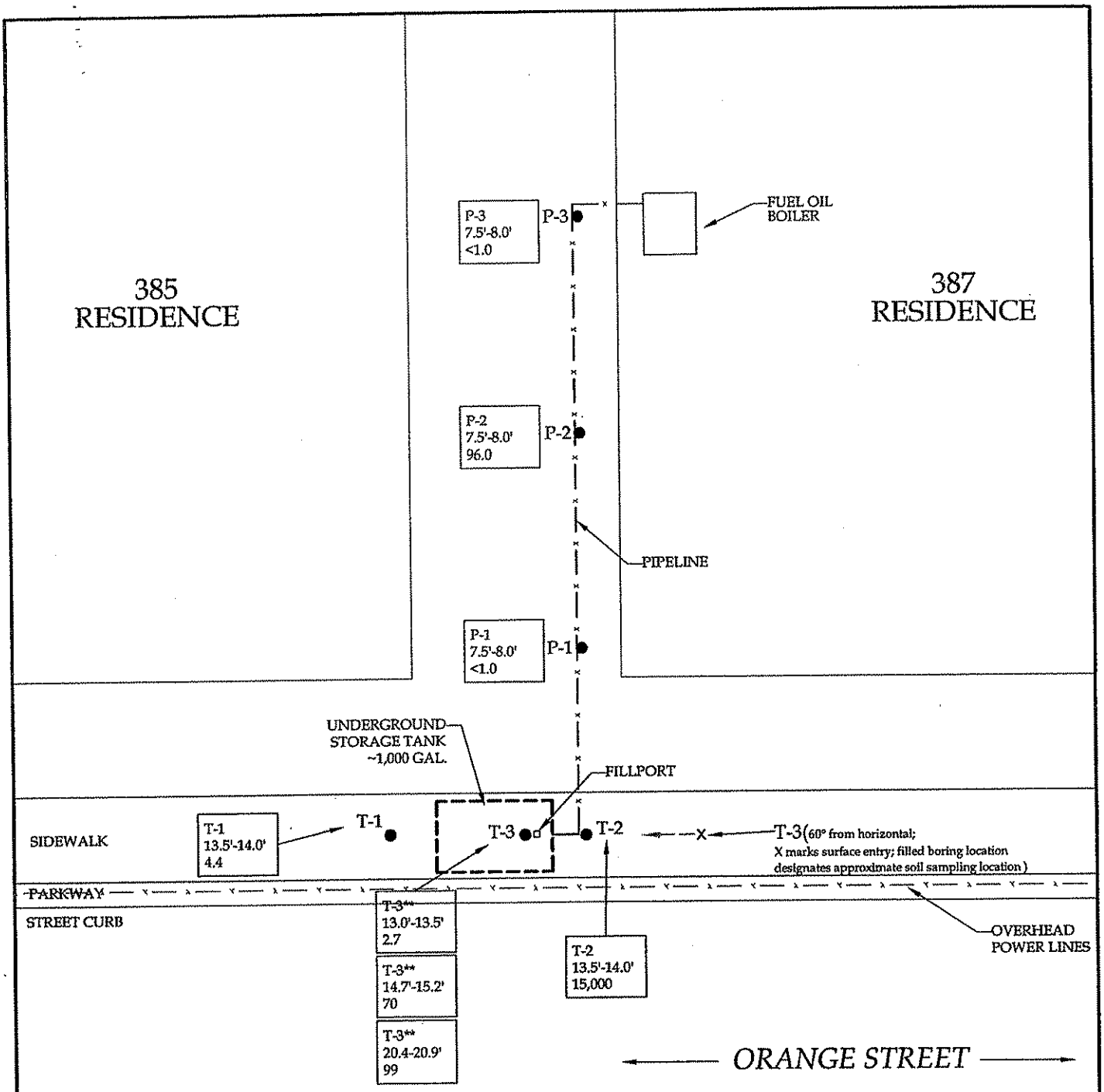
N

SITE LOCATION ON AERIAL PHOTO

385-387 Orange St. Oakland, CA	By: MJC	SEPTEMBER 2007
	Figure 1	

STELLAR
ENVIRONMENTAL SOLUTIONS, INC
GEOSCIENCE & ENGINEERING CONSULTING

2007-09-01



LEGEND

- ● T-1 to T-3 (3) TANK SAMPLES
- ● P-1 to P-3 (3) PIPELINE SAMPLES

T-3
20.4-20.9'
99
= SOIL SAMPLE #
DEPTH BGS
ANALYTICAL RESULTS IN MG/KG

ANALYTICAL RESULTS= TPHd(TOTAL PARTS HYDROCARBONS AS DIESEL)
CONCENTRATIONS IN MG/KG

T-3** SEE FIGURE 3 (CROSS SECTION) FOR SAMPLE LOCATIONS

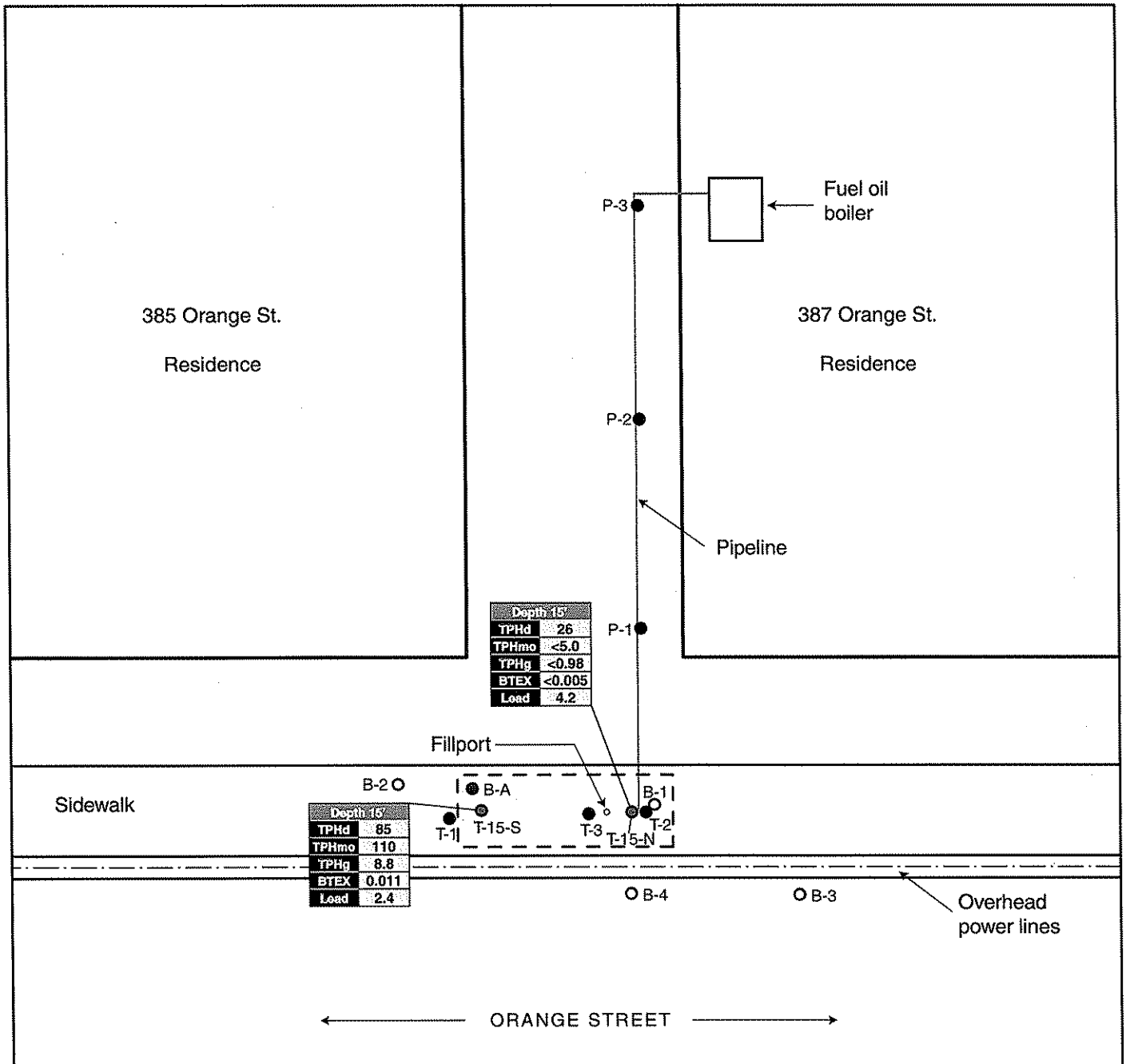
0 10 20
APPROXIMATE SCALE IN FEET
Scale: 1" = 10'

N

SITE MAP SHOWING UST, BORING LOCATIONS AND ANALYTICAL RESULTS FOR DIESEL
Estate of D. Ulibarri
385-387 Orange Street
Oakland, California

CLEARWATER GROUP

Project No.	Figure Date	Figure
GB002B	3/06	2



LEGEND

- UST Confirmation sample
- TPHd Total petroleum hydrocarbons as diesel
- BTEX Benzene, toluene, ethyl benzene, xylenes
- THPmo Total petroleum hydrocarbons as motor oil
- THPg Total petroleum hydrocarbons as gasoline
- Former UST excavation

Concentrations in mg/kg

- P-2 Clearwater group pipeline sample (2006)
- T-2 Clearwater group tank sample (2006)
- B-1 SES Boring (2007)
- B-A Abandoned boring location (SES, 2007)

