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November 12, 2013

Mr. Keith Nowell
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: **Case Closure Request**
Site: **76 Service Station No. 5325**
 3220 Lakeshore Avenue
 Oakland, California
 Fuel Leak Case No. RO0000229

Dear Mr. Nowell;

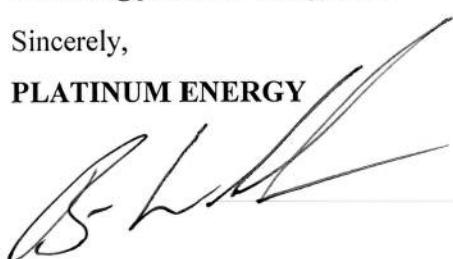
I declare under penalty of perjury that to the best of my knowledge the information and/or recommendations contained in the attached report is/are true and correct.

If you have any questions or need additional information, please call:

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Platinum Energy
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Sincerely,

PLATINUM ENERGY



BRIAN WHALEN

Attachment

Case Closure Request

*76 Service Station No. 5325
3220 Lakeshore Avenue
Oakland, California*

*Alameda County Health Care Services
Agency
Fuel Leak Case No. RO0000229*

*San Francisco Bay Regional Water Quality
Control Board
No. 01-1588*

GeoTracker Global ID No. T0600101463

Antea Group Project No. I40255325

November 12, 2013

*Prepared for:
Mr. Keith Nowell
Alameda County Health Care
Services Agency
1131 Harbor Bay Parkway,
Suite 250
Alameda, CA 94502*

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1.0 INTRODUCTION

Antea Group has prepared this Case Closure Request for the Alameda County Health Care Services Agency (ACHCSA). The purpose of this report is to summarize historical data collected during previous investigations, monitoring and sampling events, and evaluate the site data for low risk closure.

1.1 Site Description

The site is located on the southeast corner of the intersection of Lakeshore Avenue and Lake Park Avenue in Oakland, California (**Figure 1**). The site is bounded to the north by Lakeshore Avenue; to the west and southwest by Lake Park Avenue; to the southeast by a supermarket parking lot; and to the east by a pharmacy. Station facilities include a service station building with one service bay, three fuel dispenser islands, and two 12,000-gallon double-wall fiberglass, gasoline underground storage tanks (USTs) (**Figure 2**).

1.2 Geologic Setting

1.2.1 Regional Geologic Setting

The site is underlain by estuarine deposits consisting primarily of unconsolidated clay and silt, rich in organic material.

1.2.2 Site Geologic Setting

Based on previous investigations, the site is underlain by clay and silt to depths of approximately 25 feet below ground surface (bgs). Discontinuous units of sand and gravel were observed beneath the site at varying depths. The water-bearing unit is composed of sand and silt and is encountered at depths ranging from 6 to 17 feet bgs.

1.3 Hydrogeologic Setting

1.3.1 Regional Hydrogeologic setting

The site is located in the Santa Clara Valley Groundwater Basin, East Bay Plain Subbasin. The subbasin is bounded on the east by the contact with Franciscan Basement rock, on the north by San Pablo Bay, and on the south by the Niles Cone Groundwater Basin, and extends beneath the San Francisco Bay to the west.

1.3.2 Site Hydrogeologic Setting

The site currently has a network of six monitoring wells (U-1 through U-6). First encountered groundwater ranges in depth from 6 feet bgs to 10.5 feet bgs depending on subsurface conditions. Static water levels in the monitoring wells have historically ranged from 2.71 feet below top of casing (BTOC) [U-6] to 12.81 feet BTOC [U-6]. The groundwater flow direction and gradient observed during the third quarter 2013 sampling event are shown on **Figure 3**. The historical groundwater flow direction is predominately to the northwest with an average hydraulic gradient of 0.024 foot per foot (ft/ft). A historical groundwater flow direction rose diagram is presented on **Figure 4**.

2.0 SUMMARY OF PREVIOUS WORK

Over the history of the site assessment, laboratories and consultants have used a wide variety of terms for petroleum hydrocarbons reported in analysis of soil and water. Soil and groundwater samples are analyzed typically by United States Environmental Protection Agency (EPA) Method 8015 or 8260. Antea Group uses the designation TPHg for total petroleum hydrocarbons as gasoline within the C5 to C12 carbon range, diesel range organics (DRO) for total petroleum hydrocarbons as diesel within the C10 to C28 carbon range, and residual range organics (RRO) for total petroleum hydrocarbons as oil within the C24 to C40 carbon range.

Terms from previous reports may include, but are not limited to, total petroleum hydrocarbons (TPH), total recoverable petroleum hydrocarbons (TRPH), total extractable petroleum hydrocarbons (TEPH), total purgeable petroleum hydrocarbons (TPPH), and total volatile hydrocarbon (TVH) which refers to a broad carbon range. More specific terms are total petroleum hydrocarbons as gasoline (TPHg or TPH-G), total petroleum hydrocarbons as diesel (TPHd or TPH-D), and total petroleum hydrocarbons as oil or motor oil (TPHo, TPHmo, TPH-O, or TPH-MO). The designations are generally comparable to GRO, DRO,

and RRO, respectively. Antea Group has left the original designation when summarizing historical data and the second designations when applied to recent investigations and summary discussions.

2.1 Previous Environmental Investigations

May 1990 Three exploratory soil borings were advanced adjacent to the UST complex to depths ranging from 10 to 12.5 feet bgs. Soil samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) and benzene, toluene, ethylbenzene, and xylenes (BTEX). The samples contained TPH-G concentrations ranging from 2 to 7,500 parts per million (ppm) and benzene concentrations ranging from 0.014 to 13 ppm.

June 1990 Two 10,000-gallon gasoline USTs, one 550-gallon waste oil UST, and related product dispensers were replaced. Soil samples from the UST excavation sidewalls and bottom and product line trenches were reported to contain TPH-G and benzene at concentrations ranging from 12 to 2,800 ppm and 0.008 to 11 ppm, respectively. Approximately 250 cubic yards of soil and backfill material were aerated on-site to reduce concentrations to below 100 ppm TPH-G, then transported to an appropriate soil disposal facility. Groundwater was encountered at approximately 7.5 feet bgs.

September 1990 Monitoring wells U-1, U-2, and U-3 were installed. TPH-G was reported in soil samples collected from the capillary fringe in well borings U-1 and U-2 at concentrations of 110 and 480 ppm, respectively. Benzene was reported in the soil sample from well boring U-1 at a concentration of 4.5 ppm. Petroleum hydrocarbons were below the laboratory's indicated reporting limits in soil or groundwater samples collected from U-3. Groundwater samples collected from wells U-1 and U-2 were reported to contain 690 and 38 parts per billion (ppb) TPH-G and 780 and 27 ppb benzene, respectively.

June 1990 Monitoring wells U-4, U-5, and U-6 were installed. TPH-G and benzene were reported in the capillary fringe soil sample collected from boring U-5 at concentrations of 400 ppm and 1.9 ppm, respectively. TPH-G and benzene were below the laboratory's indicated reporting limits in soil samples collected from borings U-4 and U-6. Groundwater levels stabilized at depths ranging from 8.8 and 9.2 feet bgs.

November 1996 One 550-gallon waste oil UST was removed and the product lines and dispensers were replaced. A soil sample collected from the sidewall of the waste oil UST excavation contained 1.5 ppm total petroleum hydrocarbons as diesel (TPH-D) and 78 ppm total oil and grease (TOG). TPH-G, benzene, methyl tertiary butyl ether (MTBE), halogenated volatile organic compounds (HVOCs), and semi-volatile organic compounds (SVOCs) were all below the laboratory's indicated reporting limits. Product line trench excavation and over excavation samples were reported to contain petroleum hydrocarbon concentrations ranging from non-detect to 880 ppm of TPH-G, non-detect to 3.6 ppm of benzene, and

non-detect to 23 ppm of MTBE. Approximately 276 tons of excavated soil was transported to an appropriate disposal facility.

June 1997 Two exploratory borings (U-D and U-E) and one UST observation well were installed. Boring U-D was advanced offsite on Lakeshore Avenue. TPH-G was reported in the soil samples collected at the capillary fringe from the soil borings. TPH-G and MTBE were reported at a maximum concentration of 450 ppm and 1.1 ppm, respectively, in boring U-D.

October 2003 Site environmental consulting responsibilities were transferred to TRC.

April 2006 Three ozone sparge wells (C-1 through C-3) were installed by TRC in the vicinity of monitoring well U-2 for the purpose of an ozone pilot study. Total purgeable petroleum hydrocarbons (TPPH) were reported at a maximum of 4,600 milligrams per kilograms (mg/kg) in the five feet below grade (fbg) soil sample collected from C-1.

June through August 2006 A 3-month ozone sparge event was completed using sparge points C-1 through C-3 located in the vicinity of monitoring well U-2 using a mobile ozone sparge treatment system.

2.2 Sensitive Receptors

In August 2013, Antea Group conducted a review of well logs from the California Department of Water Resources (DWR) office in Sacramento and Alameda County Public Works Agency (ACPWA) to determine the location of any water-supply wells in the vicinity of the subject site. Based on the data obtained from the DWR and ACPWA well logs, there are no water supply, domestic, municipal, or irrigation wells within a half mile radius of the site. Antea Group also contacted the East Bay Municipal Utility District (EBMUD) to determine if they have any wells in the area. EBMUD indicated that they don't have any wells, anywhere. Lake Merritt is the closest surface water and is located approximately 1,300 feet west-southwest of the site.

3.0 LOW RISK CASE CLOSURE EVALUTION

3.1 General Site Information

This section reviews general site information used by Antea Group to determine if a site poses a low risk to human health and the environment.

3.1.1 Unauthorized Release is Located within the Service Area of a Public Water System

The site is located at 3200 Lakeshore Avenue in Oakland, California. According to the Department of Water Resources (DWR) the site is located within the Santa Clara Valley Groundwater Basin, East Bay Plain Subbasin. The site is within the public water system provided by the EBMUD.

3.1.2 Unauthorized Release Consists Only of Petroleum Hydrocarbons

Based on a review of historical documents the release at the site consisted only of petroleum hydrocarbons.

3.1.3 Unauthorized Release has been Stopped

The release was stopped by replacing the former USTs and product lines in 1990.

3.1.4 Free Product has been Removed to the Maximum Extent Practicable

Free product has not historically been observed in the on-site monitoring wells. In addition, the TPHg, benzene, and MTBE concentrations in the groundwater show a declining trend (**Appendix A**).

3.1.5 A Conceptual Site Model that Assesses the Nature, Extent, and Mobility of the Release has been Developed

Since 1990 at least seven separate site assessments have been conducted to create a conceptual site model. The assessments included the installation of 6 groundwater monitoring wells, 3 ozone sparge wells, and 5 soil borings. The total depth explored on-site is 26.5 feet bgs. The deepest soil sample collected was at 21.5 feet bgs from the boring advanced for monitoring well U-2. Results of the sample analysis reported TPHg and benzene below the laboratory's indicated reporting limits. MTBE was not analyzed for in any of the samples collected from the U-2 boring. MTBE was analyzed for in the soil sample collected from boring C-1 at 10 feet bgs and was reported at a concentration of 0.029 mg/kg. Historical soil analytical data is presented as **Appendix B**. Data collected from the assessments has defined the extent of the contamination plume both laterally and vertically.

3.1.6 Secondary Source has been Removed to the Extent Practicable

In 1990, approximately 800 cubic yards of soil were removed from the former UST tank pit and waste-oil tank pit and disposed of off-site. In 1996 a 550 gallon waste oil UST and product pipelines were exhumed and replaced. Approximately 276 tons of soil was removed and disposed of off-site at an approved disposal facility.

3.1.7 Soil and Groundwater have been Tested for MTBE and Results Reported in Accordance with Health and Safety Code Section 25296.15

Both soil and groundwater have been tested for MTBE and the results were reported in accordance with the Health and Safety Code section 25296.15. Results of the soil testing were reported in the associated site assessment reports to the ACHCSA and Geotracker database. Results of the groundwater testing were reported in the quarterly summary reports submitted to ACHCSA and submitted to the Geotracker database.

3.1.8 Nuisance as Defined by Water Code Section 13050 Does Not Exist at the Site

In order to meet this requirement the site must meet three criteria: is not injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property, does not affect at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal, and did not occur during, or as a result of, the treatment or disposal of wastes.

With the soil excavations conducted in 1990 and 1996, soils from 0 to 10 feet bgs do not pose a threat to human health or the free use of property, and also removed any indecent or offensive contamination that might affect the senses. The release does not affect an entire community or neighborhood. The release was not the result of or during the treatment or disposal of wastes.

3.2 Groundwater

This section reviews criteria specific to the risk to human health and the environment associated with contamination in groundwater. Groundwater concentrations at the site are compared to the California Maximum Contamination Levels (MCLs).

Constituents of concern at the site are TPHg and MTBE. Maximum concentrations observed in the monitoring wells during the most recent groundwater monitoring and sampling event, conducted in September 2013, reported TPHg at 420 µg/L and MTBE at 81 µg/L. The largest plume length for concentrations over the MCL is MTBE (MCL of 5 µg/L) at approximately 122 feet long, free product is not present at the site, and the closest sensitive receptor, Lake Merritt, is approximately 1,300 feet west-southwest of the site. Isoconcentration maps for TPHg and MTBE are presented on **Figure 5** and **Figure 6**. With the limited lateral extent of contamination above MCLs, free product not being present on the site, and the distance to the nearest sensitive receptors, groundwater contamination at the site does not pose a risk to human health or the environment. Historical groundwater gauging and analytical data is presented as **Appendix C**.

