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Alameda County
Environmental Health



July 27, 2007

Mr. Jerry Wickham
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

RE: Detailed Well Survey for Site Closure Review

**SITE: 410 Fairmount Avenue
Oakland, CA 94661
ACHCSA SLIC Case No. RO0002512
GGTR Project 8143**

Dear Mr. Wickham:

Golden Gate Tank Removal, Inc. is pleased to submit the enclosed Detailed Well Survey for Site Closure Review, which presents the findings and conclusions of the detailed well survey investigation performed within a 2,000 feet radius of the site located at 410 Fairmount Ave. Oakland, California. The survey was requested by the Alameda County Health Care Services Agency / Environmental Health Services (ACHCSA) in a letter dated May 3, 2007, as a condition for further review of site closure. An electronic copy has been uploaded to the State GeoTracker Database, as well as placed on the ACHCSA's FTP site, pursuant to current ACHCSA's guidelines.

Should you have any questions, please contact us at your earliest convenience. In my absence from the office, I may be reached by cellular service at (415) 686-8846.

Sincerely,
Golden Gate Tank Removal, Inc.

A handwritten signature in black ink, appearing to read "Brent A. Wheeler". The signature is fluid and cursive.

Brent A. Wheeler
Project Manager



July 27, 2007

Mr. Jerry Wickham
Alameda County Health Care Services Agency
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

RE: Detailed Well Survey for Site Closure Review- Dorntge Apartments,
410 Fairmount Avenue, Oakland, California
(ACHCSA SLIC Case No: RO0002512; GGTR Project No. 8143)

Dear Mr. Wickham:

On behalf of Mr. Millard Dorntge of Dorntge Apartments, Golden Gate Tank Removal, Inc. (GGTR) is pleased to provide a summary of findings of the Detailed Well Survey performed in the vicinity of the property located at 410 Fairmount Avenue in Oakland, California (the Site). The activities at the Site were performed in general accordance with the May 3, 2007 directive letter issued by the Alameda County Health Care Services Agency (ACHCSA), which requested a Detailed Well Survey within a 2,000-foot radius of the site. The purpose of the survey is to provide a review of all monitoring and water supply wells within this area. The information acquired from the Detailed Well Survey will be incorporated into the site closure report. Figure 1 is a *Site Location Map* showing the 2,000-foot radius survey area and Figure 2 is a *Site Plan* depicting the former Underground Storage Tank (UST) and soil sample locations. A copy of the ACHCSA letter dated May 3, 2007 is attached.

Site Location and Description

The site, located at 410 Fairmount Avenue, Oakland, California, is a multi-unit residential property. Glen Echo Creek runs approximately 730 feet northwest of the Site. The San Francisco Bay is located approximately 2.3 miles northwest of the Site. Lake Merritt exists approximately 0.80 mile south of the Site. The elevation of the Site is approximately 100 feet above mean sea level (Figure 1). One UST containing heating oil was located beneath the sidewalk, in the front of the Site. The tank had a capacity of about 1,500 gallons, measuring approximately 10 feet in length by 5 feet in diameter, and was constructed of single wall bare steel. The age of the tank was unknown. GGTR removed the tank on January 9, 2002. Figure 2 depicts the former UST location.

According to the Tank Removal Report, GGTR January 16, 2002, the soil surrounding the former UST was brown clayey sand to a depth of approximately 16 feet below grade (fbg). Clay and gravel was encountered below the bottom of the UST, at 16 fbg. No groundwater was encountered during the UST removal.

The Site is located within the East Bay Plain Groundwater Basin. This groundwater is classified as a significant drinking water resource. However, further de-designation of the groundwater in the area around the Site is possible based on several factors, such as low yield, brackish quality, or other surface contaminants and considerations.

The regional groundwater flow direction in the vicinity of the Site is estimated to be toward the southeast, in the general decreasing topographic relief. The depth to groundwater at the Site is not known and groundwater was not encountered during the recent subsurface investigation at the Site that included advancing a soil boring to a depth of 36 fbg (Figure 2). However, GGTR conducted a cursory search of nearby sites with monitoring wells and with close topographic elevation. The depth to shallow groundwater at the former Chevron Service Station, 3701 Broadway, Oakland, is between 12 and 15 fbg. Since the subject Site at 410 Fairmount Avenue is located at a higher elevation, we expect the depth to groundwater to be greater than the depth to groundwater at the Chevron Service Station.

Site Environmental History

UST Removal, January 2002- One UST containing heating oil was located beneath the sidewalk in front of the Site (Figure 2). The tank had a capacity of approximately 1,500 gallons.

On January 9, 2002, upon the approval of the Oakland Fire Department, GGTR removed the tank from the excavation. After a visual inspection, the tank was loaded onto a flatbed truck and transported to Circosta Iron for recycling. GGTR observed visible pitting and at least one hole in the UST shell. Apparent signs of petroleum hydrocarbon-impacted soil were observed on the east side and under the UST. According to the tank removal report, a small amount of trapped water, less than 2 gallons, was noted in the excavation. Besides this water, no groundwater was encountered.

Following the tank removal activities, under the direction of Mr. Keith Matthews of the Oakland Fire Department, GGTR collected a confirmation soil sample from beneath each end of the former UST excavation. Soil sample 8143-E was collected from the east end of the excavation at approximately 16 fbg. Soil sample 8143-W was collected from the west end of the excavation at approximately 16 fbg. One four-point composite soil sample 8143-SP was collected from the soil stockpile. All samples were transported to North State Environmental Laboratory under the formal chain-of-custody protocol for the required analyses. Figure 2 depicts the approximate location of the excavation soil samples.

The tank excavation and stockpile composite soil samples were analyzed for Total Petroleum Hydrocarbons as Diesel (TPH-D); Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX); and Methyl Tertiary-Butyl Ether (MTBE). Additional details and tabulated soil sample analytical results are presented in the document entitled *Tank Closure Report. GGTR, January 16, 2002.*

The overburden soil and the soil excavated from around the tank were returned to the excavation. The volume of the tank was replaced with clean imported soil. The tank pit was backfilled and compacted and the sidewalk was resurfaced with concrete.

The analytical results of the excavation confirmation samples showed a maximum of 42,000 parts per million (ppm) of TPH-D in the soil sample 8143-E, collected from the east side of the excavation at 16 fbg. Benzene was detected in the same sample at 0.024 ppm, Xylenes at 2.890 ppm, and MTBE was detected at 0.127 ppm. The remaining collected samples did not detect any significant concentration of TPH-D, BTEX, or MTBE. MTBE was not confirmed by using the GC/MS Method 8260B (see attached table in the Tank Closure Report).

In a letter dated September 29, 2006, the ACEHCSA requested the submittal of a workplan to investigate the extent of the petroleum hydrocarbons in soil and groundwater beneath the Site. The ACEHCSA letter requested a minimum of collecting soil and groundwater samples from one soil boring located in the proximity of the former tank excavation. GGTR submitted the workplan on December 13, 2006. The ACEHCSA approved the workplan in a letter dated December 20, 2006.

Preliminary Site Characterization

Subsurface Investigation, April 2007. On March 20, 2007, in collaboration with EnProb Environmental, GGTR advanced one direct-push soil boring (B-1) to a depth of 36 fbg. The borehole was advanced on the east side of the former UST excavation where the highest TPH-D concentration was detected after the UST removal. The investigation objective was to define the vertical extent of the petroleum hydrocarbon impact to soil and groundwater beneath the Site. Figure 2 depicts the location of soil boring B-1. Additional details and tabulated soil sample analytical results are presented in the document entitled *Subsurface Investigation Report. GGTR, April 4, 2007.*

Soil samples were collected continuously from B-1 by advancing a direct-push rod lined with 4-foot polyethylene sampling tubes into undisturbed sediments. The lithology beneath the site is mostly silty sand (SM) from 0.58 fbg to approximately 8 fbg. From 8 fbg to 36 fbg (total depth), soil is mostly silty clay (CL). Odor of petroleum hydrocarbons and staining were noticed between 16 and 22 fbg. The soil boring log is included in the document entitled *Subsurface Investigation Report. GGTR, April 4, 2007.*

No groundwater was encountered during drilling and soil sampling activities. In order to allow groundwater to flow, a 2-inch piezometer was temporarily installed in the borehole and the top of the borehole annular space was temporarily sealed with hydrated bentonite chips to prevent run-off from entering piezometer. After 24-hours, groundwater was not detected in the piezometer. Subsequently, GGTR removed the piezometer and grouted the borehole from the bottom up using a tremie pipe.