0 10

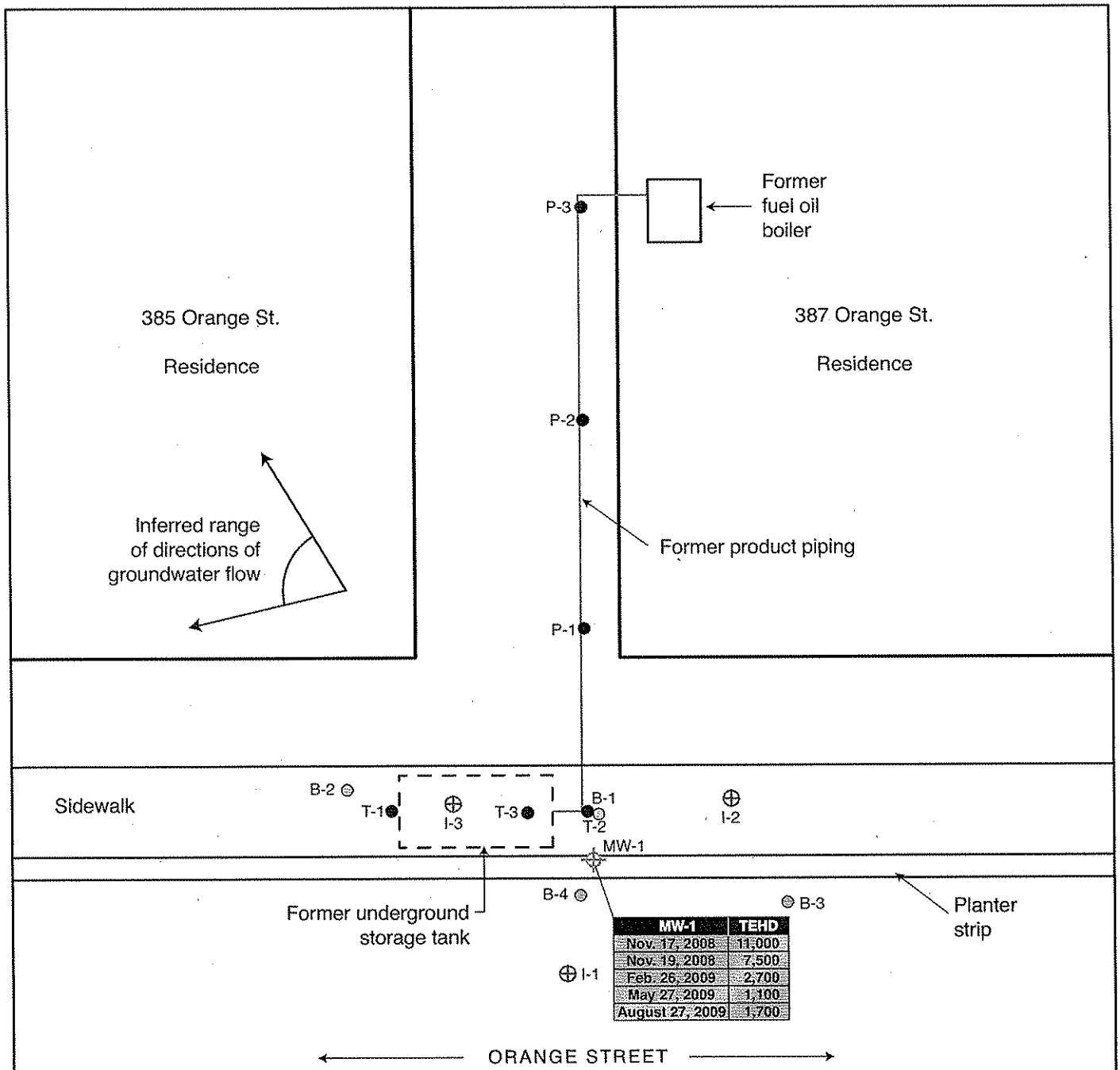
APPROX. SCALE IN FEET

UST CONFIRMATION SOIL ANALYTICAL RESULTS

385-387 Orange St. Oakland, CA	By: MJC	APRIL 2010
	Figure 2	

STELLAR ENVIRONMENTAL SOLUTIONS, INC
GEOSCIENCE & ENGINEERING CONSULTING

2007-09-22



LEGEND

- ⊕ I-1 Location of ORC injection point (SES 2008)
- ⊕ MW-1 Location of monitoring well (SES 2008)
- ● T-2 Clearwater Group tank sample (2006)
- ● P-2 Clearwater Group pipeline sample (2006)
- ◎ B-1 SES boring (2007)
- Location of former UST (CWG, 2006; SES, 2007)

TPHd=Total petroleum hydrocarbons as diesel concentrations in µg/L

0 10

APPROX. SCALE IN FEET

Modified from original source: Clearwater Group

CONCENTRATION OF TEH-DIESEL IN MONITORING WELL MW-1

387 Orange St. Oakland, CA	By: MJC	SEPTEMBER 2009	STELLAR Environmental Solutions, Inc Geoscience & Engineering Consulting
	Figure 3		

2007-09-21

Table 1. Summary of Analytical Results

Soil Samples Under UST			Analytical Results				
Date	Sample Name	Vertical Depth of Sample (ft)*	TPH-d mg/kg	Benzene mg/kg	Toluene mg/kg	Ethyl-benzene mg/kg	Total Xylenes mg/kg
2/28/06	T1 13.5-14.0'	13.5-14.0	4.4	<0.0050	<0.0050	<0.0050	<0.0050
2/28/06	T2 13.5-14.0'	13.5-14.0	15,000	<0.0050	<0.0050	0.034	0.12
2/28/06	T3 15-15.5'	13.0-13.5*	2.7	<0.0050	<0.0050	<0.0050	<0.0050
2/28/06	T3 17-17.5	14.7-15.2*	70	<0.0050	<0.0050	<0.0050	0.013
2/28/06	T3 23.5-24.0'	20.4-20.9*	99	<0.0050	<0.0050	<0.0050	<0.0050
Soil Samples Along Fuel Line							
3/6/06	P-1	7.5-8.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
3/6/06	P-2	7.5-8.0	96	<0.0050	<0.0050	<0.0050	<0.0050
3/6/06	P-3	7.5-8.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050

* Boring T3 was drilled at a 60° angle (measured from horizontal) in order to reach under the UST (Figure 3). The depth shown as part of the Sample Name was measured along the 60° angle boring.