3.3 Petroleum Vapor Intrusion to Indoor Air

This section reviews criteria specific to petroleum vapor intrusion to indoor air.

The site is currently an active commercial petroleum fueling facility. Any vapors associated with historic fuel system releases at the site are insignificant relative to exposures from small surface spills and fugitive vapor releases that are typical of active fueling facilities. Therefore, petroleum vapor intrusion to indoor air resulting from historical fuel releases does not pose a significant risk to human health or the environment.

3.4 Direct Contact and Outdoor Air Exposure

This section reviews criteria associated with direct contact and outdoor air exposure. Direct contact and outdoor air exposure is influenced by contamination found in soils from 0 to 10 feet bgs. Concentrations of benzene and ethylbenzene are compared to the Low-Threat UST Case Closure Policy (LTCP) concentration limits found in Table 1 of the policy.

Benzene and ethylbenzene have been reported above the laboratory's indicated reporting limits in soil samples collected from depths of 0 to 10 feet bgs at the site, however, the maximum concentrations

observed between 0-10 feet bgs are below the levels listed for commercial/industrial and utility worker exposure. The maximum concentrations of benzene between 0-5 feet bgs observed on-site was 3.6 mg/kg (LTCP 8.2 mg/kg) and between 5-10 feet bgs was 11 mg/kg (LTCP 12 mg/kg). The maximum concentrations of ethylbenzene between 0-5 feet bgs was 76 mg/kg (LTCP 89 mg/kg) and between 5-10 feet bgs was 63 mg/kg (134 mg/kg). Naphthalene and polynuclear aromatic hydrocarbons (PAH) have not been tested for in soil samples collected between 0 to 10 feet bgs. Naphthalene has not been analyzed for because diesel fuel has not historically been sold at this facility. While a waste oil tank was removed from the site in 1990, PAH was not analyzed for from soil samples collected from beneath the tank. The tank appeared in good condition upon removal with no visible signs of cracks, holes, or leaks. The tank pit was over excavated to a depth of 12 feet bgs. In 1996 an additional waste oil tank was removed from the site, PAHs were not analyzed for from soil samples collected from beneath the tank. The tank appeared to be in good condition upon removal with no visible signs of cracks, holes, or leaks. The tank pit was over excavated to a depth of 8 feet bgs. Shallow soil contamination does not appear to pose a threat to human health or the environment. Historical soil analytical results are presented as **Appendix B**. Historical soil sample locations are depicted on **Figure 7**.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Antea Group has made the following conclusions in this Case Closure Request:

- Groundwater contamination has been adequately characterized and does not pose a threat to human health or the environment.
- Petroleum vapor intrusion to indoor air associated with historical releases of product does not pose a threat to human health or the environment.
- Shallow soil contamination that may result in direct contact or outdoor air exposure does not exist at this site and does not pose a risk to human health or the environment.
- The closest sensitive receptor is Lake Merritt, located approximately 1,300 feet west-southwest of the MTBE plume above MCLs.

Antea Group recommends that the site be closed and no further action be required. All notification requirements will be met before the case is closed, Antea Group will remove the on-site and off-site monitoring and remediation wells, associated with this site, when instructed to do so by the ACHCSA in preparation for regulatory closure, and all derived wastes generated during the well removal activities will be properly removed from the site. The well construction details and boring logs are presented as **Appendix D**.

5.0 REMARKS

The recommendations contained in this report represent Antea USA, Inc.'s professional opinions based upon the currently available information and are arrived at in accordance with currently accepted professional standards. This report is based upon a specific scope of work requested by the client. The contract between Antea USA, Inc. and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Antea USA, Inc.'s client and anyone else specifically identified in writing by Antea USA, Inc. as a user of this report. Antea USA, Inc. will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea USA, Inc. makes no express or implied warranty as to the contents of this report.

Prepared by:

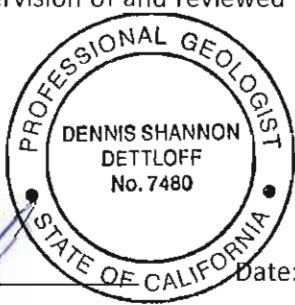


Date: 11-12-13

Edward T. Weyrens, G.I.T.
Project Professional

Information, conclusions, and recommendations provided by Antea Group in this document regarding the site have been prepared under the supervision of and reviewed by the licensed professional whose signature appears below.

Licensed Approver:

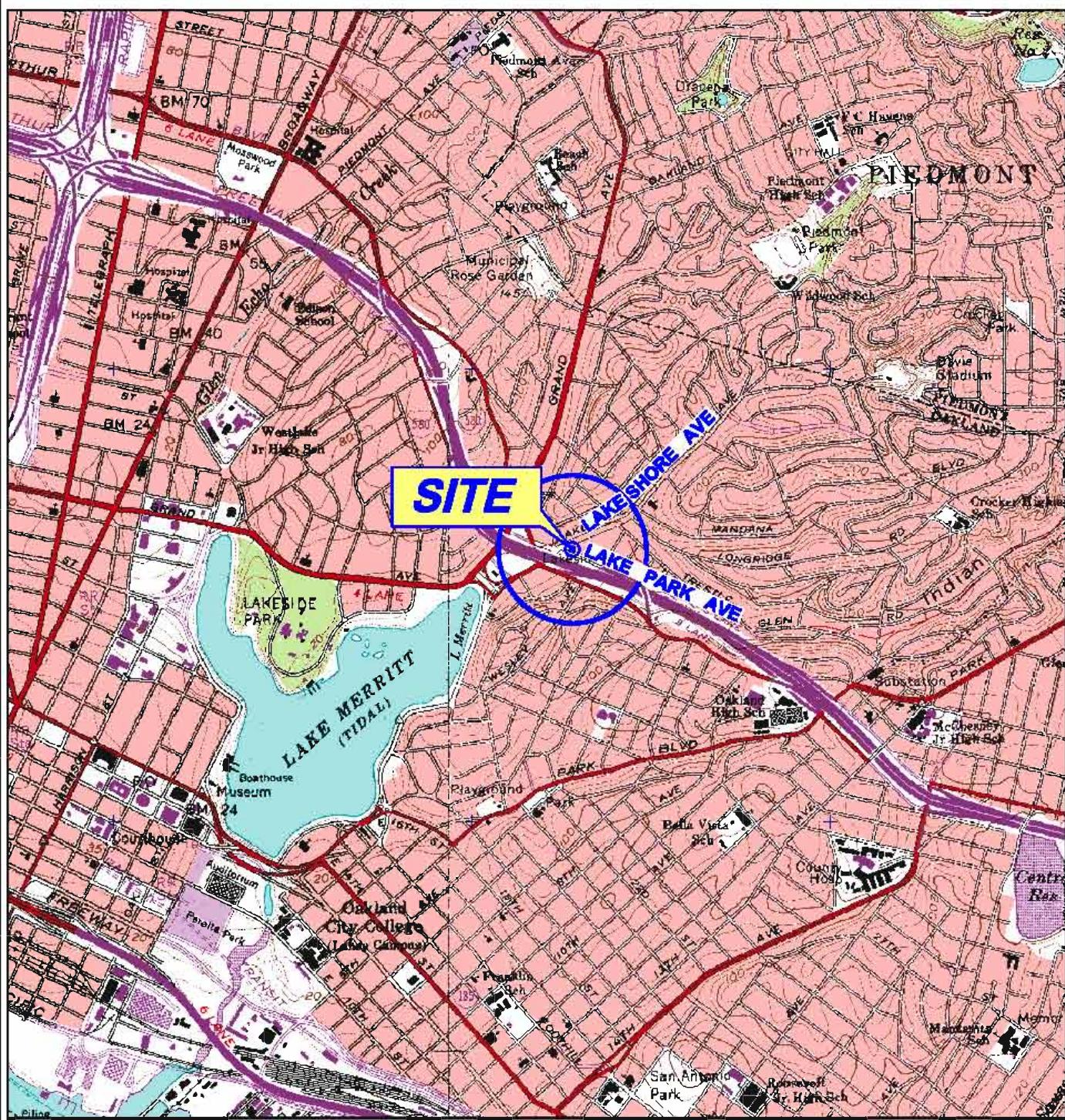


Date: 11/12/13

Dennis S. Dettloff, P.G.
Senior Project Manager
California Registered Professional Geologist No. 7480

Figures

- Figure 1** Site Location Map
- Figure 2** Site Plan
- Figure 3** Groundwater Elevation Contour Map – September 13, 2013
- Figure 4** Historical Groundwater Flow Directions
- Figure 5** Dissolved Phase TPHg Isoconcentration Map – September 13, 2013
- Figure 6** Dissolved Phase MTBE Isoconcentration Map – September 13, 2013
- Figure 7** Site Plan with Historical Sample, Boring and Well Locations



GENERAL NOTES:
BASE MAP FROM 3-D TOPO QUADS
OAKLAND WEST & OAKLAND EAST, CA. QUADRANGLE
7.5 MINUTE TOPOGRAPHIC MAP

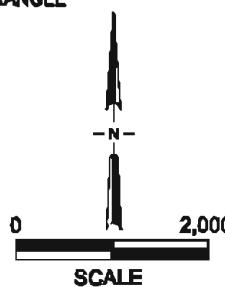
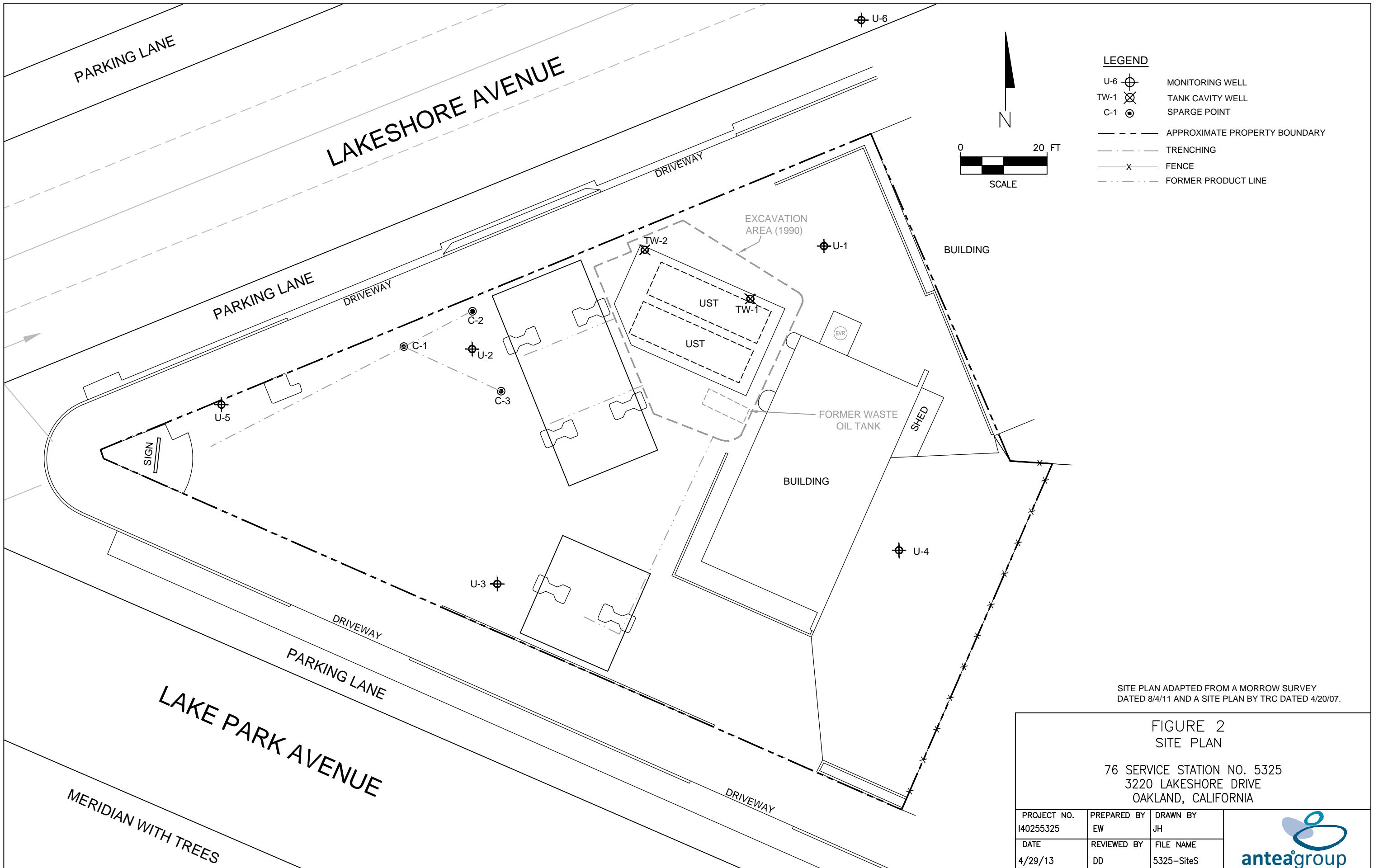