The impact of petroleum hydrocarbons to soil appears to be limited to a soil layer between 16 and 22 fbg, and on the east side of the former UST Excavation. Concentrations of TPH-D exceeding its Environmental Screening Level (ESL) were detected in soil samples B-1-16 (16 fbg) and B-1-22 (22 fbg) at levels of 220 ppm and 240 ppm, respectively. Concentrations of MTBE exceeding its ESL were detected in soil sample B-1-22 (22 fbg) at levels of 0.026 ppm. BTEX and other fuel oxygenates were non-significant to non-detected in all the analyzed samples.

Concentration of TPH-D significantly decreased from 42,000 ppm detected after the UST removal in 2002 to a maximum of 240 ppm in the approximate same area during soil sampling activities in 2007. The possible effect of natural attenuation over a five-year period may have resulted in the decrease of the TPH-D concentration. Additional details and tabulated analytical results are presented in the document entitled *Subsurface Investigation Report. GGTR, April 4, 2007*.

Based upon results of the subsurface investigation report, the ACHCSA requested in a letter dated May 3, 2007 that a Detailed Well Survey be performed within the vicinity of the Site. The purpose of the survey is to determine whether any wells (monitoring and water supply wells) exist within a 2,000-foot radius of the Site and whether they may potentially act as receptors for offsite migration of the hydrocarbon-affected groundwater.

Detailed Well Survey

On June 13, 2007, GGTR submitted a Well Completion Report Release Agreement to the Department of Water Resources (DWR), Central District and the Alameda County Public Works Agency (ACPWA), Water Resources Section for all monitoring and water supply wells (active, inactive, standby, decommission, and abandoned wells) installed within a 2,000-foot radius of the Site. A copy of the DWR and ACPWA Well Report Release Agreement is attached.

On June 25, 2007 the DWR Central District Office submitted an electronic file with all well completion reports within an approximate 2,000 feet radius of the Site. Thirty four (34) groundwater monitoring wells, two (2) cathodic protection wells, three (3) vapor extraction wells, and two (2) abandoned groundwater monitoring wells were identified as a result of the DWR 2,000 feet radius search. Of these wells, one cathodic protection well is located down gradient from the Site; and seven groundwater monitoring wells and three soil vapor extraction wells are located cross gradient from the Site (Figure 3).

As of the date of this report, the ACPWA did not provide GGTR with the requested Well Completion Reports within a 2,000 feet radius of the Site. GGTR made two unsuccessful attempts to obtain said reports from the ACPWA

Detailed Well Survey Results

The results of the detailed well survey are presented in the Table below. Figure 3 shows the approximate location of each well or well cluster within the 2,000 feet radius of the Site, as described by its respective Well Record / Report Number provided by the DWR. Copies of well logs and DWR Well Drillers Reports of down gradient and cross gradient wells, as identified in the Table below, are included as an attachment. Copies of associated DWR Well Driller Report for Well Record Nos. 01-445T, 01-445U, 01-445V, 01-445J, and 01-141,E,F&G were not available.

Well Record/ Report No	Distance from Site (Feet)	Well Dia. (Inches)	Total Well Depth (Feet)	Well Material	Screened Interval (Feet)	Well Type	Well Date
01-433Z	1050 (E)	2	25	PVC	10-25	MW	6/15/89
120171 *	2200 (SW)	NA	120	NA	NA	CP	8/1/74
115966	2200(NE)	NA	120	NA	NA	CP	6/25/74
01-508X	2100(NW)	NA	40	NA	20-40	MW	4/11/92
01-445T **	2000(SW)	2	30	PVC	15-30	MW	2/17/90
01-445U **	2000(SW)	2	30	PVC	15-30	MW	2/17/90
01-445V **	2000(SW)	2	30	PVC	15-30	MW	2/24/90
405226	1700(NW)	4	29	PVC	14-29	MW	8/27/92
405230	1700(NW)	2	26.5	PVC	16-26	MW	9/30/89
405229	1700(NW)	4	24	PVC	14-24	MW	12/16/90
01-450A	1700(NW)	2	26.5	PVC	16-26	MW	9/30/89
01-450B	1700(NW)	2	24	PVC	14-24	MW	9/6/89
01-450C	1700(NW)	2	22	PVC	12-22	MW	9/6/89
01-454K	1700(NW)	2	35	PVC	20-35	MW	4/10/90
343404	1990(NW)	2	7.5	PVC	3.5-7.5	MW	11/7/90
343405	1990(NW)	2	22	PVC	11-21	MW	11/8/90
343406	1990(NW)	2	41	PVC	38-41	MW	11/15/90
343407	1990(NW)	2	20.5	PVC	10.5-20.5	MW	11/16/90
343408	1990(NW)	2	16	PVC	12-16	MW	1/26/91
343409	1990(NW)	2	9	PVC	4-9	MW	1/27/91
346316	1550(NW)	2	35	PVC	20-35	MW	9/28/90
346328	1550(NW)	2	40	PVC	25-40	MW	2/25/91
346329	1550(NW)	2	35	PVC	20-35	MW	2/25/91
346330	1550(NW)	2	30	PVC	15-30	MW	2/26/91
346331	1550(NW)	2	35	PVC	15-35	MW	3/8/91
346332	1550(NW)	2	35	PVC	15-35	MW	3/8/91
403108	1995(NW)	4	35	PVC	10-35	MW	10/28/92
403109	1995(NW)	2	30	PVC	15-30	MW	10/14/92
403110	1995(NW)	2	35	PVC	20-35	MW	10/14/92
325190	1995(NW)	4	35	PVC	15-35	MW	5/14/91
257321	1995(NW)	4	35	PVC	10-35	MW	4/11/88
257322	1995(NW)	4	30	PVC	10-30	MW	4/12/88
325191	1995(NW)	NA	NA	NA	NA	AW	5/91
293443 **	1400(SE)	4	30	PVC	10-30	MW	7/11/88
293446 **	1400(SE)	4	28	PVC	10-28	MW	7/11/88
293447 **	1400(SE)	4	28.5	PVC	11.5-28.5	MW	7/11/88
01-445J **	1400(SE)	4	25	PVC	15-25	MW	1/9/90
01-141 E,F,G **	1400(SE)	4	12	PVC	2-12	VEW	NA

Notes:

CP = Cathodic Protection

MW = Monitoring Well

AW = 2 Abandoned Wells

VEW = 3 Vapor Extraction Wells

NA = Not Available or Not Applicable

* = Indicates well located down gradient from the site

** = Indicates well located cross gradient from the site

Based on results of the detailed well survey, thirty four (34) groundwater monitoring wells were identified within the 2,000 feet radius of the Site. Of these, seven (7) monitoring wells (Well Record Nos. 01-445T, 01-445U, 01-445V, 293443, 293446, 293447, and 01-445J) reportedly exist approximately 1,400 feet southeast of the Site (293443, 293446, 293447, and 01-445J) and 2,000 feet south west of the Site (01-445T, 01-445U, and 01-445V) and are located regionally cross gradient from the Site. The depth of these wells ranges from 25 to 30 fbg. Because of their distance, depth and cross-gradient location from the Site, it seems unlikely that these wells will act as potential receptors or vertical conduits for potential contamination migration from the Site. The remaining groundwater monitoring wells are located up-gradient from the Site. The approximate location these wells is depicted in Figure 3, and referenced in the above Table. Copies of associated DWR Well Driller Report for monitoring wells located cross gradient from the site are included as an attachment. Well Record Nos. 01-445T, 01-445U, 01-445V, and 01-445J were not available.

Three (3) vapor extraction wells (Well Record Nos. 01-141E, 01-141F and 01-141G) are reportedly located approximately 1,400 feet southeast and cross gradient from the Site. The total depth of these wells is 12 fbg. Again, because of their distance and cross-gradient location from the Site, it seems unlikely that such wells will act as potential receptors or vertical conduits for potential contamination migration from the Site. Figure 3 depicts the approximate location of these wells and referenced in the above Table. Copies of associated DWR Well Driller Report for these wells were not available.

One Cathodic Protection Well (Well Record No. 120171) is reportedly located approximately 2,200 feet southwest and regionally downgradient from the Site. Although the deepest of the wells (120 fbg), the well is sealed with concrete up to 95 fbg and does not appear to be a potential receptor based on its usage and distant location from the Site. Cathodic protection wells are typically installed to protect metallic objects (i.e. buried petroleum, natural gas, and water pipelines) in contact with the ground or subsurface environment from electrolytic corrosion. Figure 3 depicts the approximate location of this well and referenced in the above Table. A copy of the associated DWR Well Driller Report is included as an attachment. Another Cathodic Protection Well (Well Record No. 115966) was identified approximately 2,200 feet northeast and regionally upgradient from the Site (Figure 3 and above Table).