The laboratory provided these comments in their report narrative (for samples along the UST only). "Hydrocarbons reported as TPH as Diesel do not exhibit a typical Diesel chromatographic pattern for samples T1 13.5-14.0' and T3 15-15.5'. These hydrocarbons are higher boiling point than typical diesel fuels. Samples T2 13.5-14.0', T3 17-17.5' and T3 23.5-24.0' were analyzed past hold times for 8260 analytes".

CONCLUSIONS

The soil samples indicate that a high concentration of petroleum hydrocarbons occurred around the northeast end of the tank (15,000 mg/kg of TPH-d). However, soil under the southwest end of the UST had a very low concentration of petroleum hydrocarbons (4.4 mg/kg of TPH-d). The TPH-d concentrations diminish rapidly under and to the southwest end of the UST (Figure 3). The petroleum hydrocarbons could either be from a leak in the UST, a leak at the fill pipe/UST juncture, or from spillage at the fill pipe seeping downward along the pipe. The fill pipe appears to be located at the northwest end of the UST, as

Table 1
Soil and Groundwater Analytical Results
387 Orange Street, Oakland, California
April 19, 2007

Sample ID	TEHd	BTEX	MTBE	Fuel Oxygenates	Lead Scavengers	Ethanol
Grab-Groundwater Samples [(a)]						
B-1-GW	**2,400,000**	ND	ND	ND	ND	ND
B-2-GW	**460**	ND	ND	ND	ND	ND
Borehole Soil Samples [(b)]						
B-1-13	2.5	ND	ND	ND	ND	ND
B-1-18	**100**	ND	ND	ND	ND	ND
B-2-14.5	3.7	ND	ND	ND	ND	ND
B-2-18	< 1.0	ND	ND	ND	ND	ND
B3-19	4.2	ND	ND	ND	ND	ND
B4-14	22	ND	ND	ND	ND	ND
B4-18	< 1.0	ND	ND	ND	ND	ND
B4-23	1.7	ND	ND	ND	ND	ND
ESLs	**100**	**1.0**	**40**	**30**	**13**	**5.0**

Notes:

[(a)] Groundwater concentrations are in micrograms per liter (µg/L).

[(b)] Soil concentrations are in milligrams per kilogram (mg/kg).

BTEX = benzene, toluene, ethylbenzene, and total xylenes
MTBE = methyl tertiary-butyl ether
TEHd = total extractable hydrocarbons as diesel
Fuel oxygenates = TBA, DIPE, ETBE, and TAME
Lead scavengers = EDC and EDB

ND = none detected above laboratory reporting limit

ESLs = Water Board Environmental Screening Levels for residential sites where groundwater is a potential drinking water resource

Samples in **bold-face type** equal or exceed the ESL criteria.

Table 1
August 2007 UST Removal Soil Sampling Analytical Results
387 Orange Street, Oakland, California

Sample I.D.	Sample Depth (feet)	TEHd	TVHg	TVHmo	Benzene	Toluene	Ethyl benzene	Total Xylenes	Total Lead
T-15-N (northeast)	15	26	*<0.98*	*<5.0*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	4.2
T-15-S (southwest)	15	85	8.8	110	*<0.005*	*<0.005*	*<0.005*	0.011	2.4
Soil ESLs		100	100	1,000	0.044	2.9	3.3	2.3	150

Notes:

ESLs = Water Board Environmental Screening Levels for residential sites where groundwater *is* a potential drinking water resource

TEHd = total extractable hydrocarbons – diesel range

TVHg = total volatile hydrocarbons – gasoline range

TVHmo = total volatile hydrocarbons – motor oil range (includes oil & grease range)

Samples in **bold-face type** exceed the ESL criterion. All results are reported in mg/kg.

REGULATORY STATUS

The UST has not been under regulatory oversight through permitting or other mechanisms. There are no records in possession of the current property owners pertaining to installation or usage of the UST, and it was presumably installed at the same time the residential building was constructed, approximately 80 years ago.

Oakland Fire Department

The Oakland Fire Department (OFD) has permitting responsibility and regulatory oversight for removal of the UST. If there is no indication of subsurface contamination (i.e., all samples collected come back with non-detectable results), the Oakland Fire department can close the case. If the UFST removal proceeded according to their requirements but there is evidence of some subsurface contamination then the OFD will approve the UST closure but send out a notification to Alameda County Department of Environmental Health (ACEH) whom will evaluate the issues associated with contamination.

In this particular case there were environmental investigations that occurred before the UST removal because of the physical constraints to removal of the UST and the agreement of the OFD to allow an in-place closure if it was demonstrated to ACEH satisfaction that there was no contamination.