FIGURE 1
SITE LOCATION MAP

76 SERVICE STATION NO. 5325
3220 LAKESHORE AVENUE
OAKLAND, CALIFORNIA

PROJECT NO. 140255325	DRAWN BY JH	ANTEA GROUP
FILE NO. 5325-SLM	PREPARED BY EW	
DATE 28 JAN 11	REV. 2	
REVIEWED BY		





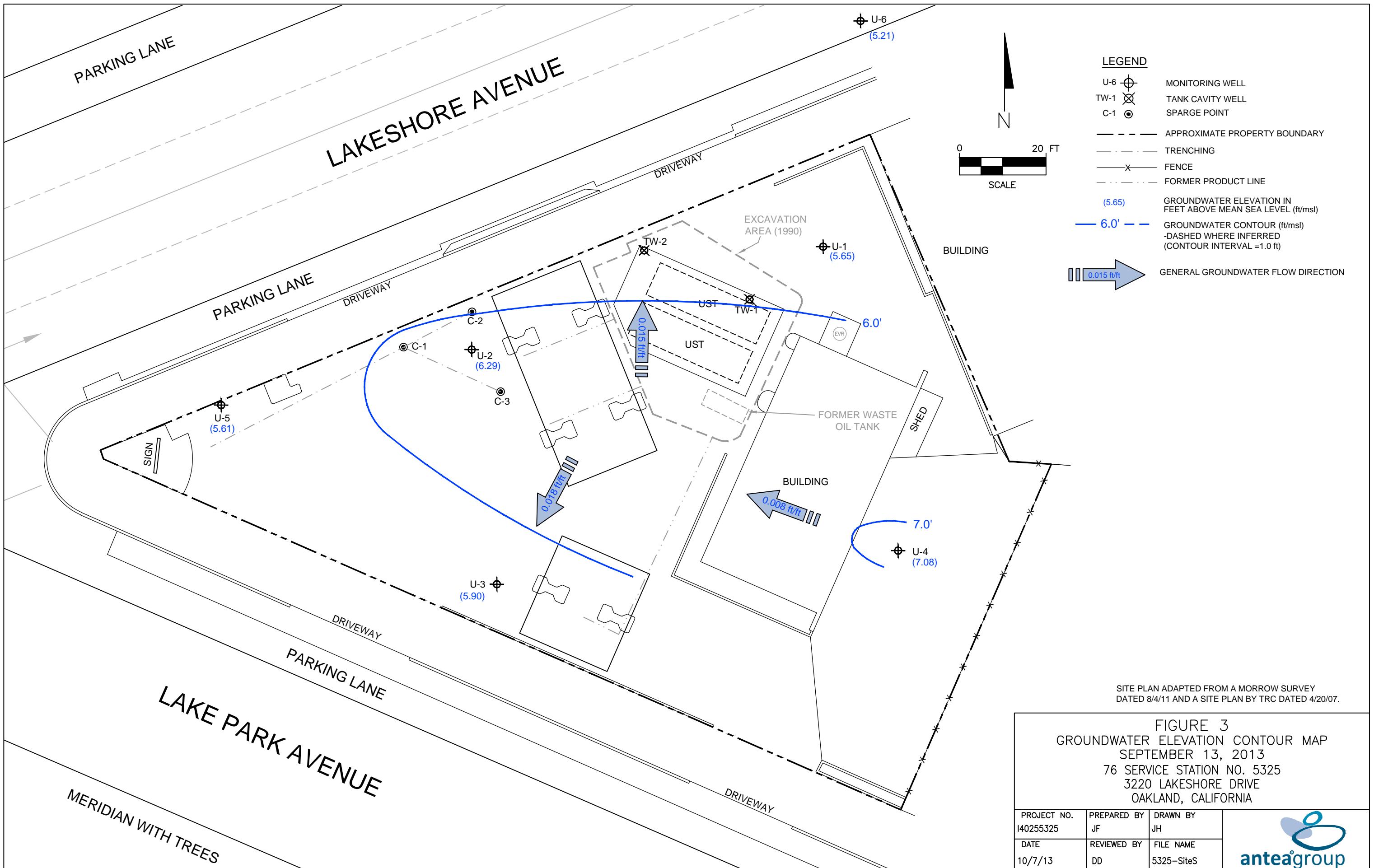
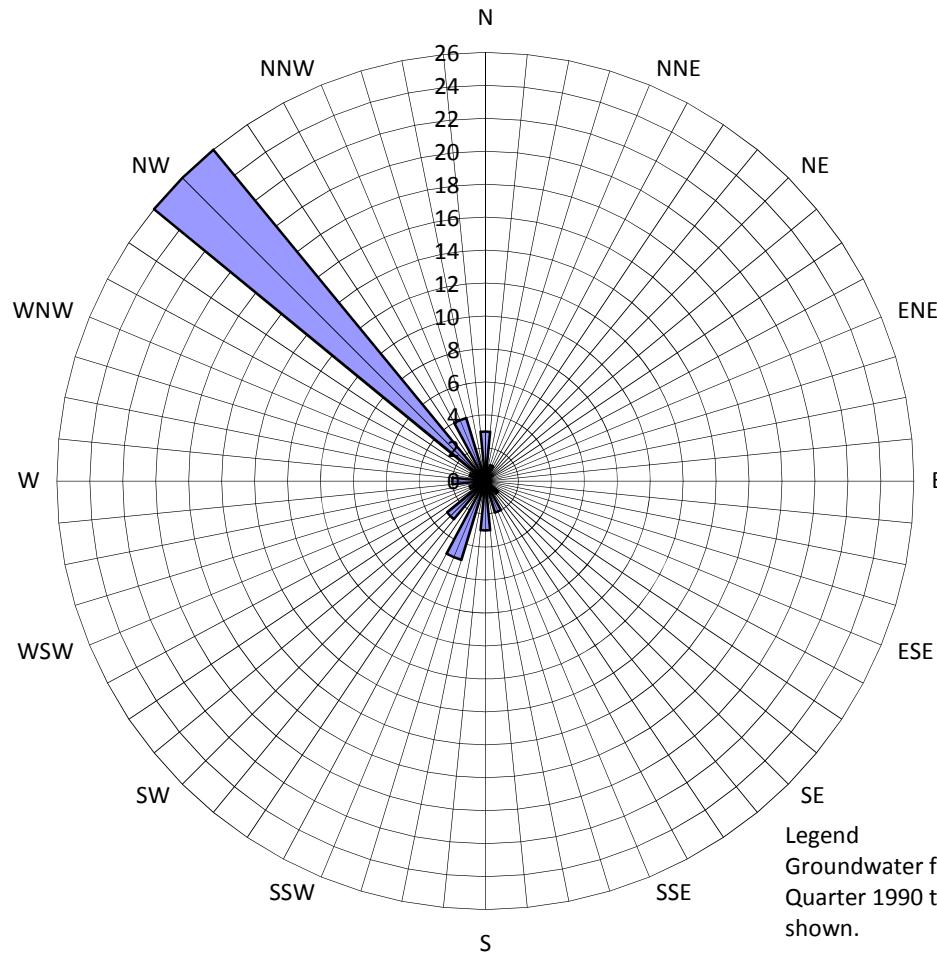
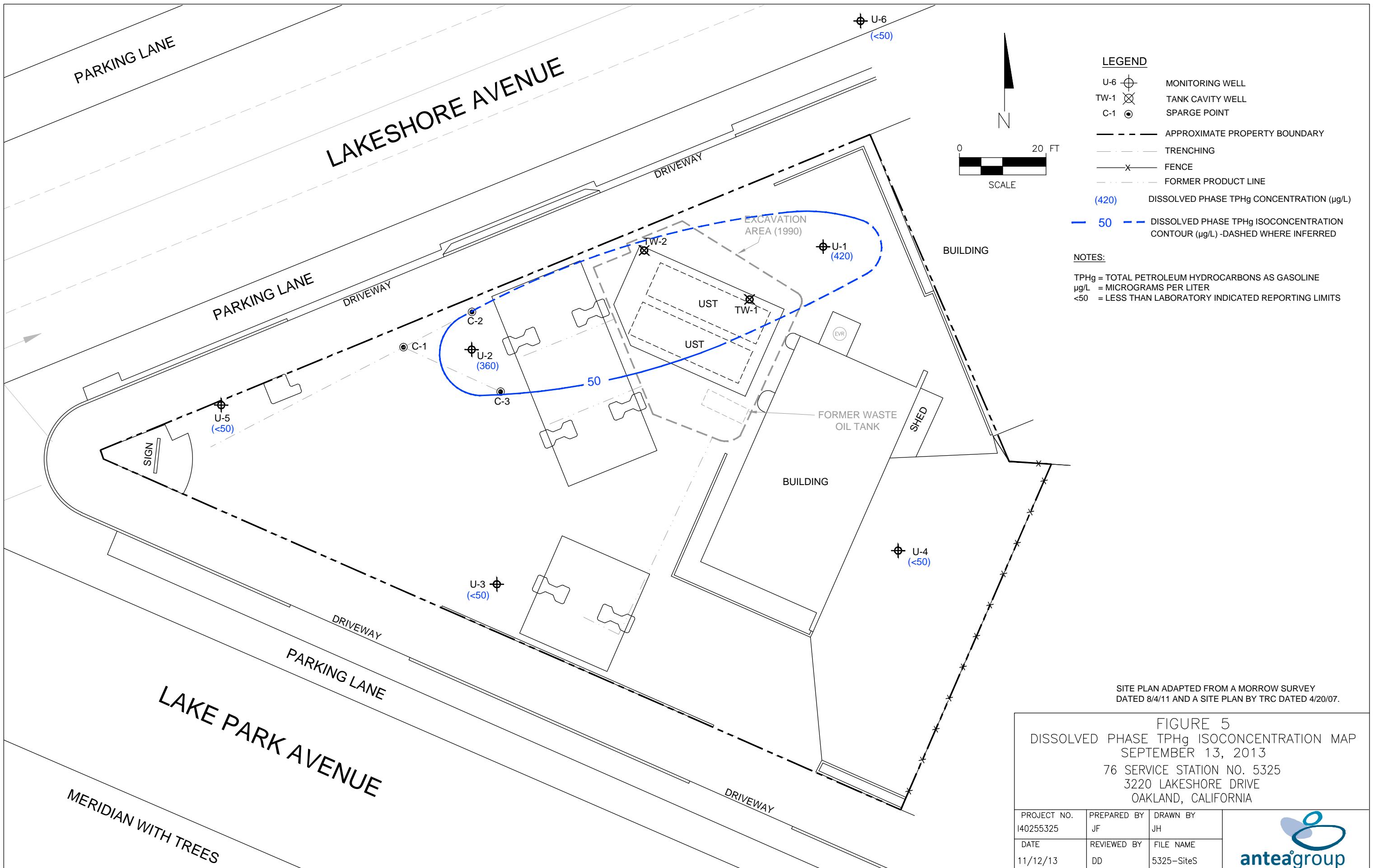


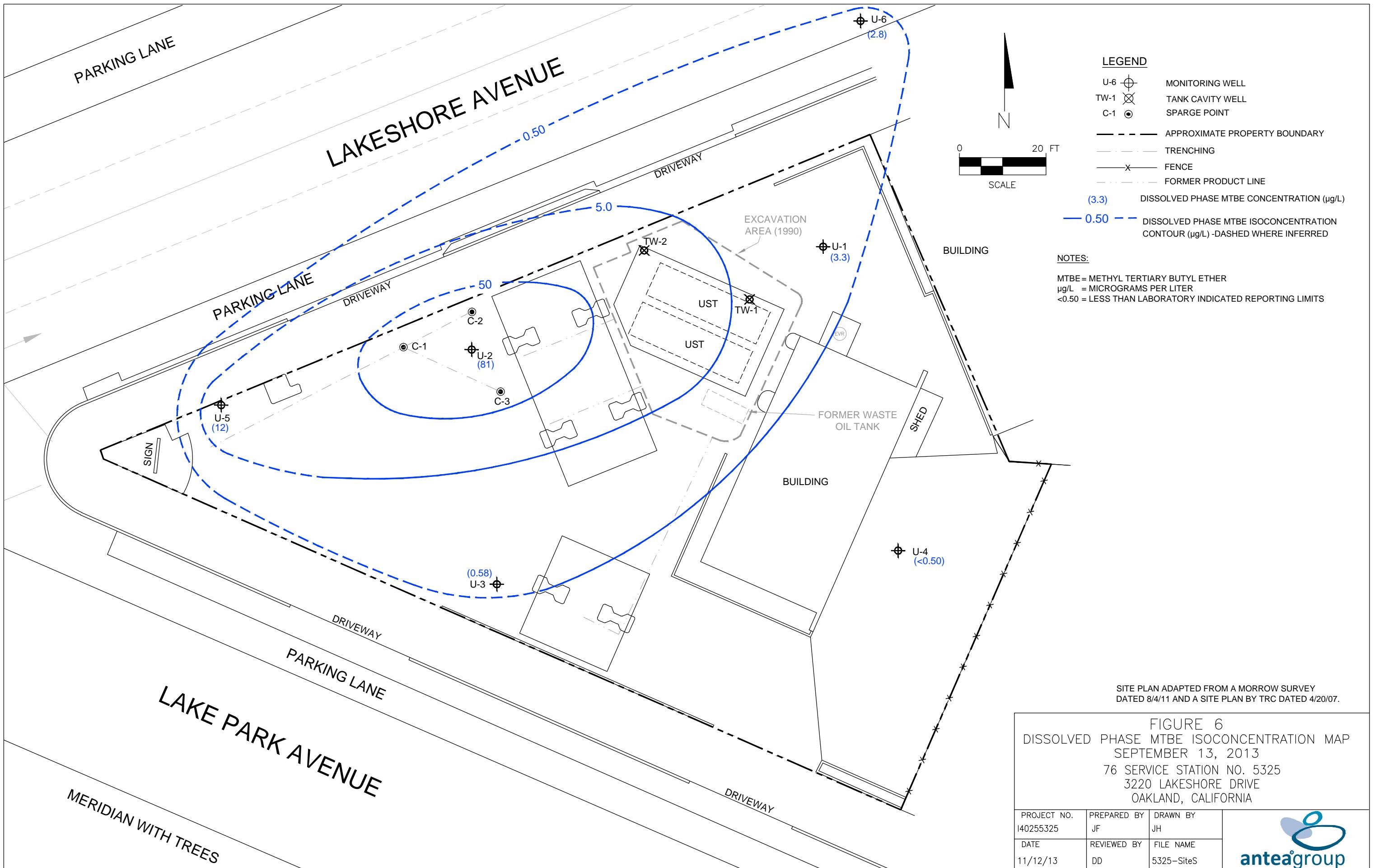
Figure 4
HISTORICAL GROUNDWATER FLOW DIRECTIONS
76 SERVICE STATION NO. 5325
3220 LAKESHORE AVENUE
OAKLAND, CALIFORNIA