Additionally, two abandoned wells are reportedly located approximately 1,995 feet northwest and regionally up gradient from the site. Neither water supply wells nor irrigation wells were identified during the Detailed Well Survey investigation.

Conclusions/Recommendation

Based on results of the Detailed Well Survey and information provided by the DWR Central District, it appears at this time, that no receptors exist within the designated survey radius area that would be affected by any offsite migration of potentially impacted groundwater.

Based on the above, and on the findings and conclusions of the April 2007 subsurface investigation, GGTR recommends that no further action be conducted at the Site and that the ACHCSA complete the Site closure review process.

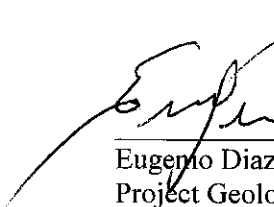
Limitations and Certification

It should be understood that all environmental assessments are inherently limited in that conclusions are drawn and recommendations developed from information obtained from limited research and visual observations. Subsurface conditions change significantly with distance and time and therefore may differ from the conditions implied by subsurface investigation. It must be noted that no investigation can absolutely rule out the existence of any hazardous or petroleum substances at a given site. Existing hazardous materials and contaminants can escape detection using these methods. The work performed in conjunction with this assessment and the data developed are intended as a description of available information at the dates and location given. GGTR's professional services have been performed, with findings obtained and recommendations prepared in accordance with customary principles and practices in the field of environmental science, at the time of the assessment. This warranty is in lieu of all other warranties either expressed or implied. GGTR is not responsible for the accuracy of information reported by others or the independent conclusions, opinions or recommendations made by others based on the field exploration presented in this report. The findings contained in this report are based upon information contained in previous reports of corrective action activities performed at the subject property and based upon site conditions as they existed at the time of the investigation, and are subject to change. The scope of services conducted in execution of this phase of investigation may not be appropriate to satisfy the needs of other users and any use or reuse of this document and any of its information presented herein is at the sole risk of said user. The figures, drawings and plates presented in this report are only for the purposes of environmental assessment and no other use is recommended. No other third party may rely on this report, figures or plates for any other purpose.

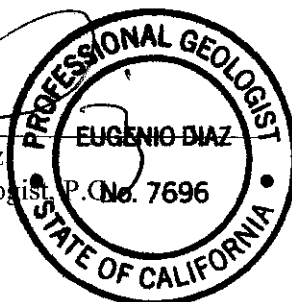
Golden Gate Tank Removal, Inc.



Brent Wheeler
Project Manager



Eugenio Diaz
Project Geologist



Report Distribution

All reports that are prepared during the continuing work on this project will be sent to:

Alameda County Health Care Services Agency
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
Attention: Mr. Jerry Wickham

(1 PDF Copy Via GeoTracker)
(1 PDF Copy Via ACHCSA FTP)

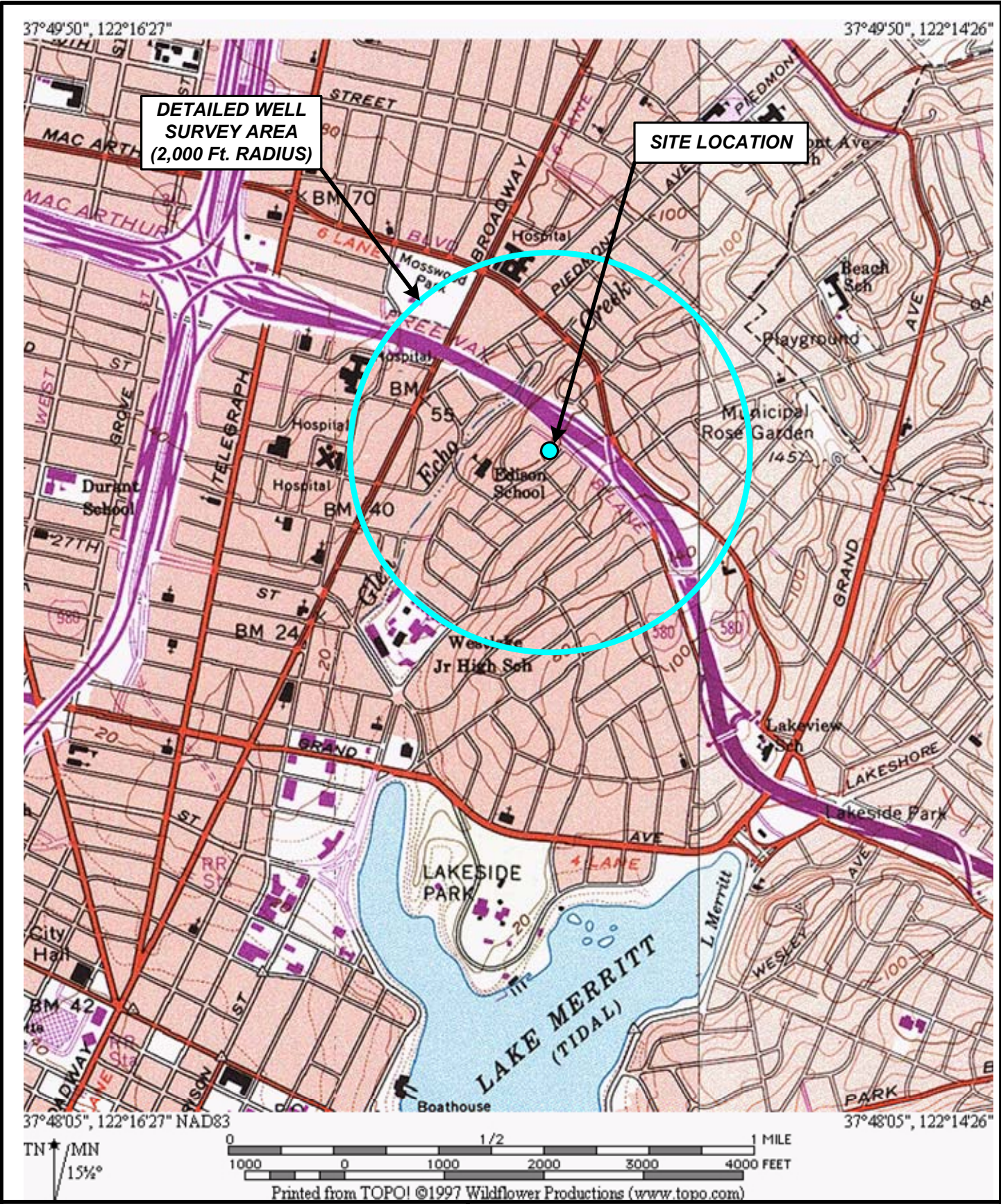
Mr. Millard Dorntge
1321 Acton Street
Berkeley, California, 94706

(1 Copy Bound)

ATTACHMENTS

Figures

ACHCSA May 3, 2007 Correspondence
DWR and ACPWA Well Report Release Agreement
DWR Well Driller Report



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GOLDEN GATE TANK REMOVAL, INC.
 3730 Mission Street
 San Francisco, CA 94110
 Ph (415) 512-1555 Fx (415) 512-0964