Table 1 Summary of Historical Groundwater Analytical Results and Depth to Groundwater
387 Orange Street, Oakland, California

Sample ID	Depth to Groundwater feet BTOC (a)	TEHmo	TEHd	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
April 19, 2007 Hydropunch Grab-Groundwater Samples								
B1	21	*NA*	**2,400,000**	*ND*	*ND*	*ND*	*ND*	*NA*
B2	22	*NA*	**460**	*ND*	*ND*	*ND*	*ND*	*NA*
November 17, 2008 Baseline Groundwater Sample								
MW-1	18.50	*NA*	**11,000**	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<2.0*
November 19, 2008 Post-Purge Sample								
MW-1	26.98	*NA*	**7,500**	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<2.0*
February 27, 2009 Groundwater Sample								
MW-1	18.02	*NA*	**2,700**	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<2.0*
May 27, 2009 Groundwater Sample								
MW-1	16.06	*NA*	**1,100**	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<2.0*
August 27, 2009 Groundwater Sample								
MW-1	17.01	*NA*	**1,700**	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<2.0*
May 5, 2010 Groundwater Sample								
MW-1	15.62	**1,100**	**2,600**	*NA*	*NA*	*NA*	*NA*	*NA*
ESLs	-	370	100	1.0	40	30	20	5.0

Notes:

(a) BTOC = below top of casing; top of casing is 1 foot below ground surface. Initial pre-sampling depths to water in feet or first encountered groundwater for hydropunch samples

TEHmo = total extractable hydrocarbons as motor oil

ESLs = Water Board Environmental Screening Levels for residential sites where groundwater is a potential drinking water resource (Water Board, 2008); Sample concentration values in **bold-face** type equal or exceed the ESL criteria.

Post-purge = after purging well dry, removal of approximately 1.17 gallons from monitoring well;

MTBE = methyl tertiary-butyl ether; TEHd = total extractable hydrocarbons as diesel;

ND = none detected above laboratory reporting limit; NA = not analyzed

Monitoring Well MW-1: 30 feet deep, screened (0.01 inch slot) from 20 -30 feet bgs

Groundwater concentrations are reported in micrograms per liter (µg/L)

Table 2
Groundwater Well Sample Analytical Results
Natural Attenuation Indicators
387 Orange Street, Oakland, California

Sample I.D.	Nitrates	Sulfates	Methane	Dissolved Oxygen (a)	Ferrous Iron (a)	Redox Potential (milliVolts) (a)
Baseline Results - November 17, 2008						
MW-1	2.8	59	*<0.005*	8.06	1.13	48.4
Post-Purge Results – November 19, 2008						
MW-1	3.4	110	0.077	3.13	0.02	250
Verification Sampling – February 26, 2009						
MW-1	2.5	28	*<0.005*	19.86 to >19.99	1.44	-24
Verification Sampling – May 27, 2009						
MW-1	5.4	36	*<0.005*	13.62 – 16.94	0.84	92
Verification Sampling – August 27, 2009						
MW-1	5.5	40	*<0.005*	18.28	*> 3.30*	114
Verification Sampling – May 5, 2010						
MW-1	4.4	33	*<0.005*	15.1	1.09	252

Notes:
(a) = post purge measurement collected in field;
All groundwater concentrations are reported in milligrams per liter (mg/L) unless otherwise stated.

DISCUSSION OF RESULTS AND ENHANCED NATURAL ATTENUATION INDICATORS

The Site Conceptual Model, supported by the data collected to date, indicates limited leakage occurred at the residential underground fuel storage tank and/or piping that migrated downward in soil without lateral spreading, and locally dissolved in the groundwater. The limited nature of the dissolved hydrocarbons suggests a stratigraphic barrier has limited its outward migration. To the extent that downgradient diffusion will occur, natural attenuation should prevail.

Pre-purge and post-purge groundwater samples, collected from the monitoring well when it was installed in November 2008, were analyzed for indicators of natural biodegradation (enhanced by

BORING/WELL CONSTRUCTION LOG

CLEARWATER GROUP, INC.
Environmental Services
229 Tewksbury Ave, Point Richmond, California 94801

CLIENT/ 385-387 Orange Street
LOCATION Oakland, California

DRILLING CONTRACTOR Fast- Tek
DRILL RIG OPERATOR Eric Austin
DRILL RIG TYPE Geo Probe 5400
LOGGED BY J. Gekov
REVIEWED BY R. Nelson, P.G.
PLANNED USE soil investigation
DATES DRILLED: 2/28/06
DRILLING START 1530
DRILLING FINISH 1700
Approximate First Encountered Water Depth
Approximate Stabilized Water Depth

BORING/ WELL NUMBER T-1
PROJECT NUMBER GB002B
BORING DEPTH 22'
WELL DEPTH --
SCREEN SLOT SIZE --
BORE/CASE DIAMETER 2"
FILTER PACK --
WELL MATERIAL --
DEPTH TO FIRST WATER --

DEPTH (feet)	SAMPLING: BLOWS/ 6" INTERVAL	SAMPLING: INTERVAL	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL TPHd (mg/kg)	WATER LEVEL	OVM READING (ppm)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	LITHOLOGY	USCS SYMBOL	LITHOLOGIC DESCRIPTION/ NOTES	WELL CONSTRUCTION DETAILS
0												(0.0- 0.3) Concrete Sidewalk	0
1											CL	(0.3- 2.0) Sandy lean clay with gravel, dark brown, soft, moist, low plasticity	1
2						0							2
3												(2.0- 22.0) Clayey sand, light brown, dense, moist, orange/black mottling, minor gravel	3
4						0							4
5													5
6						0	10	65	25				6
7													7
8						0							8
9													9
10						0							10
11													11
12						0					SC		12
13													13
14			GOOD	4.4		0							14
15													15
16						0							16
17													17
18						0							18
19													19
20						0							20
21													21
22						0						EOH	22
23													23
24													24

Analytical concentration of TPHd in mg/kg

BORING/WELL CONSTRUCTION LOG

CLEARWATER GROUP, INC.
Environmental Services
229 Tewksbury Ave, Point Richmond, California 94801