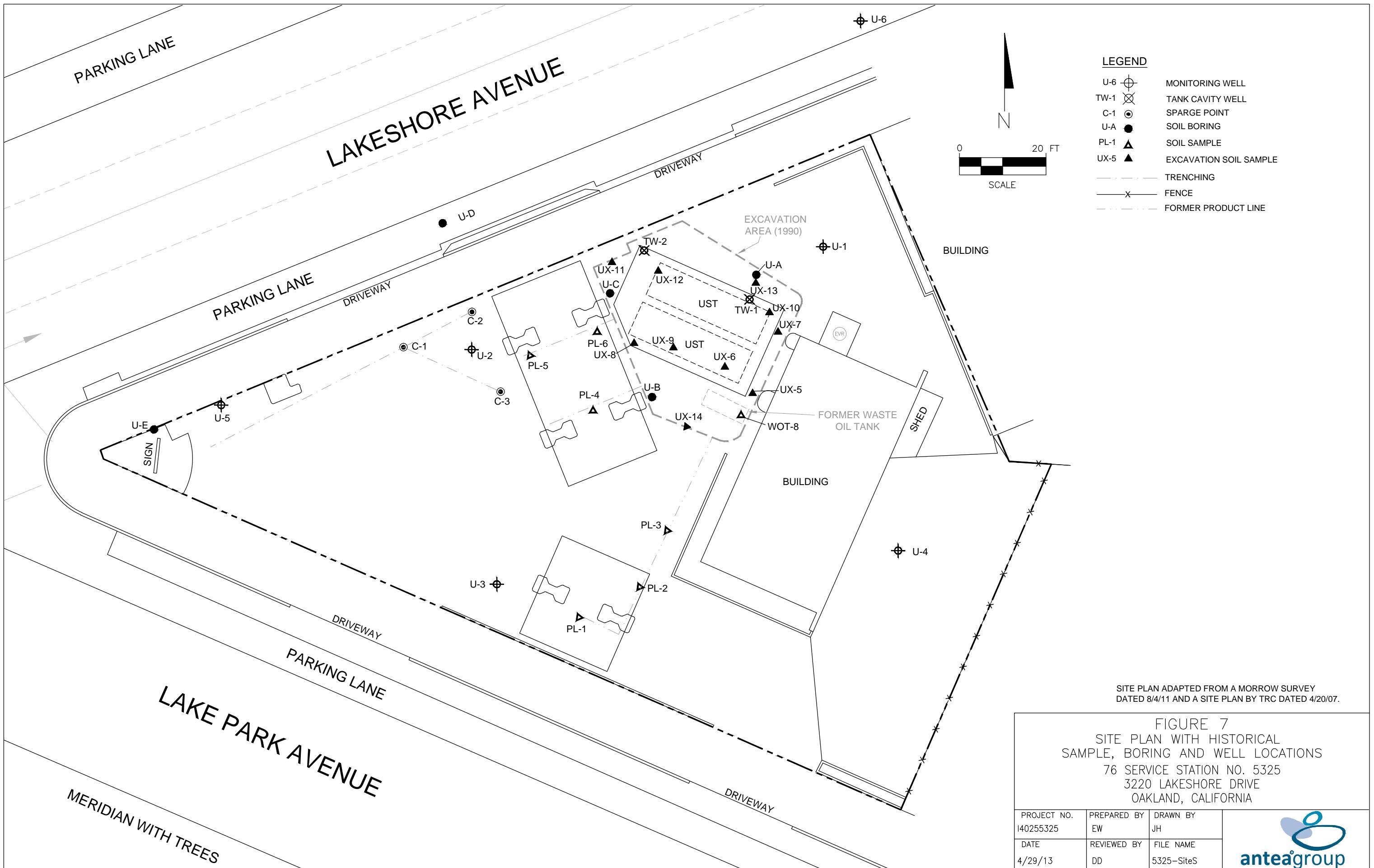


Legend
Groundwater flow directions are based on data from the Third Quarter 1990 to the Third Quarter 2013. 52 data points shown.

■ Groundwater Flow Direction







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Antea Group Project No. I40255325



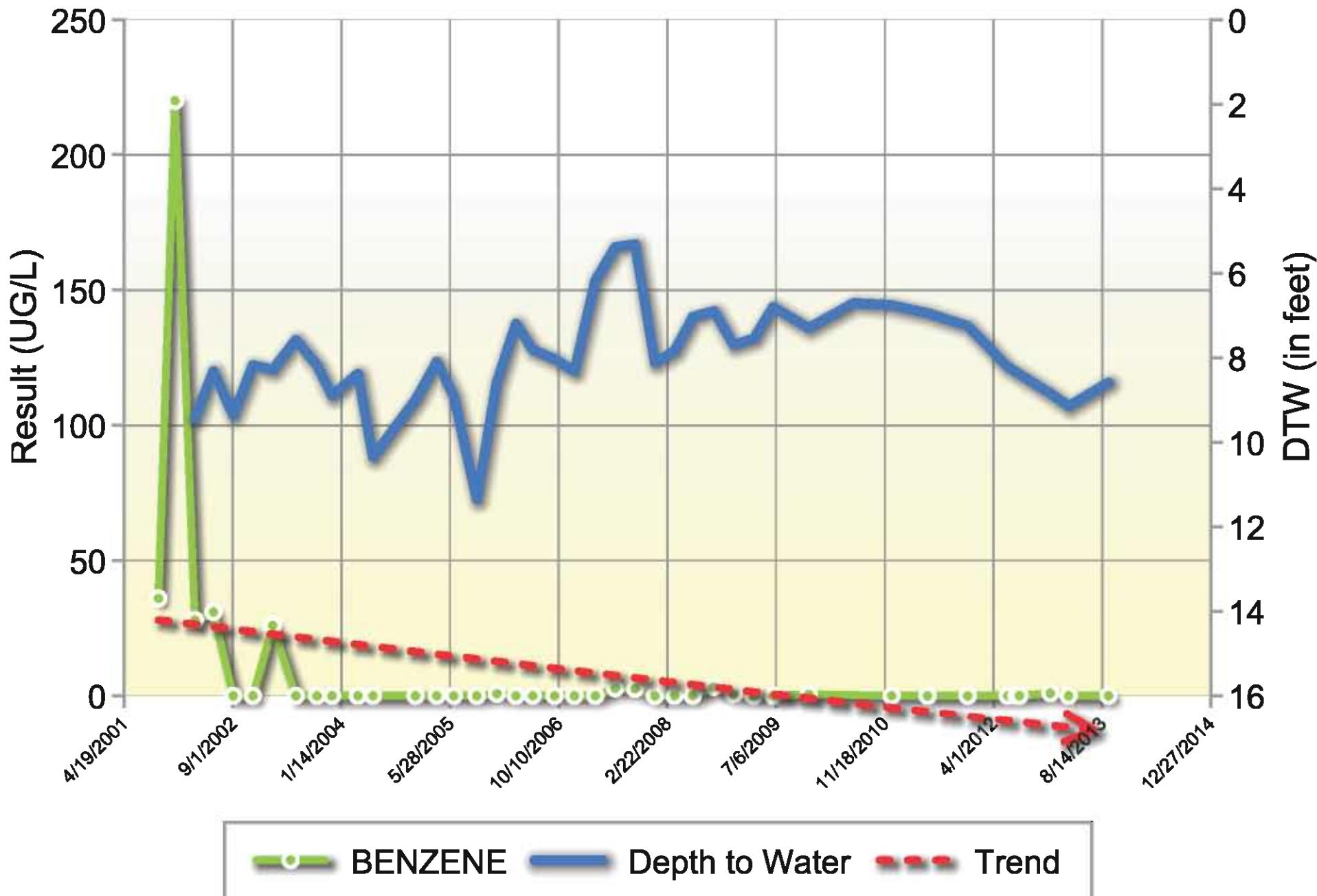
Appendix A

Concentration Trend Graphs

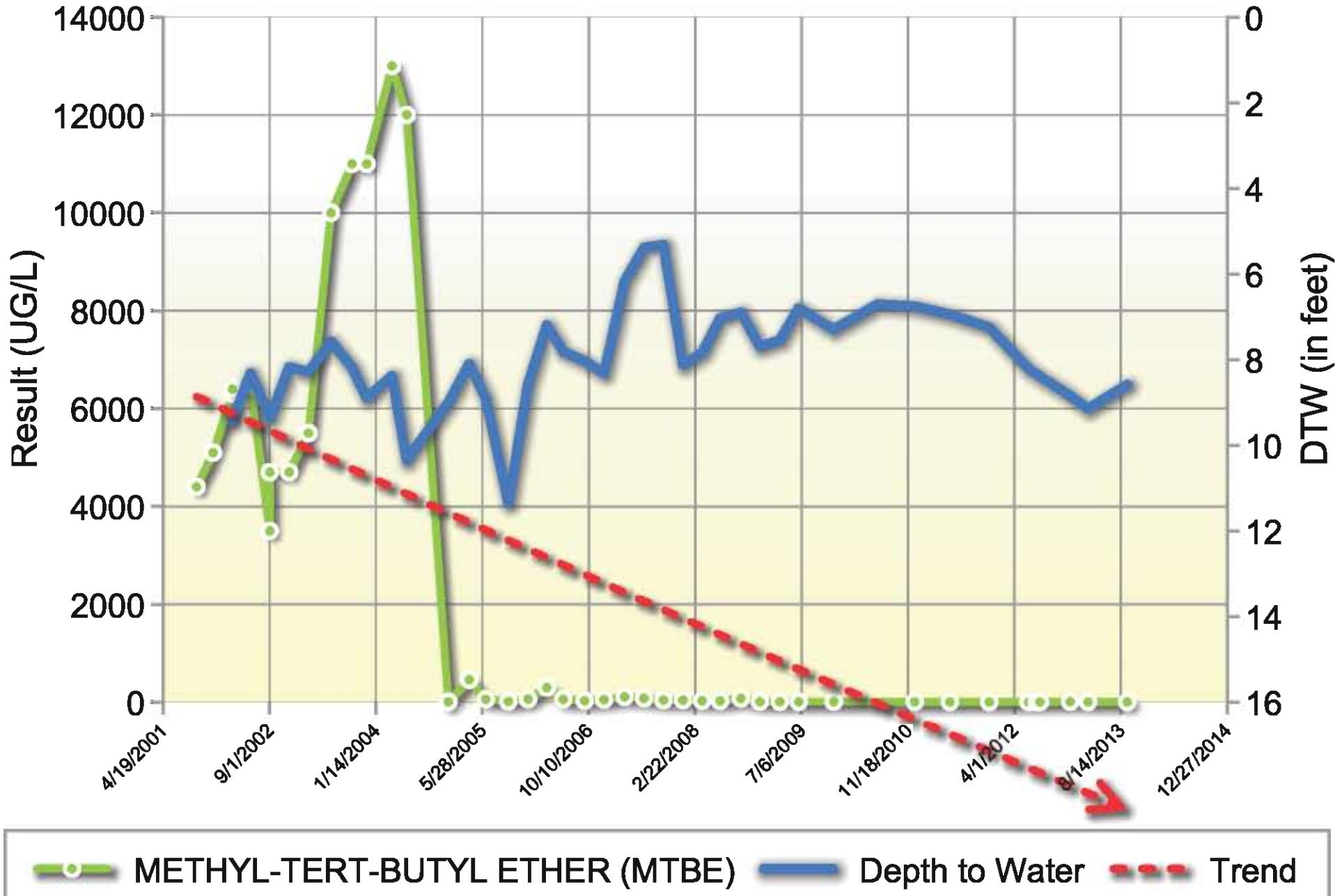
TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE (TPHG) Results for U-1