SITE LOCATION MAP
 410 Fairmount Avenue
 Oakland, California

GGTR Project No. 8143

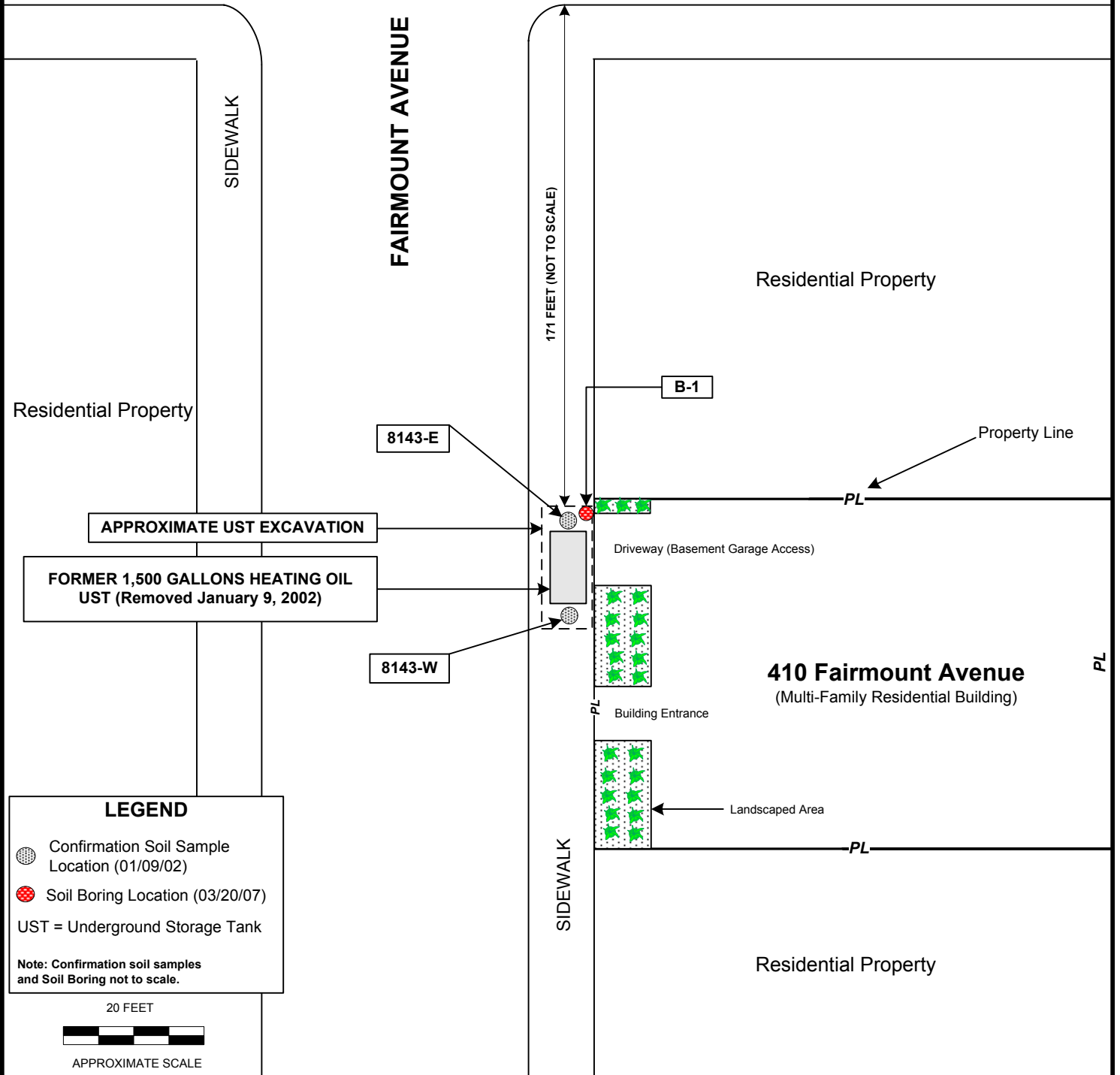
Fn: 8143-DWS.F1

Revision By: ed/07.07

Figure 1



STANLEY PLACE



GOLDEN GATE TANK REMOVAL, INC.

3730 Mission Street
 San Francisco, CA 94110
 Ph (415) 512-1555 Fx (415) 512-0964

SITE PLAN

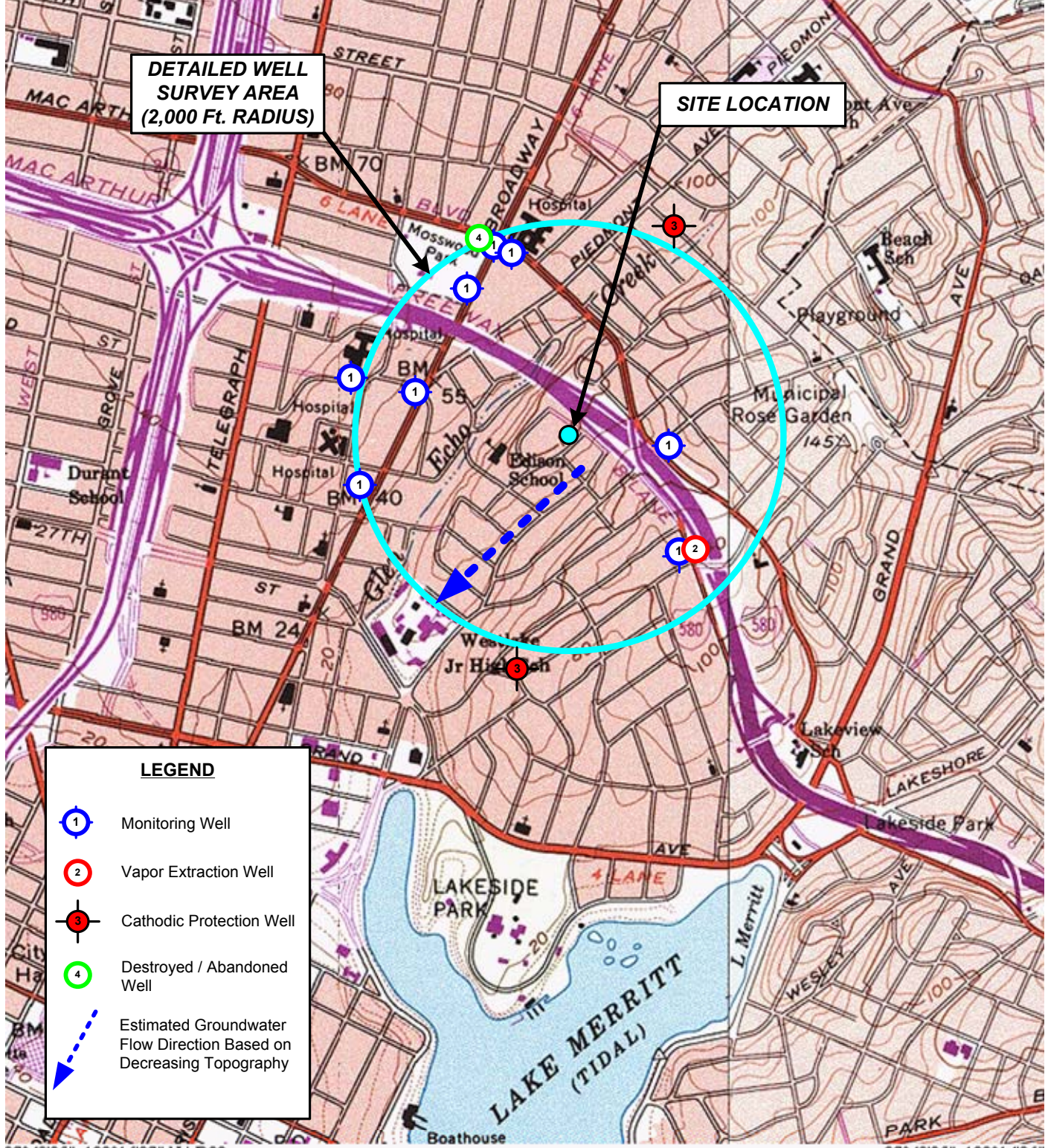
410 Fairmount Avenue
 Oakland, CA 94611

37°49'50", 122°16'27"






37°49'50", 122°14'26"

DETAILED WELL SURVEY AREA (2,000 Ft. RADIUS)

SITE LOCATION

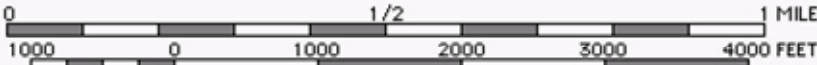


LEGEND

-  Monitoring Well
-  Vapor Extraction Well
-  Cathodic Protection Well
-  Destroyed / Abandoned Well
-  Estimated Groundwater Flow Direction Based on Decreasing Topography

37°48'05", 122°16'27" NAD83

37°48'05", 122°14'26"



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GOLDEN GATE TANK REMOVAL, INC.

3730 Mission Street
San Francisco, CA 94110
Ph (415) 512-1555 Fx (415) 512-0964

DETAILED WELL SURVEY AREA

410 Fairmount Avenue
Oakland, California

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



#8145

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

May 3, 2007

Mr. Millard Dorntge
1321 Acton Street
Berkeley, CA 94706

Subject: SLIC Case No. RO0002512 and Geotracker Global ID T06019705283, Dorntge Property, 410 Fairmount Avenue, Oakland, CA 94611

Dear Mr. Dorntge:

Alameda County Environmental Health (ACEH) staff has reviewed the Spills, Leaks, Investigations, and Cleanups (SLIC) case file for the above referenced site including the recently submitted report entitled, "Subsurface Investigation Report, 410 Fairmount Avenue, Oakland, California 94611," dated April 13, 2007. The report presents the results from one soil boring advanced near the east end of a former underground storage tank. A petroleum hydrocarbon odor and stained soil were observed in the soil boring from a depth of approximately 15 feet bgs to 24 feet bgs. Total petroleum hydrocarbons (TPH) as diesel and methyl tert-butyl ether (MTBE) were detected in soil samples collected at depths of 16 and 22 feet bgs.