CLIENT/ 385-387 Orange Street
LOCATION Oakland, California

DRILLING CONTRACTOR	Fast- Tek
DRILL RIG OPERATOR	Eric Austin
DRILL RIG TYPE	Geo Probe 5400
LOGGED BY	J. Gekov
REVIEWED BY	R. Nelson, P.G.
PLANNED USE	soil investigation
DATES DRILLED:	2/28/06
DRILLING START	1400
DRILLING FINISH	1500

▽ Approximate First Encountered Water Depth
▼ Approximate Stabilized Water Depth

BORING/ WELL NUMBER	T-2
PROJECT NUMBER	GB002B
BORING DEPTH	14'
WELL DEPTH	--
SCREEN SLOT SIZE	--
BORE/CASE DIAMETER	2"
FILTER PACK	--
WELL MATERIAL	--
DEPTH TO FIRST WATER	--

DEPTH (feet)	SAMPLING: BLOWS/ 6" INTERVAL	SAMPLING: INTERVAL	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL TPHd (mg/kg)	WATER LEVEL	OVM READING (ppm)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	LITHOLOGY	USCS SYMBOL	LITHOLOGIC DESCRIPTION/ NOTES	WELL CONSTRUCTION DETAILS
0												(0.0- 0.3) Concrete Sidewalk	
1						0	10	30	60		CL	(0.3- 1.0) Sandy lean clay with gravel, dark brown, soft, moist, low plasticity	
2												(1.0- 12.0) Clayey sand with gravel, light brown,medium dense, moist, orange/black mottling, gravel rounded to angular	
3						0	20	60	20				
4													
5						0							
6											SC		
7						0							
8													
9						0							
10													
11						13							
12								80	20			(12.0- 14.0) Clayey sand, green, dense, moist, *hydrocarbon odor @ 12-14'	
13											SC		
14			GOOD	15,000		78						EOH	
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													

Analytical concentration of TPHd in mg/kg

BORING/WELL CONSTRUCTION LOG

CLEARWATER GROUP, INC.
Environmental Services
229 Tewksbury Ave, Point Richmond, California 94801

CLIENT/ 385-387 Orange Street
LOCATION Oakland, California

DRILLING CONTRACTOR	Fast- Tek
DRILL RIG OPERATOR	Eric Austin
DRILL RIG TYPE	Geo Probe 5400
LOGGED BY	J. Gekov
REVIEWED BY	R. Nelson, P.G.
PLANNED USE	soil investigation
DATES DRILLED:	2/28/06
DRILLING START	1215
DRILLING FINISH	1330
▽ Approximate First Encountered Water Depth	
▼ Approximate Stablized Water Depth	

BORING/ WELL NUMBER	T-3
PROJECT NUMBER	GB002B
BORING DEPTH	24'
WELL DEPTH	--
SCREEN SLOT SIZE	--
BORE/CASE DIAMETER	2"
FILTER PACK	--
WELL MATERIAL	--
DEPTH TO FIRST WATER	--

DEPTH (feet)	SAMPLING: BLOWS/ 6" INTERVAL	SAMPLING: INTERVAL	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL TPHd (mg/kg)	WATER LEVEL	OVM READING (ppm)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	LITHOLOGY	USCS SYMBOL	LITHOLOGIC DESCRIPTION/ NOTES	WELL CONSTRUCTION DETAILS
0												(0.0- 0.3) Concrete Sidewalk	
1						0	5	20	75		CL	(0.3- 2.0) Sandy lean clay with gravel, dark brown, soft, moist, low plasticity	
2												(2.0- 16.0) Silty sand with gravel, light brown, moist, dense, orange/black mottling, gravel is well rounded to angular	
3						0							
4							15	55	30				
5						0							
6													
7						0							
8													
9						0					SM		
10													
11						0							
12													
13						0							
14													
15			GOOD	2.7		0							
16						38	5	60	35		SC	(16.0- 18.0) Silty sand with clay, green, dense, moist, *hydrocarbon odor, slight oily sheen @16-18'	
17			GOOD	70									
18						10					SC	(18.0- 20.0) color change to light brown, *hydrocarbon odor @ 18-24'	
19						16							
20						3					SC	(20.0- 23.5) color change to green	
21						41							
22						5							
23													
24			GOOD	99		0					SC	(23.5- 24.0) color change to light brown	
25												EOH	

Analytical concentration of TPHd in mg/kg

Boring is angled 60 degrees from ground surface-Boring and sample interval depth is apparent

BORING/WELL CONSTRUCTION LOG

CLEARWATER GROUP, INC.
Environmental Services
229 Tewksbury Ave, Point Richmond, California 94801

CLIENT/ 385-387 Orange Street
LOCATION Oakland, California

DRILLING CONTRACTOR Fast- Tek
DRILL RIG OPERATOR Eric Austin
DRILL RIG TYPE Hand Auger
LOGGED BY J. Gekov
REVIEWED BY R. Nelson, P.G.
PLANNED USE soil investigation
DATES DRILLED: 3/6/06
DRILLING START 1230
DRILLING FINISH 1300
▽ Approximate First Encountered Water Depth
▼ Approximate Stabilized Water Depth