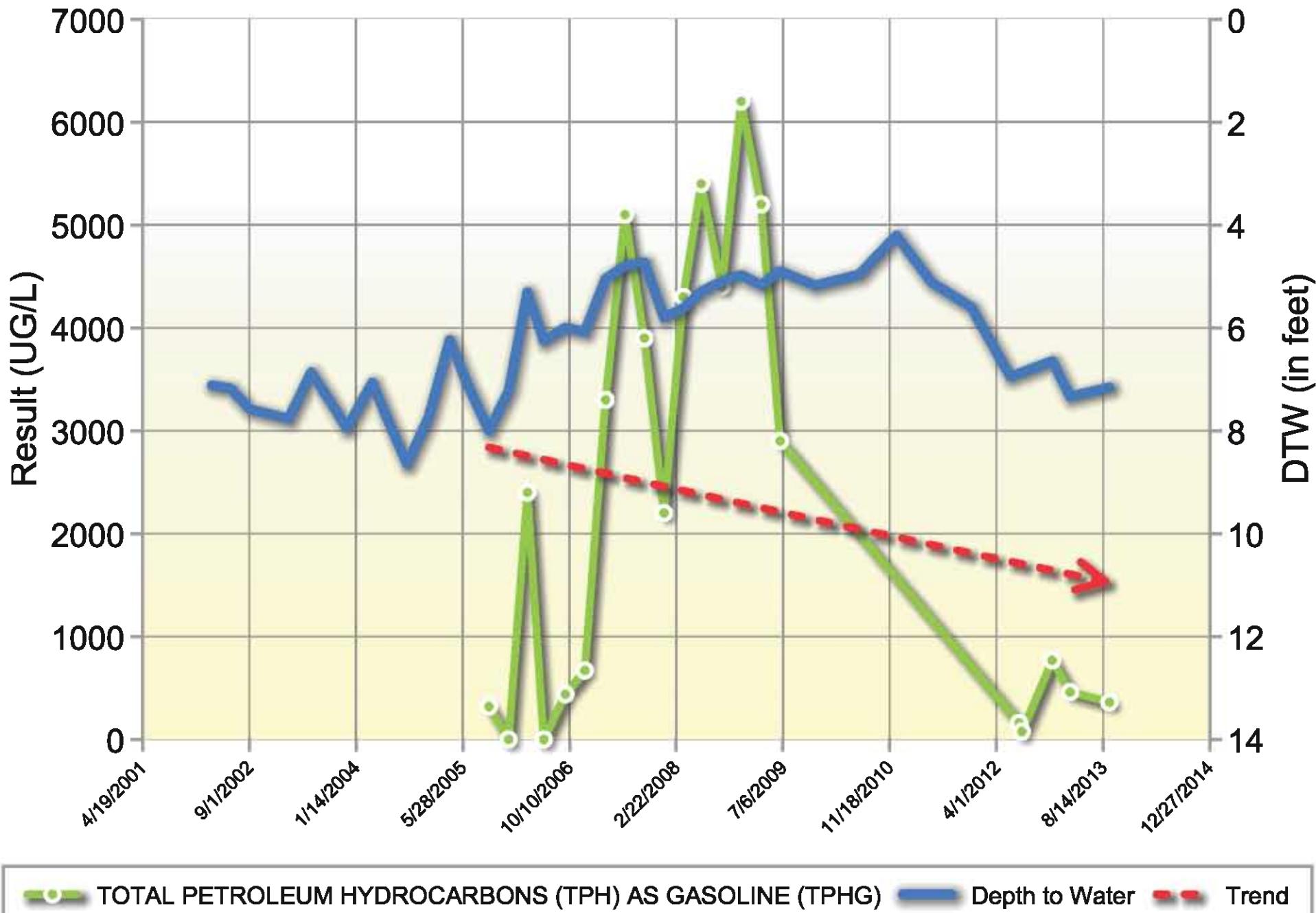
BENZENE Results for U-1



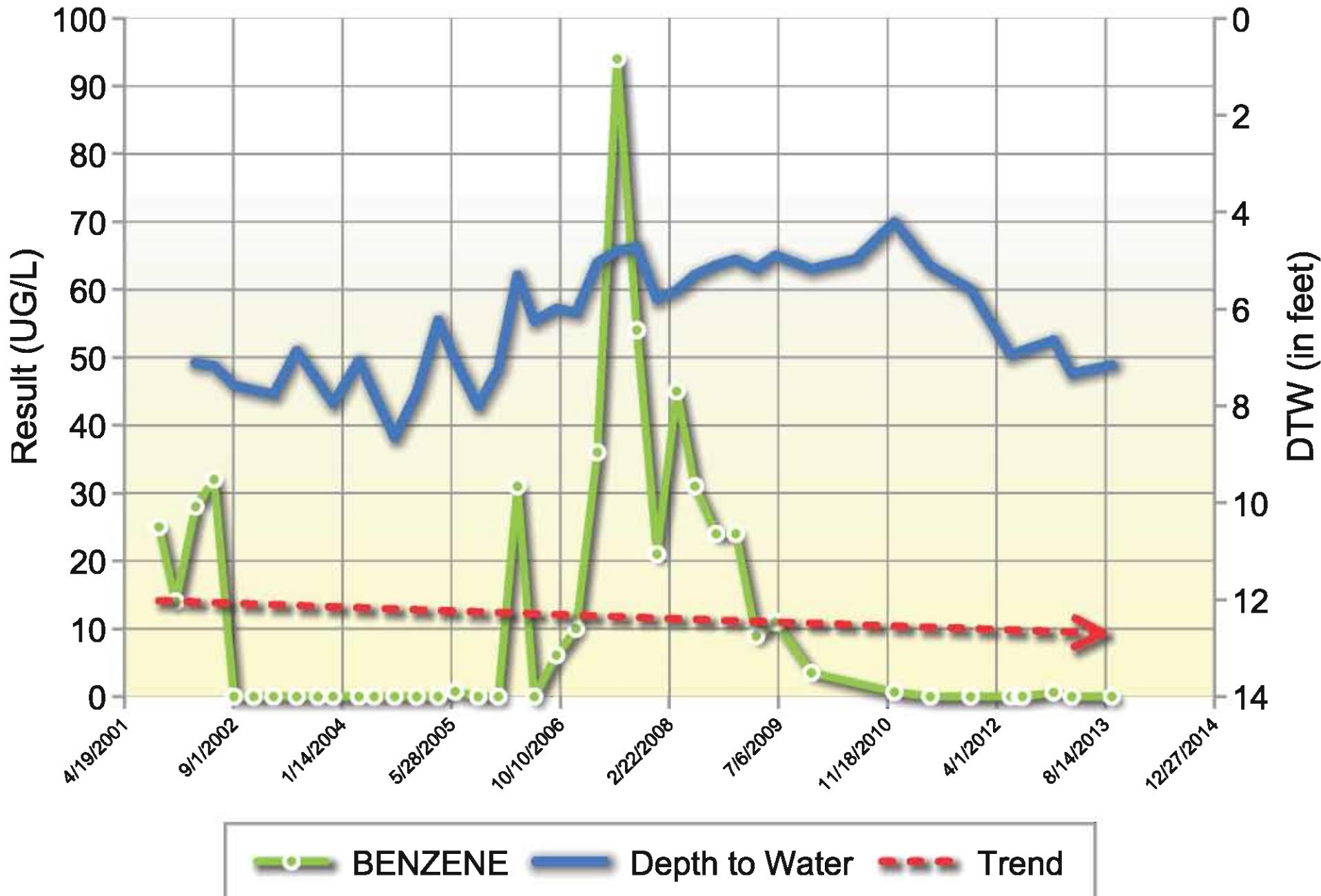
METHYL-TERT-BUTYL ETHER (MTBE) Results for U-1



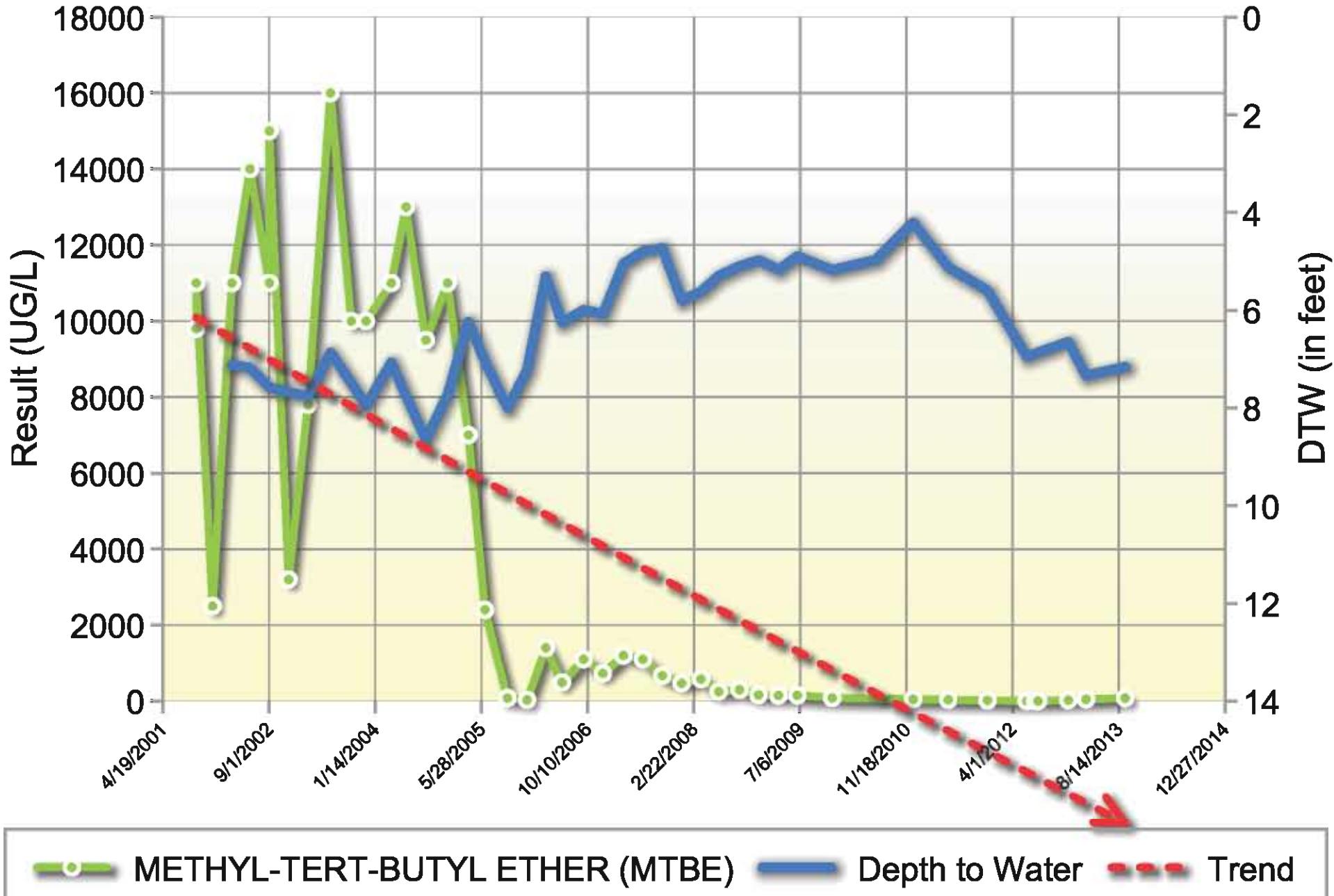
TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE (TPHG) Results for U-2