Although collection of one grab groundwater sample from the boring was proposed in the "Soil and Groundwater Sampling Workplan," dated December 13, 2006, no groundwater sample was collected. Groundwater was not observed in a temporary piezometer, which was installed in the soil boring for a period of 24 hours. The total depth of the soil boring was 36 feet bgs. The report concludes that impacts to groundwater are unlikely based on the soil analytical results.

We request that you conduct a well survey to identify any water supply wells within the vicinity of the site. The case will be reviewed for possible case closure pending the results of the well survey. We request that you address the technical comment below regarding a well survey and send us the report requested below.

TECHNICAL COMMENTS

1. **Detailed Well Survey.** We request that you conduct a well survey to locate all wells (monitoring and water supply wells: active, inactive, standby, decommissioned, and abandoned wells) within a 2,000-foot radius of the site. Submittal of maps showing the location of all wells identified in your study, and the use of tables to report the data collected as part of your survey are required. Please provide a table that includes the well designation, location, total depth, diameter, screen interval, date of well installation, current status, historic use, and owner of the wells. In addition, please provide well logs and completion records for any wells downgradient from the site that are potential receptors for the site. We recommend that you obtain well information from the Alameda County Public Works Agency and State of California Department of Water Resources, at a minimum. Please report your results in the Well Survey Report requested below.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Mr. Jerry Wickham), according to the following schedule:

- **July 27, 2007** – Well Survey Report

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program ftp site are provided on the attached "Electronic Report Upload (ftp) Instructions." Please do not submit reports as attachments to electronic mail.

Submission of reports to the Alameda County ftp site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. Submission of reports to the Geotracker website does not fulfill the requirement to submit documents to the Alameda County ftp site. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements ([http://www.swrcb.ca.gov/ust/cleanup/electronic reporting](http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting)).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

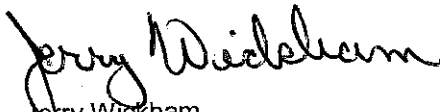
The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

If you have any questions, please call me at (510) 567-6791.

Sincerely,



Jerry Wickham
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Sami Malaeb
Golden Gate Tank Removal
3730 Mission Street
San Francisco, CA 94110

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

STATE OF CALIFORNIA - THE RESOURCES AGENCY

ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF WATER RESOURCES

CENTRAL DISTRICT
901 P Street
Sacramento, CA 95814
(916) 881-0753
(916) 881-0726 (Fax)

NORTHERN DISTRICT
2440 Main Street
Red Bluff, CA 96080
(530) 529-7300
(530) 529-7322 (Fax)

SAN JOAQUIN DISTRICT
3374 E. Shields Ave Ste A7
Fresno, CA 93728
(559) 230-3300
(559) 230-3361 (Fax)

SOUTHERN DISTRICT
770 Fairmont Avenue
Glendale, CA 91203
(818) 500-1845 ext. 233
(818) 543-4604 (Fax)

WELL COMPLETION REPORT RELEASE REQUEST AND CONFIDENTIALITY AGREEMENT
REGULATORY-RELATED ENVIRONMENTAL CLEANUP STUDY

Well Completion Reports associated with wells located within two miles of an area affected or potentially affected by a known unauthorized release of a contaminant will be made available upon request to any person performing an environmental cleanup study associated with the unauthorized release, if the study is conducted pursuant to a regulatory agency order (Water Code Section 13752).

Requests must be made on the form below, signed and submitted to the appropriate DWR District Office. Please provide the township, range, and section of the property where the study is to be conducted. Attach a map or a sketch with a north arrow, and provide as much identifying information requested below as possible; additional paper may be attached if necessary.

By signing below, the requester acknowledges and agrees that, in compliance with Section 13752, the information obtained from these reports will be kept confidential and will not be disseminated, published, or made available for inspection by the public. Copies obtained must be stamped CONFIDENTIAL and kept in a restricted file accessible only to authorized personnel. These reports must not be used for any purpose other than for the purpose of conducting the environmental cleanup study.

Project Name: SUBSURFACE INVESTIGATION County: ALAMEDA
Street Address: 410 FAIRMONT AVENUE City: OAKLAND
Township, Range, and Section: _____ Radius: 2,000 FEET
(Include entire study area and a map that shows the area of interest.) (maximum 2 miles)

GOLDEN GATE TANK REMOVAL
Requester's Company

ALAMEDA COUNTY-HEALTH CARE SERVICES
Regulatory Agency Name

EUGENIO DIAZ
Requester's Name (please print)

JERRY WICKHAM
Agency Contact Name (please print)

3730 MISSION STREET
Address

1131 HARBOR BAY PARKWAY, #250
Address

SAN FRANCISCO - CA 94110
City, State, and Zip Code

ALAMEDA - CA 94502
City, State, and Zip Code

Signature: [Signature]

Signature: [Signature]

Title: PROJECT GEOLOGIST

Title: HAZARDOUS MATERIALS SPECIALIST

Telephone: (415) 512-1555

Telephone: (510) 567-6791

FAX: (415) 512-0964

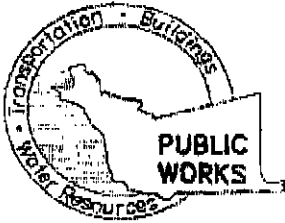
FAX: (510) 337-9335

Date: June - 12 - 2007

Date: 6/12/07

E-mail: EUGENIODIAZ@GGTR.COM

E-mail: jerrywickham@acgov.org



COUNTY OF ALAMEDA
PUBLIC WORKS AGENCY
WATER RESOURCES SECTION
399 Elmhurst Street, Hayward, CA 94544-1395
James Yoo PH: (510) 670-6633 FAX: (510) 782-1939
FOR GENERAL DRILLING PERMIT INFO:
www.acgov.org/pwa/wells

WELL COMPLETION REPORT RELEASE AGREEMENT—AGENCY
(Government and Regulatory Agencies and their Authorized Agents)

Project No/ Site Address: 8143/410 FAIRMOUNT AVE, City OAKLAND
Township, Range, and Section _____ Radius 2,000 FEET
(Must include entire study area and a map that shows the area of interest.)

Under California Water Code Section 13752, the agency named below requests permission from Department of Water Resources to inspect or copy, or for our authorized agent named below to inspect or copy. Well Completion Reports filed pursuant to Section 13751 to (check one):

- Make a study, or,
- Perform an environmental cleanup study associated with an unauthorized release of a contaminant within a distance of 2 miles.

In accordance with Section 13752, information obtained from these reports shall be kept confidential and shall not be disseminated, published, or made available for inspection by the public without written authorization from the owner(s) of the well(s). The information shall be used only for the purpose of conducting the study. Copies obtained shall be stamped CONFIDENTIAL and shall be kept in a restricted file accessible only to agency staff or the authorized agent.

GOLDEN GATE TANK REMOVAL
Authorized Agent

3730 MISSION STREET
Address

SAN FRANCISCO - CA 94110
City, State, and Zip Code

[Signature]
Signature

PROJECT GEOLOGIST
Title

Telephone () 415-512-1555

Fax () 415-512-0964

Date June 12, 2007

E-mail Eugeniodiaz@GGTR.COM

ALAMEDA COUNTY - HEALTH CARE SERVS.
Government or Regulatory Agency

1131 HARBOR BAY PARKWAY, # 250
Address

ALAMEDA - CA 94502
City, State, and Zip Code

[Signature]
Signature

HAZARDOUS MATERIALS SPECIALIST
Title

Telephone () 510-567-6791

Fax () 510-337-9335

Date 6/12/07

E-mail Jerry.Wickham@acgov.org

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

BORING LOG

15/4W 26H6
01-445T

PROJECT NO: 90-1006	PROJECT NAME: EURO-MOTORS	BORING NO: MW1
LOCATION: 2915 BROADWAY, OAKLAND		DATE: 2/17/90
GEOLOGIST: REINHARD RUHMKE		PAGE 1 OF 1
GROUND WATER DEPTH: 20'		DRILLER: HEW
DRILLING METHODS: HOLLOW STEM AUGER		

DEPTH	SAMPLE	RECOVERY	BLOWS	DESCRIPTION	USCS	GRAPHIC SYMBOL	WELL CONSTRUCTION
0				4" ASPHALT; 8" GRAVEL BASE.			
1				LIGHT BROWN CLAY; STIFF; DRY.	CL		
2							
3							
4				REDDISH-BROWN SILTY. SANDY GRAVEL; LOOSE; DRY.	GM		
5	MW1 5	18'	14- 15- 28				
6							
7							
8							
9				LIGHT BROWN SILTY CLAY; STIFF; DRY; SLIGHTLY PLASTIC.			
10	MW1 10	18'	3- 5- 10				
11							
12				LESS SILT; DENSER.			
13							
14							
15	MW1 15	18'	5- 9- 14		CL		
16							
17							
18							
19							
20	MW1 20	18'	6- 8- 12		CL		
21				LIGHT BROWN SANDY CLAY; WET; STIFF.			
22							
23							
24							
25				GRAYISH OLIVE-GREEN SANDY CLAY; WET.	CL		
26							
27							
28							
29							
30				END OF BORING.			