BORING/ WELL NUMBER P-1
PROJECT NUMBER GB002B
BORING DEPTH 8'
WELL DEPTH --
SCREEN SLOT SIZE --
BORE/CASE DIAMETER 1"
FILTER PACK --
WELL MATERIAL --
DEPTH TO FIRST WATER --

DEPTH (feet)	SAMPLING: BLOWS/6" INTERVAL	SAMPLING: INTERVAL	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL TPHd (mg/kg)	WATER LEVEL	OVM READING (ppm)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	LITHOLOGY	USCS SYMBOL	LITHOLOGIC DESCRIPTION/ NOTES	WELL CONSTRUCTION DETAILS
0												(0.0- 3.0) Silty clay, dark brown, moist, organic debris, low plasticity, some gravel and sand, soft to stiff	0
1													1
2						0	10	10	80		CL		2
3												(3.0- 4.0) Silty clay with sand and gravel, dark brown, moist, stiff	3
4						0	15	10	75		CL		4
5												(4.0- 8.0) Poorly graded gravel with sand and clay, light brown/orange, loose to medium dense, moist, poor recovery	5
6						0					GP		6
7													7
8			POOR	<1.0		0	60	30	10		GP		8
8												EOH	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
21													21
22													22
23													23
24													24

Analytical concentration of TPHd in mg/kg

BORING/WELL CONSTRUCTION LOG

CLEARWATER GROUP, INC.
Environmental Services
229 Tewksbury Ave, Point Richmond, California 94801

CLIENT/ 385-387 Orange Street
LOCATION Oakland, California

DRILLING CONTRACTOR	Fast- Tek
DRILL RIG OPERATOR	Eric Austin
DRILL RIG TYPE	Hand Auger
LOGGED BY	J. Gekov
REVIEWED BY	R. Nelson, P.G.
PLANNED USE	soil investigation
DATES DRILLED:	3/6/06
DRILLING START	1315
DRILLING FINISH	1345

▽ Approximate First Encountered Water Depth
▼ Approximate Stabilized Water Depth

BORING/ WELL NUMBER	P-2
PROJECT NUMBER	GB002B
BORING DEPTH	8'
WELL DEPTH	--
SCREEN SLOT SIZE	--
BORE/CASE DIAMETER	1"
FILTER PACK	--
WELL MATERIAL	--
DEPTH TO FIRST WATER	--

DEPTH (feet)	SAMPLING: BLOWS/ 6" INTERVAL	SAMPLING: INTERVAL	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL TPHd (mg/kg)	WATER LEVEL	OVM READING (ppm)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	LITHOLOGY	USCS SYMBOL	LITHOLOGIC DESCRIPTION/ NOTES	WELL CONSTRUCTION DETAILS
0											CL	(0.0- 1.0) Silty clay with sand, dark brown, moist, low plasticity, trace gravel, soft	
1						0	5	15	80			(1.0- 8.0) Poorly graded gravel with sand and clay, medium brown/orange, medium dense, moist, poor recovery	
2													
3						0							
4											GP		
5						0	60	20	20				
6													
7						0							
8		XXXX	POOR	96								EOH	
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													

Analytical concentration of TPHd in mg/kg

BORING/WELL CONSTRUCTION LOG

CLEARWATER GROUP, INC.
Environmental Services
229 Tewksbury Ave, Point Richmond, California 94801

CLIENT/ 385-387 Orange Street
LOCATION Oakland, California

DRILLING CONTRACTOR Fast- Tek
DRILL RIG OPERATOR Eric Austin
DRILL RIG TYPE Hand Auger
LOGGED BY J. Gekov
REVIEWED BY R. Nelson, P.G.
PLANNED USE soil investigation
DATES DRILLED: 3/6/06
DRILLING START 1350
DRILLING FINISH 1420
Approximate First Encountered Water Depth
Approximate Stabilized Water Depth

BORING/ WELL NUMBER P-3
PROJECT NUMBER GB002B
BORING DEPTH 8'
WELL DEPTH --
SCREEN SLOT SIZE --
BORE/CASE DIAMETER 1"
FILTER PACK --
WELL MATERIAL --
DEPTH TO FIRST WATER --

DEPTH (feet)	SAMPLING: BLOWS/ 6" INTERVAL	SAMPLING: INTERVAL	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL TPHd (mg/kg)	WATER LEVEL	OVM READING (ppm)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	LITHOLOGY	USCS SYMBOL	LITHOLOGIC DESCRIPTION/ NOTES	WELL CONSTRUCTION DETAILS
0													0
1						0	5	15	80		CL	(0.0- 2.0) Silty clay with sand, dark brown, moist, low plasticity, trace gravel, soft	1
2													2
3						0					GP	(2.0- 8.0) Poorly graded gravel with sand and clay, dark brown, loose to medium dense, moist, poor recovery	3
4													4
5						0							5
6													6
7													7
8			POOR	<1.0		0	65	25	10			EOH	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
21													21
22													22
23													23
24													24