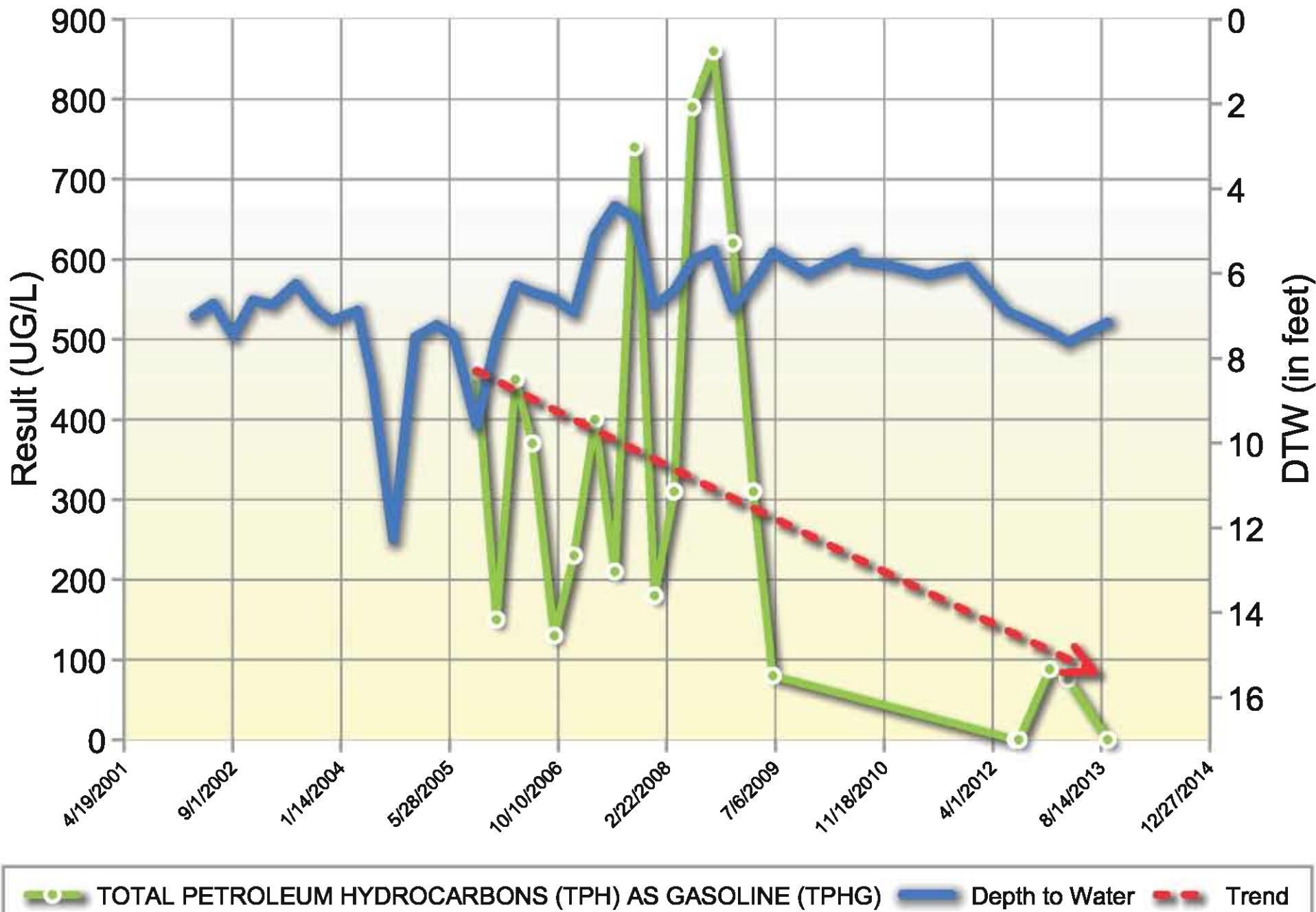
BENZENE Results for U-2



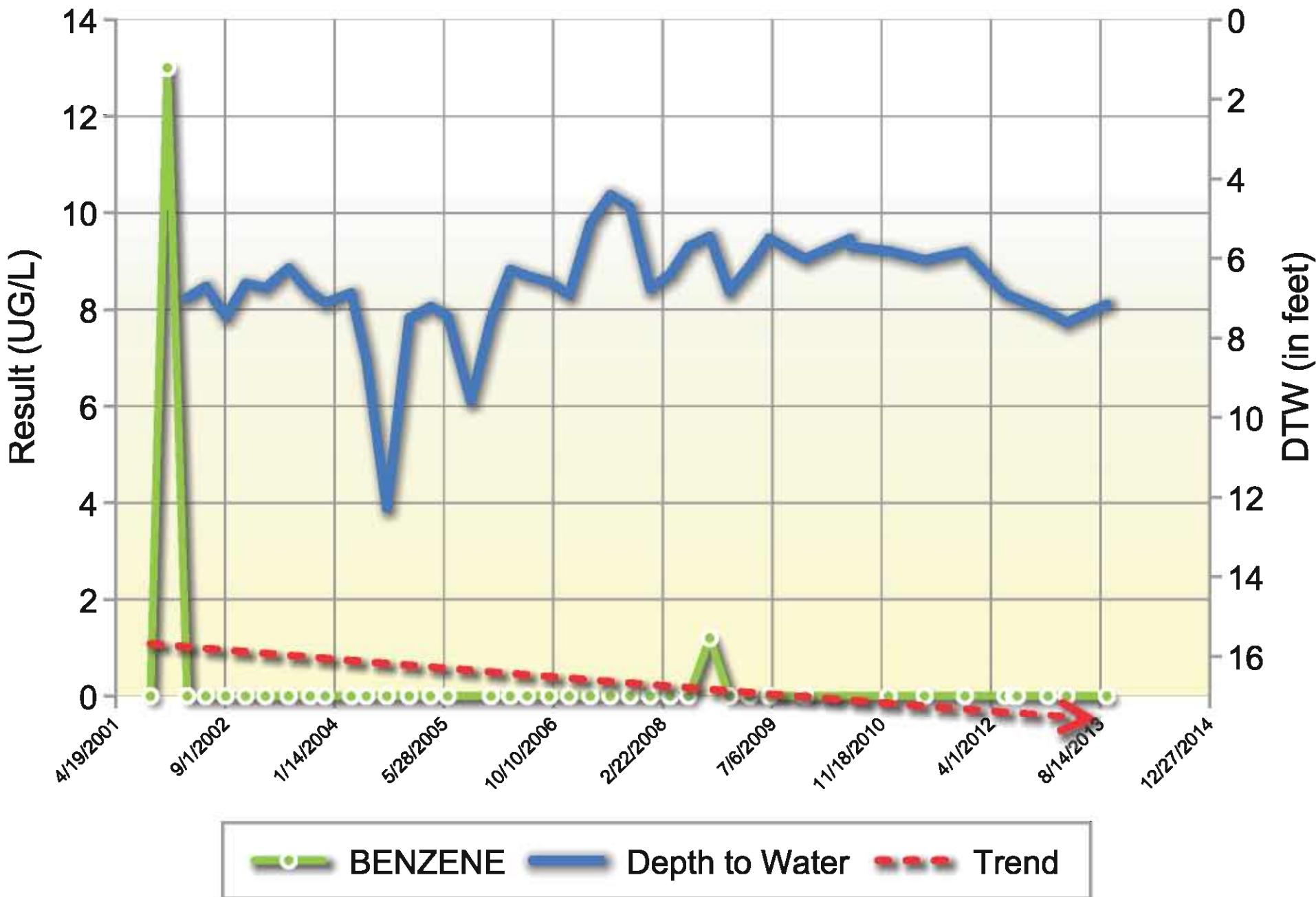
METHYL-TERT-BUTYL ETHER (MTBE) Results for U-2



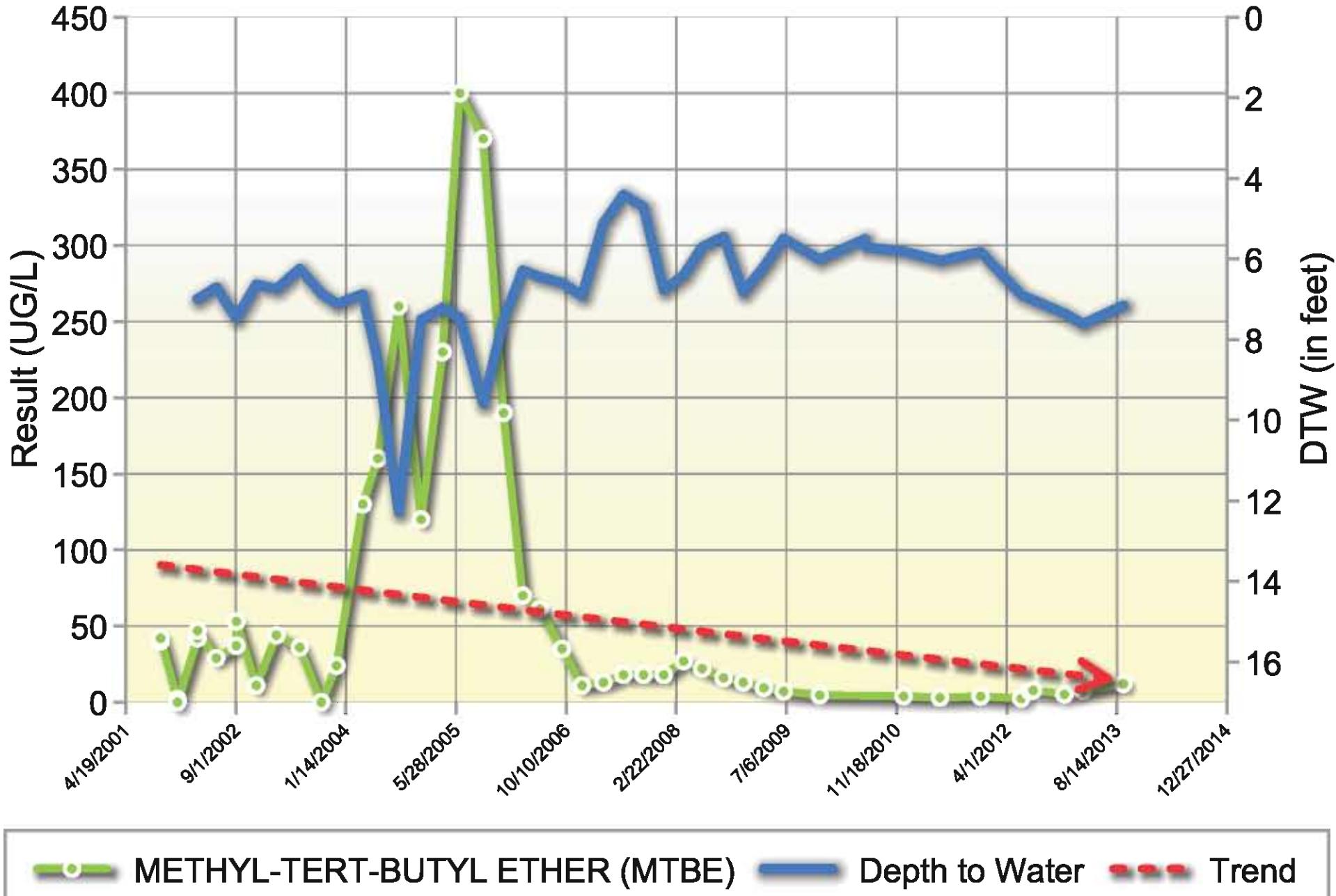
TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE (TPHG) Results for U-5



BENZENE Results for U-5



METHYL-TERT-BUTYL ETHER (MTBE) Results for U-5



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Antea Group Project No. I40255325



Appendix B

Historical Soil Analytical Data

TABLE 1
HISTORICAL SOIL ANALYTICAL DATA
76 Service Station No. 5325
3200 Lakeshore Avenue

Sample ID	Date	Sample Depth (feet)	TPH-GRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	TPH-DRO (mg/kg)	MTBE (mg/kg)
GeoStrategies Inc. 1990									
U-A-5	5/24/90	5	18	0.12	0.069	0.52	0.46	--	--
U-A-7	5/24/90	7	2,100	1.3	27	32	190	--	--
U-A-12.5	5/24/90	12.5	260	0.28	2.4	3	18	--	--
U-B-4.5	5/24/90	4.5	3,100	2.6	44	46	250	--	--
U-B-8.5	5/24/90	8.5	1,600	5.3	31	22	120	--	--
U-B-10.5	5/24/90	10.5	2	0.014	0.11	0.045	0.21	--	--
U-C-4.5	5/24/90	4.5	7,500	13	250	160	990	--	--
U-C-7.5	5/24/90	7.5	86	0.46	3.2	1.7	10	--	--
U-C-10	5/24/90	10	3	.031	0.13	0.08	0.38	--	--
UX-5	6/19/90	9.5	<1.0	<0.005	<0.005	<0.005	<0.005	--	--
UX-6	6/20/90	14	<1.0	<0.005	<0.005	<0.005	<0.005	0.013	--
UX-7	6/20/90	14	<1.0	0.008	0.006	0.008	0.016	--	--
UX-8	6/20/90	7.0	<1.0	<0.005	<0.005	<0.005	0.022	--	--
UX-9	6/20/90	14	<1.0	<0.005	<0.005	<0.005	<0.005	--	--
UX-10	6/20/90	6.5	1,300	1.7	2.1	26	100	--	--
UX-11	6/20/90	12.5	<1.0	<0.005	<0.005	<0.005	<0.005	--	--
UX-12	6/20/90	13	<1.0	0.044	0.008	<0.005	0.01	--	--
UX-13	6/20/90	6.5	<1.0	0.021	<0.005	<0.005	<0.005	--	--
UX-14	6/20/90	7.5	2,800	11	11	63	320	--	--
UX-15	6/20/90	8.0	12	1.1	0.91	0.93	5.2	--	--
UWO-1	6/22/90	unknown	<2.5	<0.026	<0.026	<0.026	<0.05	<2	--
UWO-2	6/22/90	unknown	<2.5	<0.006	<0.0006	<0.026	<0.026	7	--
UT-4	6/25/90	3.5	60	1.1	1.5	2.0	11	--	--
UT-5	6/25/90	3.5	28	1.7	0.76	1.3	4.4	--	--
UT-6	6/25/90	3.0	12	0.62	1.6	0.52	1.9	--	--
UT-7	6/25/90	3.5	<2.5	<0.025	<0.025	<0.025	<0.05	--	--
UT-8	6/25/90	3.5	<2.5	<0.025	<0.025	<0.025	<0.05	--	--
UT-9	6/25/90	4.0	14	<0.026	<0.026	<0.026	0.05	--	--
U1-6.5	9/24/90	6.5	480	4.5	29	14	74	--	--
U1-11.5	9/24/90	11.5	1.4	0.65	0.019	0.015	0.051	--	--
U2-6.0	9/24/90	6.0	110	<0.2	1.6	2.4	12	--	--
U2-11.5	9/24/90	11.5	<1.0	0.007	<0.005	<0.005	0.005	--	--
U2-21.5	9/24/90	21.5	<1.0	<0.007	<0.007	<0.007	<0.007	--	--
U3-6.5	9/24/90	6.5	<1.0	<0.005	<0.005	<0.005	<0.005	--	--
U3-11.5	9/24/90	11.5	<1.0	<0.005	<0.005	<0.005	<0.005	--	--
GeoStrategies Inc. 1994									
U-4-4.0	6/2/94	4.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	--	--
U-4-9.5	6/2/94	9.5	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	--	--
U-5-6.0	6/2/94	6.0	400	1.9	12	9.9	43	--	--
U-6-5.5	6/2/94	5.5	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	--	--