REMARKS

MILLER ENVIRONMENTAL COMPANY
RICHMOND, CA

0L4450

BORING LOG

1S/4W 26H7

PROJECT NO: 90-1006	PROJECT NAME: EURO-MOTORS	BORING NO: MW2
LOCATION: 2915 BROADWAY, OAKLAND		DATE: 2/17/90
GEOLOGIST: REINHARD RUHMKE		PAGE 1 OF 1
GROUND WATER DEPTH: 20'		DRILLER: HEW
DRILLING METHODS: HOLLOW STEM AUGER		

DEPTH	SAMPLE	RECOVERY	BLOWS	DESCRIPTION	USCS	GRAPHIC SYMBOL	WELL CONSTRUCTION
0				4" ASPHALT; 8" GRAVEL BASE.			
1				LIGHT BROWN CLAY; STIFF; DRY.	CL		
2							
3							
4				BROWN SILTY. SANDY GRAVEL LOOSE; DRY.	GM		
5	MW2-5	18'	8-7				
6							
7							
8							
9				LIGHT BROWN SILTY CLAY; STIFF; DRY; SLIGHTLY PLASTIC.			
10	MW2-10	18'	5-7-10				
11							
12				LESS SILT; DENSER.			
13							
14							
15	MW2-15	18'	7-10-12		CL		
16							
17							
18							
19							
20	MW2-20	18'	7-14-15		CL		
21				LIGHT BROWN SANDY CLAY; WET; STIFF.			
22							
23							
24							
25				GRAYISH OLIVE-GREEN SANDY CLAY; WET.	CL		
26							
27							
28							
29							
30				END OF BORING.			

REMARKS

WATER WAS GOING INTO BOREHOLE FROM GRAVEL BED BENEATH THE ASPHALT. PARTIAL SUCCESS WAS ACHIEVED IN STOPPING THE FLOW BY SEALING THE GRAVEL WITH BENTONITE. AS MUCH WATER AS POSSIBLE WAS REMOVED FROM THE BOREHOLE BEFORE PLACING THE CEMENT SEAL. THE CEMENT MIX WAS MADE THICKER SO IT WOULD DISPLACE THE WATER.

MILLER ENVIRONMENTAL COMPANY
RICHMOND, CA

BORING LOG

1S/4W 26H8
OL445Y

PROJECT NO: 90-1006	PROJECT NAME: EURO-MOTORS	BORING NO: MW3
LOCATION: 2915 BROADWAY, OAKLAND		DATE: 2/24/90
GEOLOGIST: REINHARD RUHMKE		PAGE 1 OF 1
GROUND WATER DEPTH: 20'		DRILLER: HEW
DRILLING METHODS: HOLLOW STEM AUGER		

DEPTH	SAMPLE	RECOVERY	BLOWS	DESCRIPTION	USCS	GRAPHIC SYMBOL	WELL CONSTRUCTION
0				4" ASPHALT; 8" GRAVEL BASE.			
1				LIGHT BROWN CLAY; STIFF; DRY.	CL		
2				REDDISH-BROWN GRAVELLY CLAY; DRY.			
3							
4				LESS GRAVEL.			
5	MW3 5	18'	4-7-11		GM		
6							
7							
8							
9				LIGHT BROWN SILTY CLAY; STIFF; DRY; SLIGHTLY PLASTIC.			
10	MW3 10	18'	6-12-18				
11							
12							
13							
14					CL		
15	MW3 15	18'	6-11-17				
16				LIGHT BROWN SANDY CLAY; STIFF.			
17							
18				LIGHT BROWN CLAY; STIFF; DRY.			
19							
20	MW3 20	18'	8-13-19				
21				LIGHT BROWN CLAYEY SAND; WET.	SC		
22							
23				LIGHT BROWN SANDY CLAY; STIFF.			
24					CL		
25				GRAYISH OLIVE-GREEN SANDY CLAY; STIFF; WET.			
26							
27							
28							
29							
30				END OF BORING.			

REMARKS

MILLER ENVIRONMENTAL COMPANY
RICHMOND, CA

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

01-454M P.2
 IS HW
 BORING No.: MW-1 ZLP
 DATE DRILLED: 7-11-88
 PROJECT No.: 1847 G
 LOGGED BY: SC



ensco
 environmental
 services, Inc.

PROJECT NAME: SHELL Service Station
 230 MacArthur Blvd.
 Oakland, California

EXPLORATORY BORING LOG

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft./10s.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
1				8" concrete over 5" pea gravel		
2			SP	CLAYEY SAND, greenish gray, predominantly fine sand 20% fine gravel, damp		
3						
4				SAND, greenish gray, predominantly fine to medium sand, 5-10% coarse sand, 10-15% fine gravel, <5% fines, very dense, damp		
5						
6	1-1	72	SP	SAND, olive brown, fine to medium grained trace silt, very dense, damp		0
7						
8						
9						
10				CLAYEY SAND, orangish brown, fine to medium grained organic staining, 4" lens of fine to medium sand (poorly sorted, greenish gray), dense, damp		1
11	1-2	30	SC			
12						
13						
14						
15			SW	SAND, bluish gray, fine to coarse grained <5% fines, color to brown at 15.5 feet, wet, dense	Σ	
16	1-3	37	CL	SANDY CLAY, yellowish brown, 30% fine sand, very moist		2
17						
18			SC	CLAYEY SAND, tannish brown, predominantly fine sand, trace medium sand, 15-20% fines, rare rootholes, moist, dense		
19			SP	SAND, brown, predominantly fine sand, becomes silty at 20.5', dense, very moist to wet		
20						

REVIEWED BY R.G./C.E.G.



ensco
environmental
services, Inc.

PROJECT NAME: SHELL Service Station
230 MacArthur Blvd.
Oakland, California

BORING No.: MW-1
DATE DRILLED: 7-11-88
PROJECT No.: 1847 G
LOGGED BY: SC

EXPLORATORY BORING LOG

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
20	1-4	30	SP	SAND cont.	0	
21			CL	SILTY CLAY, brown, 5-10% fine sand locally to 20% disseminated, hard, very moist		
22						
23						
24			SP-SC	SAND, light olive, fine to medium grained <10% clay fines, rare oxidation stains, dense, very moist to wet		
25						
26	1-5	48	SC	CLAYEY SAND, light olive, predominantly fine to medium sand, 40% clay, rare organics, dense, very moist to wet	1	
27						
28						
29						
30			SP-SC	SAND, light olive, predominantly fine to medium grained, 15% coarse sand, <10% clay fines, dense, saturated		
31	1-6	36				
32						
33				BOTTOM OF BORING 31.5'		
34						
35						
36						
37						
38						
39						
40						

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED



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environmental
services, inc.

PROJECT NAME: SHELL Service Station
230 MacArthur Blvd.
Oakland, California

BORING No.: MW-2 24P
DATE DRILLED: 7-11-88
PROJECT No.: 1847 G
LOGGED BY: SC

EXPLORATORY BORING LOG

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
1				4" Asphalt pavement over 9" baserock		
2			SC	CLAYEY SAND, orangish brown, fine to medium sand, 20% fines, damp		
3						
4				-as above; color to dark olive gray, locally 40% fine to coarse gravel composed of angular chert fragments, rare coarse sand, dense, damp		
5						
6	2-1	44	SC		2	
7						
8						
9						
10			SC	-as above, color to yellowish brown with minor olive gray staining, ~40% fines, trace organic black staining, rare rootholes, dense, damp		
11	2-2	34			1	
12			CL	SANDY TO SILTY CLAY, olive beige with slight orange staining, 10 to 20% fine sand, orange staining low plasticity, hard, damp		
13						
14						
15					▽	
16	2-3	34	SP-SM	SAND, brown, predominantly fine sand, 5 to 10% silt, trace organic staining, dense, wet, fine to medium sand		0.5
17						
18						
19						
20						

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED



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PROJECT NAME: SHELL Service Station
230 MacArthur Blvd.
Oakland, California

BORING No.: MW-3
DATE DRILLED: 7-12-88
PROJECT No.: 1847 G
LOGGED BY: SC

EXPLORATORY BORING LOG

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft./lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
1				8" concrete		
2				FILL, pea gravel		
3						
4						
5						
6						
6						
7						
8						
9						
10					0	
11	3-1	12	SC	CLAYEY SAND, olive grey mottled with orangish brown, 50 to 60% fine sand, trace medium to coarse sand, slight petroleum odor, medium dense, damp		120
12			SW	SAND, orangish brown, fine to coarse grained with fine angular chert gravels, medium dense, damp		
13				SAND, greenish gray, well graded, fine to coarse grained 10 to 15% fine gravels (angular to subangular white, yellow, and red cherts, graywacke), very faint petroleum odor, medium dense, saturated	Σ	2
15						
16	3-2	13				
17			CL	SILTY CLAY, tannish brown, trace organic staining, 10% fine sand, rare root holes, low plasticity, stiff, moist		
18				-----		
19			SC			
20						



ensco
environmental
services, inc.