Analytical concentration of TPHd in mg/kg

STELLAR
ENVIRONMENTAL SOLUTIONS, INC
GEOSCIENCE & ENGINEERING CONSULTING

Soil Boring and Well Construction Log

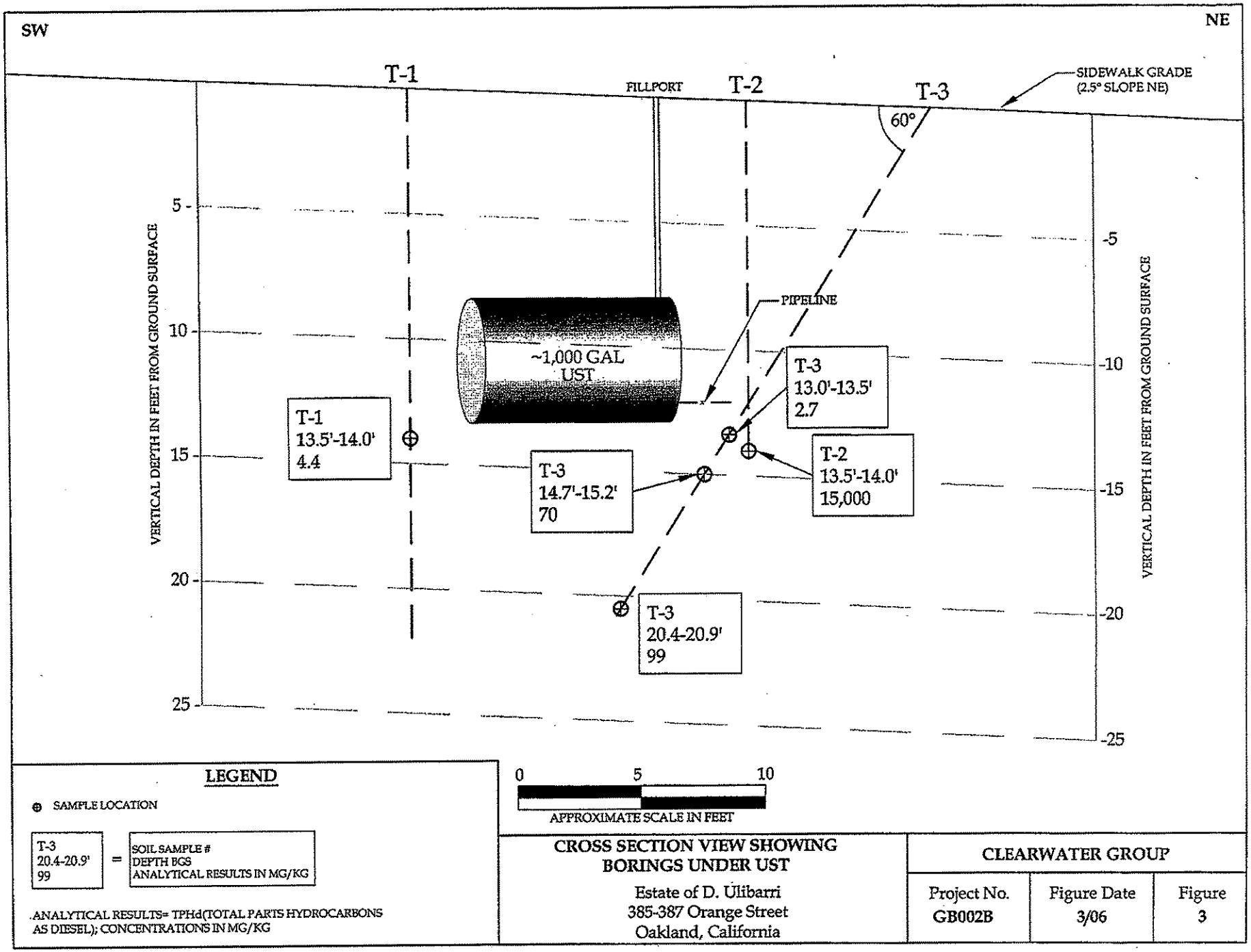
WELL NUMBER MW-1 Page 1 of 1

PROJECT Orange Cleaners
OWNER Ulibarry Estate
LOCATION 387 Orange Street, Oakland, CA
PROJECT NUMBER 2007-09
TOTAL DEPTH 30 feet (bgs)
BOREHOLE DIA. 8 inch
SURFACE ELEV. 105 feet (ansl)
WATER FIRST ENCOUNTERED 24 feet (bgs)
DRILLING COMPANY RSI Drilling
DRILLING METHOD HSA TRAC Geoprobe
DRILLER Norman
GEOLOGIST H. Pietropaoli
DATE DRILLED 11/17/08

DEPTH (feet)	GRAPHIC LOG	PID	DESCRIPTION/SOIL CLASSIFICATION	REMARKS	WELL CONSTRUCTION MW-1
0			GM, Greyish brown sandy gravel fill, moist, loose, 30% angular gravel		
5		0			
10		0			
15			Bottom of former UST excavation		
		2	ML, olive brown clayey silt, moist, slightly plastic, slight fuel odor		
20		8			
25		6	▽ First groundwater encountered; material as above ▼	Notes: PID = Photoionization Detector "Readings" are in parts per million per volume air (ppmv)	
30		0	Bottom of boring		Bottom of Borehole

2007-09-16

2" PVC screen (0.020-in. slots) | Hydrated bentonite pellets | No. 3 Monterey Sand | Portland cement & water grout | ▽ First encountered groundwater | ▼ Equilibrated groundwater level | Flush-mounted well box



CROSS SECTION VIEW SHOWING BORINGS UNDER UST

Estate of D. Ulibarri
385-387 Orange Street
Oakland, California

CLEARWATER GROUP

Project No.	Figure Date	Figure
GB002B	3/06	3