TABLE 1
HISTORICAL SOIL ANALYTICAL DATA

Sample ID	Date	Sample Depth (feet)	TPH-GRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	TPH-DRO (mg/kg)	MTBE (mg/kg)
GeoStrategies Inc. 1996									
WOT-8.0	11/15/96	8.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	1.5	<0.025
PL1-3.5	11/15/96	3.5	19	0.0061	0.018	0.20	0.32	--	0.79
PL2-3.5	11/15/96	3.5	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	--	<0.025
PL3-3.5	11/15/96	3.5	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	--	<0.025
PL4-3.5	11/15/96	3.5	800	1.8	9.0	12	64	--	23
PL4-5.0	11/15/96	5.0	220	3.6	17	5.3	29	--	1.7
PL5-3.5	11/15/96	3.5	49	0.20	0.30	0.71	3.6	--	0.66
PL5-5.0	11/15/96	5.0	450	2.3	16	9.2	51	--	3.7
PL6-3.5	11/15/96	3.5	72	0.18	0.83	1.2	7.9	--	0.63
PL6-5.0	11/15/96	5.0	270	0.86	10	6.0	39	--	2.3
GeoStrategies Inc. 1997									
U-D-5.5	6/23/97	5.5	450	<0.12	1.2	9.8	35	--	1.1
U-E-6.5	6/23/97	6.5	29	0.16	0.034	<0.025	0.050	--	<0.12
TRC 2006									
C-1 @ 5'	4/12/06	5	4,600	<9.7	<9.7	76	340	--	<9.7
C-1 @ 10'	4/12/06	10	<0.23	<0.0045	<0.0045	<0.0045	<0.0091	--	0.029
C-2 @ 7'	4/12/06	7	1.2	<0.0050	<0.0050	<0.0050	<0.010	--	0.16
C-3 @ 5'	4/12/06	5	<47	<0.94	<0.94	<0.94	<1.9	--	1.9

Case Closure Request
76 Service Station No. 5325
Antea Group Project No. I40255325



Appendix C

Historical Groundwater Gauging and Analytical Data

TABLE 2
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 SERVICE STATION NO. 5325
3200 LAKESHORE AVENUE
OAKLAND, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA												
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)
U-1	8/10/1990	NSVD	NG	NG	NG	690	38	75	8.6	130	--	--	--	--	--	--	--	--
	1/7/1991	NSVD	NG	NG	NG	250	22	16	4.2	17	--	--	--	--	--	--	--	--
	4/1/1991	NSVD	NG	NG	NG	160	13	8.6	1.0	15	--	--	--	--	--	--	--	--
	7/3/1991	NSVD	NG	NG	NG	140	21	4.3	0.36	17	--	--	--	--	--	--	--	--
	10/9/1991	NSVD	NG	NG	NG	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	2/12/1992	NSVD	NG	NG	NG	250	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	5/5/1992	NSVD	NG	NG	NG	230	1.2	ND	ND	ND	--	--	--	--	--	--	--	--
	6/11/1992	NSVD	NG	NG	NG	1,000	80	1.4	6.7	41	--	--	--	--	--	--	--	--
	8/20/1992	NSVD	NG	NG	NG	400	1.0	ND	ND	0.6	--	--	--	--	--	--	--	--
	2/22/1993	NSVD	NG	NG	NG	34,000	1,400	5,500	910	7,300	--	--	--	--	--	--	--	--
	5/7/1993	NSVD	NG	NG	NG	8,700	600	240	650	3,300	--	--	--	--	--	--	--	--
	8/8/1993	NSVD	NG	NG	NG	4,900	79	ND	832	270	--	--	--	--	--	--	--	--
	11/16/1993	5.32	8.60	NP	-3.28	690	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	2/16/1994	5.32	8.53	NP	-3.21	6,800	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	6/22/1994	8.46	8.39	NP	0.07	200	ND	ND	5.9	21	--	--	--	--	--	--	--	--
	9/22/1994	8.46	8.65	NP	-0.19	6,100	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	12/24/1994	8.46	8.03	NP	0.43	50,000	2,500	9,700	2,400	17,000	--	--	--	--	--	--	--	--
	3/25/1995	8.46	7.71	0.36	1.02	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	6/21/1995	8.46	9.30	0.20	-0.69	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	9/19/1995	8.46	9.28	0.39	-0.53	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	12/19/1995	8.46	8.97	0.02	-0.50	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	3/18/1996	8.46	8.25	NP	0.21	27,000	ND	2,300	1,400	11,000	4,900	--	--	--	--	--	--	--
	6/27/1996	8.46	7.92	NP	0.54	120,000	540	4,300	2,600	26,000	ND	--	--	--	--	--	--	--
	9/26/1996	8.46	9.10	0.02	-0.63	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	12/9/1996	8.46	6.88	0.03	1.60	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	3/14/1997	8.46	9.02	0.55	-0.15	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	6/30/1997	8.46	8.40	0.01	0.07	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	9/19/1997	8.46	8.56	0.02	-0.09	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	12/12/1997	8.46	8.57	0.00	-0.11	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	3/3/1998	8.46	8.22	0.03	0.26	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	6/15/1998	8.46	8.36	NP	0.10	52,000	ND	900	1,800	13,000	ND	--	--	--	--	--	--	--
	9/30/1998	8.46	8.93	NP	-0.47	1,000,000	ND	2,600	13,000	83,000	4,800	--	--	--	--	--	--	--
	12/28/1998	8.46	8.56	NP	-0.10	1,100,000	ND	1,600	8,600	71,000	5,700	--	--	--	--	--	--	--
	3/22/1999	8.46	8.18	NP	0.28	130,000	470	1,100	2,000	28,000	5,700	--	--	--	--	--	--	--
	6/9/1999	8.46	9.36	NP	-0.90	40,000	230	640	590	13,000	3,500	2,100	--	--	--	--	--	--
	9/8/1999	8.46	9.52	NP	-1.06	55,000	217	202	745	14,300	6,890	6,690	--	--	--	--	--	--
	12/7/1999	8.46	9.67	NP	-1.21	41,200	89.3	ND	385	6,930	15,800	14,700	--	--	--	--	--	--
	3/13/2000	8.46	8.43	NP	0.03	48,000	490	610	2,400	10,000	22,000	23,000	--	--	--	--	--	--
	6/21/2000	8.46	9.44	NP	-0.98	37,000	200	ND	1,200	7,200	15,000	20,000	--	--	--	--	--	--
	9/27/2000	8.46	9.28	NP	-0.82	15,000	92	ND	540	2,800	74,000	83,000	ND	ND	ND	ND	ND	--
	12/12/2000	8.46	9.36	NP	-0.90	50,000	ND	ND	250	1,900	12,000	15,000	--	--	--	--	--	--
	3/7/2001	8.46	8.44	NP	0.02	6,220	29.8	10.4	96.3	638	11,200	11,800	ND	ND	ND	ND	ND	ND
	6/6/2001	8.46	9.28	NP	-0.82	5,200	17	ND	69	420	6,500	8,700	ND	ND	ND	ND	ND	ND
	9/24/2001	8.46	9.39	NP	-0.93	4,300	36	<25	65	590	4,400	4,400	<1000	<1000	<1000	<20000	<400000	<1000
	12/10/2001	8.46	9.17	NP	-0.71	11,000	220	<100	380	1,500	5,100	5,100	<100	<100	<100	<4000	<8000	<100
	3/11/2002	8.46	9.43	NP	-0.97	5,500	28	<20	360	690	6,400	6,300	<100	<100	<100	<5		

TABLE 2
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 SERVICE STATION NO. 5325
3200 LAKESHORE AVENUE
OAKLAND, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA													
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
U-1	3/28/2005	8.46	8.10	NP	0.36	37,000	<10	<10	1,500	5,300	--	460	--	--	--	--	<1000	--	--
	6/14/2005	8.46	8.90	NP	-0.44	3,900	<0.50	<0.50	48	68	--	60	<10	<10	<10	4,400	<1000	<10	<10
	9/28/2005	8.46	11.35	NP	-2.89	560	<0.50	0.60	3.0	26	--	18	<10	<10	<10	5,500	<250	<10	<10
	12/29/2005	8.46	8.57	NP	-0.11	510	0.77	<0.50	27	63	--	62	<0.50	<0.50	<0.50	3,900	<250	<0.50	<0.50
	3/27/2006	8.46	7.19	NP	1.27	29,000	<25	<25	1,500	4,900	--	300	--	--	--	--	<12000	--	--
	6/12/2006	8.46	7.80	NP	0.66	3,200	<0.50	<0.50	42	15	--	56	--	--	--	--	<250	--	--
	9/21/2006	8.46	8.03	NP	0.43	2,600	<12	<12	<12	<12	--	30	--	--	--	--	<6200	--	--
	12/21/2006	8.46	8.31	NP	0.15	2,000	<0.50	<0.50	13	2.2	--	53	--	--	--	--	<250	--	--
	3/28/2007	8.46	6.17	NP	2.29	12,000	<2.5	<2.5	690	1,900	--	110	<2.5	<2.5	<2.5	1,600	<1200	<2.5	<2.5
	6/27/2007	8.46	5.38	NP	3.08	13,000	2.8	<2.5	960	1,300	--	79	<2.5	<2.5	<2.5	1,500	<1200	<2.5	<2.5
	9/26/2007	8.46	5.32	NP	3.14	6,900	2.6	<2.5	310	680	--	44	--	--	--	--	<1200	--	--
	12/27/2007	8.46	8.11	NP	0.35	5,900	<2.5	<2.5	290	130	--	42	--	--	--	--	<1200	--	--
	3/26/2008	8.46	7.84	NP	0.62	3,500	<2.5	<2.5	100	18	--	30	--	--	--	--	<1200	--	--
	6/18/2008	8.46	7.03	NP	1.43	8,400	<5.0	<5.0	230	86	--	26	--	--	--	--	<2500	--	--
	9/24/2008	8.46	6.90	NP	1.56	6,000	3.3	<2.5	170	86	--	78	--	--	--	--	<1200	--	--
	12/22/2008	8.46	7.69	NP	0.77	6,400	0.64	<0.50	95	7.0	--	12	--	--	--	--	<250	--	--
	3/26/2009	8.46	7.55	NP	0.91	5,700	<2.5	<2.5	72	6.5	--	10	--	--	--	--	<1200	--	--
	6/23/2009	8.46	6.80	NP	1.66	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/3/2009	8.46	7.30	NP	1.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/4/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/28/2010	8.46	6.71	NP	1.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/30/2010	--	--	--	--	7,090	<0.50	<0.50	2.1	2.2	--	5.1	<0.50	<0.50	<0.50	1,110	<250	<1.0	<1.0
	12/20/2010	8.46	6.76	NP	1.70	6,280	<0.50	<0.50	29.9	1.8	--	7.0	<0.50	<0.50	<0.50	391	<250	<1.0	<1.0
	6/3/2011	8.46	6.95	NP	1.51	6,490	<0.50	<0.50	1.2	<1.5	--	6.1	<0.50	<0.50	<0.50	880	<250	<1.0	<1.0
	12/5/2011	14.24	7.25	NP	6.99	6,190	<0.50	<0.50	1.1	<1.5	--	5.8	<0.50	<0.50	<0.50	872	<250	<1.0	<1.0
	6/6/2012	14.24	8.22	NP	6.02	2,240	<0.50	<0.50	0.66	2.6	--	4.6	<0.50	<0.50	<0.50	2,100	<250	<1.0	<1.0
	12/19/2012	14.24	8.85	NP	5.39	4,000	0.95	<0.50	53	11	--	11	<0.50	<0.50	<0.50	760	<5.0	<0.50	<0.50
	3/13/2013	14.24	9.15	NP	5.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/13/2013	14.24	8.59	NP	5.65	420	<0.50	<0.50	1.2	14	--	3.3	<0.50	<0.50	<0.50	1,000	<5.0	<0.50	<0.50
U-2	8/10/1990	NSVD	NG	NG	NG	780	27	46	15	130	--	--	--	--	--	--	--	--	--
	1/7/1991	NSVD	NG	NG	NG	1,900	67	5.8	58	69	--	--	--	--	--	--	--	--	--
	4/1/1991	NSVD	NG	NG	NG	1,700	250	89	34	190	--	--	--	--	--	--	--	--	--
	7/3/1991	NSVD	NG	NG	NG	2,100	150	25	3.1	290	--	--	--	--	--	--	--	--	--
	10/9/1991	NSVD	NG	NG	NG	230	7.1	ND	ND	11	--	--	--	--	--	--	--	--	--
	2/12/1992	NSVD	NG	NG	NG	410	1.9	ND	0.36	0.4	--	--	--	--	--	--	--	--	--
	5/5/1992	NSVD	NG	NG	NG	1,600	120	52	6.2	290	--	--	--	--	--	--	--	--	--
	6/11/1992	NSVD	NG	NG	NG	620	17	2.1	ND	37	--	--	--	--	--	--	--	--	--
	8/20/1992	NSVD	NG	NG	NG	700	28	6.5	1.3	4.6	--	--	--	--	--	--	--	--	--
	2/22/1993	NSVD	NG	NG	NG	3,400	2,400	2,100	1,200	5,800	--	--	--	--	--	--	--	--	--
	5/7/1993	NSVD	NG	NG	NG	17,000	1,800	660	1,700	4,000	--	--	--	--	--	--	--	--	--
	8/8/1993	NSVD	NG	NG	NG	5,600	420	ND	410	670	--	--	--	--	--	--	--	--	--
	11/16/1993	4.53	8.17	NP	-3.64	510	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
	2/16/1994	4.53	7.7																