PROJECT NAME: SHELL Service Station
230 MacArthur Blvd.
Oakland, CA

BORING No.: MVV-3 24P
DATE DRILLED: 7-12-88
PROJECT No.: 1847 G
LOGGED BY: SC

EXPLORATORY BORING LOG

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft./lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
20	3-3	31	SC	CLAYEY SAND, brown, 70% fine sand, medium dense, moist to wet	0	
21			CL	SILTY CLAY, tannish brown, 10% fine sand, trace organic staining, no rootholes, low plasticity, very stiff, wet		
22						
23						
24			SC	CLAYEY SAND, olive with minor orange staining, 60% fine sand, 10% medium to coarse sand, shell fragment, very dense, moist to wet		
25	3-4	72			0	
26			CL	SANDY CLAY to SILTY CLAY, olive, 25% fine sand (locally sand <10%), low plasticity, hard, moist		
27						
28						
29	3-5	44	SP	CLAYEY SAND, olive with minor orange oxide staining, 60 to 70% fine sand, locally clay to 50%, (becomes very sandy at 30', olive to bluish gray), dense, moist		
30						
31				BOTTOM OF BORING 30'	0	
32						
33						
34						
35						
36						
37						
38						
39						
40						

REVIEWED BY R.G./C.E.G.

Page 2 of 2

15/4W24P

01-445J

Monitoring Well Detail

PROJECT NUMBER 1847-2G
 PROJECT NAME Shell -Oakland
 COUNTY Alameda
 WELL PERMIT NO. 90116

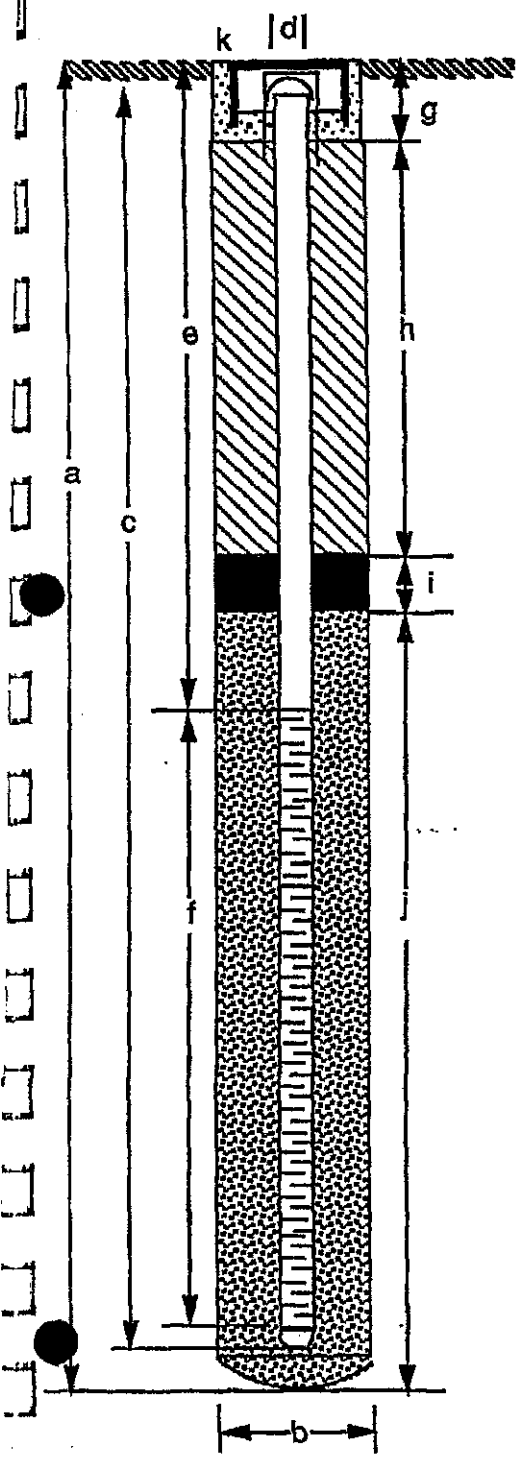
BORING / WELL NO. MW-4
 TOP OF CASING ELEV. 73.83
 GROUND SURFACE ELEV. 74.46
 DATUM 72.96

EXPLORATORY BORING

- a. Total depth 25.5 ft.
- b. Diameter 12 in.
Drilling method Hollow stem auger

WELL CONSTRUCTION

- c. Casing length 25 ft.
Material schedule 40 PVC
- d. Diameter 4 in.
- e. Depth to top perforations 15 ft.
- f. Perforated length 10 ft.
Perforated interval from 15 to 25 ft.
Perforation type slotted screen
Perforation size 0.020 in.
- g. Surface seal 1 ft.
Seal material concrete
- h. Backfill 12 ft.
Backfill material neat cement grout
- i. Seal 1 ft.
Seal material bentonite
- j. Gravel pack 11 ft.
Pack material clean sand
- k. _____





ensco
environmental
services, inc.

EXPLORATORY BORING LOG

IS 14W 24P7
01-445J Page 1 of 2

PROJECT NAME: Shell Oil Company
230 MacArthur Blvd.
Oakland, CA

BORING NO. MW-4

DATE DRILLED: 1/9/90

PROJECT NUMBER: 1847-2G

LOGGED BY: J.M.

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OYA READING ppm
1			CL	SANDY CLAY, light olive brown (2.5Y 5/6), 30-40% rounded to subangular fine to medium grained sand, ~ 10% coarse gravel to 2", iron stain, black mottling, hard, very low plasticity, dry to damp		
2						
3						
4						
5						
6	MW-4-1	64				0
7						
8						
9			SW	SAND, light olive brown (2.5Y 5/6), fine to medium grained sand, 30% clay, rounded to subangular, poorly sorted, medium dense		
10	MW-4-2	40				
11			CL	SANDY CLAY, light olive brown (2.5Y 5/6), 35-45% sand, rounded to subangular, fine to medium grained, iron stain, very stiff, low plasticity, damp Silty lenses		
12						
13						
14						
15	MW-4-3	27	SP	SAND, olive gray (5Y 4/2), fine to medium grained sand, well sorted, rounded to subrounded, some iron stain, clay 10-20%, silt 10-20%, loose, moist	▼	0
16						
17						
18			CL	SILTY CLAY, brown (10YR 5/3), silt ~ 40%, black and gray mottling, iron stain, root holes and organic matter, very stiff, low plasticity, moist to damp		
19						
20	MW-4-4	33				0
21						

REVIEWED BY R.G./C.E.G.

Driller: Enesco

EXPLORATORY BORING LOG

01-445J Page 2 of 2



ensco
environmental
services, inc.

PROJECT NAME: Shell Oil Company
230 MacArthur Blvd.
Oakland, CA

BORING NO. MW-4

DATE DRILLED: 1/9/90

PROJECT NUMBER: 1847-2G

LOGGED BY: J.M.

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVM READING ppm
-22						
-23						
-24			CL	same as above		
-25	MW-4-5	33				0
-26				Bottom of Boring = 25.5 feet		
-27						
-28						
-29						
-30						
-31						
-32						
-33						
-34						
-35						
-36						
-37						
-38						
-39						
-40						
-41						
-42						

REVIEWED BY R.G./C.E.G.

01-141 EFG

#P7064

plum/ugr
1/11/77
AD

J gettler - ryan inc.
general contractors

15/4W24P1-3

Shell Service Station
230 MacArthur Boulevard
Oakland, California

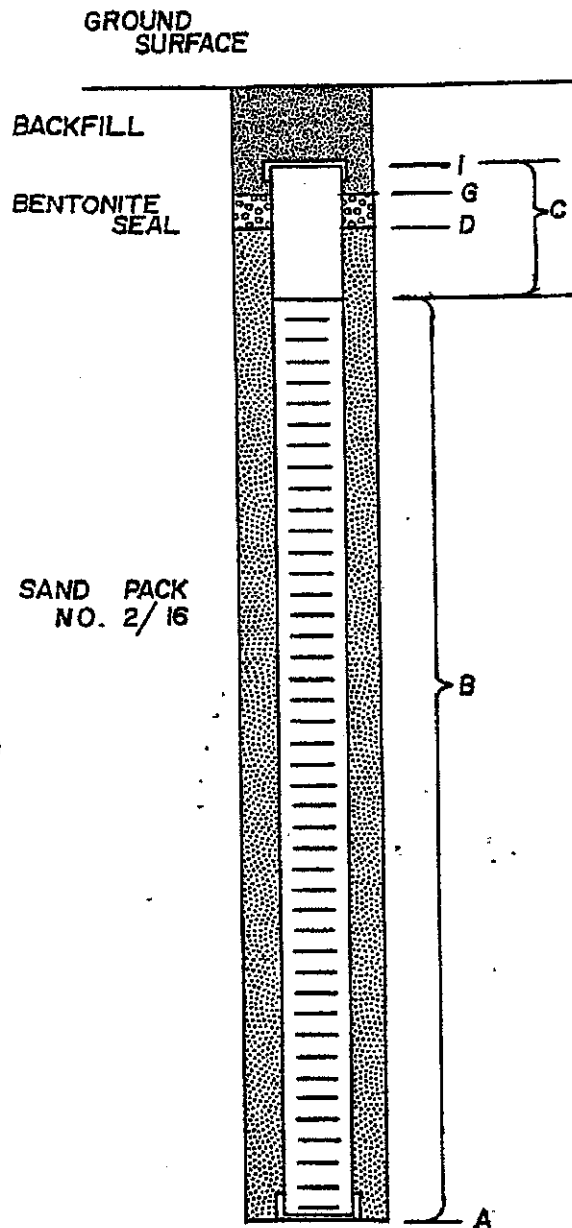
The work performed at this site under permit #87064 involved the installation of three vadose wells in approximately the same locations as borings S-A, S-B, and S-C shown on the attached site sketch. The vadose wells were constructed of four inch PVC well casing to a depth of fifteen feet; As the vadose wells were installed in approximately the same locations as the previously drilled borings, S-A, S-B, and S-C, in primarily the same tank hole backfill, these boring logs should be consistent with conditions encountered while drilling the three vadose wells. The vadose wells had a surface seal consisting of one foot of bentonite and three feet of cement.

NOTE: SAME AS S6077.
WELL NOS. ARE
15/4W24

VAPOR RECOVERY WELL

#P7064

1S/AW24P1-3



A. Total depth drilled	13 ft.
B. Length of slotted casing	10 ft.
C. Length of blank casing	2 ft.
D. Depth to top of sand fill	2 ft.
E. Footage of sand fill (A-D)	11 ft.
F. Bags of sand used	24
G. Depth to top of bentonite seal	1.5 ft.
H. Thickness of bentonite seal (D-G)	.5 ft.
I. Depth to top of casing	1 ft.
J. Depth of backfill (G-Ø)	1.5 ft.

Type of casing 4" Schedule 40 PVC, .020 slotting

Shell Station McArthur/Piedmont, Oakland	
PROJECT NO. 86.255	FIGURE NO. 5

GP07 86077

01-141A

DRAFT

15/4W24P

LOG OF EXPLORATORY BORING

PROJECT NUMBER 800-41.01

BORING NO. S-A

PROJECT NAME Gettler-Ryan, Shell, 230 MacArthur Blvd, Oakland PAGE 1 OF 1

BY MF DATE 4/14/86

SURFACE ELEV. 75±

TORVANE (TSF)	POCKET PENETROMETER (TSF)	PENETRATION (Blows/FL)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO-GRAPHIC COLUMN	DESCRIPTION
				0			ASPHALT and GRAVEL - Fill.
				1	GP		GRAVEL - Fill; dark olive gray (5Y, 3/2); pea gravel; trace fine sand; trace fines; loose; moist to wet; moderate product odor.
				2	SP		SAND - Fill; dark olive gray (5Y, 3/2); fine grained; trace coarse sand; trace gravel; loose; moist; strong product odor.
	2.5	29		3	ML		SILT; gray (5Y, 5/1); slightly clayey; very stiff; wet; strong product odor.
				10	ML/SW-GW		SANDY SILT and GRAVELLY SAND to SANDY GRAVEL - Interbedded; moist to wet; moderate product odor; SILT: dark brown (10YR, 4/3); 10-20% medium to coarse sand; hard; GRAVELLY SAND to SANDY GRAVEL olive (5Y, 4/4); fine to coarse grained; 30-60% fine to medium gravel; very dense.
				15	CL-ML		CLAY to SILT: pale brown (10YR, 6/3); very clayey; hard; moist to wet; no product odor.
2.7		48		20			BOTTOM OF BORING AT 20½ FEET.

REMARKS Drilled by 5-inch continuous-flight, solid-stem auger to 3 feet. 8-inch hollow-stem auger to total depth: samples collected with 2-inch California modified split-spoon sampler. Borehole backfilled with bentonite to 15 feet soil cuttings to ½ foot. concrete to surface.



GP07 86077

01-141B

DRAFT

15/4W24P

GP# 77

01-141B

DRAFT N/4W24P

LOG OF EXPLORATORY BORING

PROJECT NUMBER 800-41.01

BORING NO. 5-B

PROJECT NAME Gettler-Ryan, Shell, 230 MacArthur Blvd., Oakland

PAGE 1 OF 1

BY MF DATE 4/14/86

SURFACE ELEV. 75±

TORVANE (TSF)	POCKET PENETROMETER (TSF)	PENETRATION (Blows/Ft.)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO-GRAPHIC COLUMN	DESCRIPTION
				0			ASPHALT and GRAVEL-FILL.
				5	1		SAND-FILL; dark olive gray (5Y, 3/2) with greenish hue; fine to medium grained; loose; moist to wet; strong product odor.
		6		8	2		@8': 5-10% coarse grained sand; strong product odor.
				10		ML	@10': visible product in auger returns. SILT; gray (5Y, 5/1); slightly clayey; stiff; moist; faint product odor.
	1.5	74	▽ 13.0'	13	3	ML/SP	SILT and SAND-Interbedded; olive (5Y, 4/4); wet; strong product odor; SILT: as above; SAND: fine to medium grained; 5-15% gravel; very dense.
				15			@17': gravel layer.
	3.2	73 for 10"		20	4	CL-ML	CLAY to SILT; pale brown (10YR, 6/3); very clayey; hard; wet; no product odor. BOTTOM OF BORING AT 20 FEET.

REMARKS Drilled by 5-inch continuous-flight, solid-stem auger to 4 feet, 8-inch hollow-stem auger to total depth; samples collected with 2-inch California modified split-spoon sampler. Borehole backfilled with bentonite to 18 feet, soil cuttings; to 1/2 foot, concrete to surface.



DRILLER:

PLATE B

GPO #86077

01-141C

DRAFT

15/4N24P

LOG OF EXPLORATORY BORING

PROJECT NUMBER 800-41.01

BORING NO. S-C

PROJECT NAME Gettler-Ryan, Shell, 230 MacArthur Blvd., Oakland

PAGE 1 OF 1

BY MF

DATE 4-14-86

SURFACE ELEV. 75±

TORVANE (TSF)	POCKET PENETROMETER (TSF)	PENETRATION (blows/ft.)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO-GRAPHIC COLUMN	DESCRIPTION
				0			ASPHALT and GRAVEL-FILL.
					SP		SAND-FILL; yellowish brown (10YR, 5/6); fine grained; 5% medium grained; loose; moist; no product odor.
					ML		SANDY SILT; dark brown (10YR, 4/3); 10-20% medium to coarse sand; very stiff; moist; slight product odor.
	3.5	60		5	1		@7': 5-15% sand; very stiff; faint product odor.
	2.5	50			2		
				10			
	2.1	62			3	ML/SW-GW	SANDY SILT and GRAVELLY SAND to SANDY GRAVEL-Interbedded; olive (5Y, 4/4); moist; moderate product odor. SANDY SILT: as above; GRAVELLY SAND to SANDY GRAVEL: fine to coarse grained; 30 to 60% fine to medium gravel; very dense.
							@13½': wet; moderate product odor.
	2.5	54		15	4		@16': augers covered with product film.
				20	5	CL-ML	CLAY to SILT; grayish brown (10YR, 5/2); very silty; hard; very stiff; no product odor.
	2.3	65					BOTTOM OF BORING AT 20 FEET.

REMARKS Drilled by 5-inch continuous-flight, solid-stem auger to 4 feet, 8-inch hollow-stem auger to total depth; samples collected with 2-inch California modified split-spoon sampler. Borehole backfilled with bentonite to 12 feet, soil cuttings to ½ foot, concrete to surface.



DRILLER: BAYLAND

PLATE C