TABLE 2
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 SERVICE STATION NO. 5325
3200 LAKESHORE AVENUE
OAKLAND, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA													
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
U-2	12/12/1997	7.62	6.75	NP	0.87	LPH	LPH	LPH	LPH	LPH	LPH	--	--	--	--	--	--	--	
	3/3/1998	7.62	6.36	NP	1.26	80,000	3,000	1,100	820	16,000	16,000	--	--	--	--	--	--	--	
	6/15/1998	7.62	6.51	NP	1.11	48,000	1,800	330	470	7,900	20,000	--	--	--	--	--	--	--	
	9/30/1998	7.62	7.17	NP	0.45	60,000	1,300	ND	500	9,700	19,000	--	--	--	--	--	--	--	
	12/28/1998	7.62	7.05	NP	0.57	63,000	590	160	320	5,600	16,000	--	--	--	--	--	--	--	
	3/22/1999	7.62	6.82	NP	0.80	28,000	1,100	ND	360	2,900	25,000	--	--	--	--	--	--	--	
	6/9/1999	7.62	7.51	NP	0.11	21,000	110	190	310	2,600	7,900	7,800	--	--	--	--	--	--	--
	9/8/1999	7.62	8.15	NP	-0.53	23,300	477	138	286	4,110	16,400	15,300	--	--	--	--	--	--	--
	12/7/1999	7.62	8.31	NP	-0.69	4,840	17.2	ND	157	14,900	15,600	--	--	--	--	--	--	--	--
	3/13/2000	7.62	6.69	NP	0.93	11,000	380	160	ND	2,100	22,000	26,000	--	--	--	--	--	--	--
	6/21/2000	7.62	7.67	NP	-0.05	9,100	22	ND	ND	800	16,000	22,000	--	--	--	--	--	--	--
	9/27/2000	7.62	7.44	NP	0.18	2,900	43	ND	ND	39	20,000	26,000	--	--	--	--	--	--	--
	12/12/2000	7.62	7.51	NP	0.11	3,600	17	ND	ND	87	8,000	7,800	--	--	--	--	--	--	--
	3/7/2001	7.62	7.15	NP	0.47	1,670	51.0	ND	7.20	19.5	5,930	7,900	ND	ND	ND	ND	ND	ND	ND
	6/6/2001	7.62	7.57	NP	0.05	1,100	14	ND	9.3	35	9,200	10,000	ND	ND	ND	ND	ND	ND	ND
	9/24/2001	7.62	7.63	NP	-0.01	1,000	25	<2.5	12	100	9,800	11,000	<1000	<1000	<1000	<20000	<400000	<1000	<1000
	12/10/2001	7.62	6.78	NP	0.84	83	14	0.55	3.4	6.8	2,500	2,500	<50	<50	<50	<2000	<4000	<50	<50
	3/11/2002	7.62	7.11	NP	0.51	<1000	28	<10	40	31	11,000	11,000	<200	<200	<200	<10000	<50000	<200	<200
	6/4/2002	7.62	7.17	NP	0.45	7,700	32	<25	33	48	14,000	--	--	--	--	--	--	--	--
	9/3/2002	7.62	7.57	NP	0.05	5,200	<25	<25	<25	<25	11,000	15,000	<1000	<1000	<1000	<50000	<250000	<1000	<1000
	12/3/2002	7.62	7.67	NP	-0.05	<5000	<50	<50	<50	<100	--	3,200	<200	<200	<200	<10000	<50000	<200	<200
	3/4/2003	7.62	7.76	NP	-0.14	8,100	<50	<50	<50	<100	--	7,800	<200	<200	<200	<10000	<50000	<200	<200
	6/18/2003	7.62	6.86	NP	0.76	11,000	<50	<50	<50	<100	--	16,000	<200	<200	<200	<10000	<50000	<200	<200
	9/24/2003	7.62	7.48	NP	0.14	<10000	<100	<100	<100	<200	--	10,000	<400	<400	<400	<20000	<100000	<400	<400
	12/2/2003	7.62	7.94	NP	-0.32	<10000	<100	<100	<100	<200	--	10,000	--	--	--	<100000	--	--	--
	3/30/2004	7.62	7.07	NP	0.55	12,000	<100	<100	<100	<200	--	11,000	<200	<100	<100	2,400	<10000	<100	<100
	6/7/2004	7.62	7.75	NP	-0.13	14,000	<100	<100	<100	<200	--	13,000	<200	<100	<100	2,600	<10000	<100	<100
	9/9/2004	7.62	8.64	NP	-1.02	<10000	<100	<100	<100	<200	--	9,500	<200	<100	<100	2,700	<10000	<100	<100
	12/20/2004	7.62	7.73	NP	-0.11	<5000	<50	<50	<50	<100	--	11,000	<100	<50	<50	3,500	<5000	<50	<50
	3/28/2005	7.62	6.23	NP	1.39	12,000	<50	<50	160	120	--	7,000	<50	<50	<50	830	<5000	<50	<50
	6/14/2005	7.62	7.05	NP	0.57	2,000	0.75	<0.50	3.7	1.1	--	2,400	<20	<20	<20	10,000	<2000	<20	<20
	9/28/2005	7.62	8.00	NP	-0.38	320	<0.50	<0.50	<0.50	<1.0	--	80	<0.50	<0.50	<0.50	13,000	<250	<0.50	<0.50
	12/29/2005	7.62	7.23	NP	0.39	<50	<0.50	<0.50	<0.50	<1.0	--	35	<0.50	<0.50	<0.50	11,000	<250	<0.50	<0.50
	3/27/2006	7.62	5.30	NP	2.32	2,400	31	0.73	120	15	--	1,400	--	--	--	<250	--	--	--
	6/12/2006	7.62	6.25	NP	1.37	<1200	<12	<12	17	<25	--	490	--	--	--	6200	--	--	--
	9/21/2006	7.62	6.00	NP	1.62	440	6.1	<0.50	1.7	<0.50	--	1,100	--	--	--	<250	--	--	--
	12/21/2006	7.62	6.07	NP	1.55	670	10	<0.50	52	1.2	--	730	--	--	--	<250	--	--	--
	3/28/2007	7.62	5.05	NP	2.57	3,300	36	<5.0	200	6.8	--	1,200	<5.0	<5.0	<5.0	4,000	<2500	<5.0	<5.0
	6/27/2007	7.62	4.80	NP	2.82														

TABLE 2
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 SERVICE STATION NO. 5325
3200 LAKESHORE AVENUE
OAKLAND, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA													
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
U-2	9/13/2013	13.45	7.16	NP	6.29	360	<0.90	<0.90	<0.90	<0.90	--	81	<0.90	<0.90	<0.90	3,500	<9.0	<0.90	<0.90
U-3	8/10/1990	NSVD	NG	NG	NG	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	1/7/1991	NSVD	NG	NG	NG	ND	ND	ND	1.8	--	--	--	--	--	--	--	--	--	
	4/1/1991	NSVD	NG	NG	NG	ND	1.0	2.9	0.53	5.4	--	--	--	--	--	--	--	--	
	7/3/1991	NSVD	NG	NG	NG	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	10/9/1991	NSVD	NG	NG	NG	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	2/12/1992	NSVD	NG	NG	NG	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	5/5/1992	NSVD	NG	NG	NG	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	6/11/1992	NSVD	NG	NG	NG	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	8/20/1992	NSVD	NG	NG	NG	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	2/22/1993	NSVD	NG	NG	NG	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	5/7/1993	NSVD	NG	NG	NG	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	8/8/1993	NSVD	NG	NG	NG	210	5.0	9.7	0.7	4.1	--	--	--	--	--	--	--	--	
	11/16/1993	7.86	11.81	NP	-3.95	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	2/16/1994	7.86	11.61	NP	-3.75	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	6/22/1994	10.98	11.64	NP	-0.66	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	9/22/1994	10.98	11.76	NP	-0.78	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	12/24/1994	10.98	11.27	NP	-0.29	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	3/25/1995	10.98	10.96	NP	0.02	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	6/21/1995	10.98	11.36	NP	-0.38	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	9/19/1995	10.98	11.55	NP	-0.57	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	12/19/1995	10.98	11.44	NP	-0.46	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	3/18/1996	10.98	11.10	NP	-0.12	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	6/27/1996	10.98	11.15	NP	-0.17	440	49	50	51	140	50	--	--	--	--	--	--	--	
	9/26/1996	10.98	11.55	NP	-0.57	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	12/9/1996	10.98	10.11	NP	0.87	ND	ND	ND	ND	ND	29	--	--	--	--	--	--	--	
	3/14/1997	10.98	10.86	NP	0.12	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	6/30/1997	10.98	11.07	NP	-0.09	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	9/19/1997	10.98	11.05	NP	-0.07	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	12/12/1997	10.98	10.57	NP	0.41	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	3/3/1998	10.98	9.84	NP	1.14	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	6/15/1998	10.98	10.56	NP	0.42	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	9/30/1998	10.98	11.11	NP	-0.13	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	12/28/1998	10.98	10.96	NP	0.02	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	3/22/1999	10.98	9.46	NP	1.52	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	6/9/1999	10.98	11.01	NP	-0.03	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	9/8/1999	10.98	11.31	NP	-0.33	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	12/7/1999	10.98	11.26	NP	-0.28	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	3/13/2000	10.98	8.27	NP	2.71	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	6/21/2000	10.98	11.11	NP	-0.13	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	9/27/2000	10.98	11.06	NP	-0.08	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	12/12/2000	10.98	10.93	NP	0.05	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	3/7/2001	10.98	8.31	NP	2.67	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	6/6/2001	10.98	10.93	NP	0.05	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	9/24/2001	10.98	11.02	NP	-0.04	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--	
	12/10/2001	10.98	8.15	NP	2.83	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--	
	3/11/2002	10.98	7.82	NP	3.16	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--	
	6/4/2002	10.98	10.57	NP	0.41	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--	
	9/3/2002	10.98	10.93	NP	0.05	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--	
	12/3/2002	10.98	10.65	NP	0.33	<50	<0.50	<0.50	<										

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76 SERVICE STATION NO. 5325
3200 LAKESHORE AVENUE
OAKLAND, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA													
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
U-3	12/20/2004	10.98	10.78	NP	0.20	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<50	--	--
	3/28/2005	10.98	9.80	NP	1.18	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<50	--	--
	6/14/2005	10.98	10.75	NP	0.23	<50	<0.50	<0.50	<0.50	1.2	--	<0.50	--	--	--	--	<50	--	--
	9/28/2005	10.98	11.15	NP	-0.17	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	12/29/2005	10.98	10.40	NP	0.58	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	3/27/2006	10.98	10.15	NP	0.83	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	6/12/2006	10.98	9.93	NP	1.05	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	9/21/2006	10.98	11.01	NP	-0.03	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	--	<250	--	--
	12/21/2006	10.98	10.92	NP	0.06	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	--	<250	--	--
	3/28/2007	10.98	10.84	NP	0.14	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	--	<250	--	--
	6/27/2007	10.98	10.93	NP	0.05	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	--	<250	--	--
	9/26/2007	10.98	11.01	NP	-0.03	770	<0.50	<0.50	<0.50	<0.50	--	18	--	--	--	--	<250	--	--
	12/27/2007	10.98	10.93	NP	0.05	<50	<0.50	<0.50	<0.50	<1.0	--	0.63	--	--	--	--	<250	--	--
	3/26/2008	10.98	10.84	NP	0.14	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	6/18/2008	10.98	10.89	NP	0.09	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	9/24/2008	10.98	10.89	NP	0.09	<50	<0.50	<0.50	<0.50	<1.0	--	0.87	--	--	--	--	<250	--	--
	12/22/2008	10.98	10.93	NP	0.05	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	3/26/2009	10.98	10.69	NP	0.29	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	6/23/2009	10.98	10.40	NP	0.58	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/3/2009	10.98	11.10	NP	-0.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/28/2010	10.98	10.67	NP	0.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/30/2010	10.98	10.74	NP	0.24	<50.0	<0.50	<0.50	<0.50	<1.5	--	<0.50	<0.50	<0.50	<0.50	<5.0	<250	<1.0	<1.0
	12/20/2010	10.98	10.37	NP	0.61	<50.0	<0.50	<0.50	<0.50	<1.5	--	0.91	<0.50	<0.50	<0.50	<5.0	<250	<1.0	<1.0
	6/3/2011	10.98	10.54	NP	0.44	<50.0	<0.50	<0.50	<0.50	<1.5	--	0.73	<0.50	<0.50	<0.50	<5.0	<250	<1.0	<1.0
	12/5/2011	16.37	10.59	NP	5.78	<50.0	<0.50	<0.50	<0.50	<1.5	--	1.4	<0.50	<0.50	<0.50	<5.0	<250	<1.0	<1.0
	6/6/2012	16.37	10.47	NP	5.90	<50.0	<0.50	<0.50	<0.50	<1.5	--	0.78	<0.50	<0.50	<0.50	<5.0	<250	<1.0	<1.0
	12/19/2012	16.37	10.50	NP	5.87	<50	<0.50	<0.50	<0.50	<0.50	--	0.55	<0.50	<0.50	<0.50	<5.0	<5.0	<0.50	<0.50
	3/13/2013	16.37	10.60	NP	5.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/13/2013	16.37	10.47	NP	5.90	<50	<0.50	<0.50	<0.50	<0.50	--	0.58	<0.50	<0.50	<0.50	11	<5.0	<0.50	<0.50
U-4	6/22/1994	11.15	10.15	NP	1.00	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
	9/22/1994	11.15	10.78	NP	0.37	ND	0.78	1.3	ND	1.4	--	--	--	--	--	--	--	--	--
	12/24/1994	11.15	9.81	NP	1.34	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
	3/25/1995	11.15	9.51	NP	1.64	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
	6/21/1995	11.15	9.53	NP	1.62	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
	9/19/1995	11.15	10.17	NP	0.98	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
	12/19/1995	11.15	9.97	NP	1.18	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
	3/18/1996	11.15	9.65	NP	1.50	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
	6/27/1996	11.15	9.73	NP	1.42	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
	9/26/1996	11.15	10.14	NP	1.01	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
	12/9/1996	11.15	8.67	NP	2.48	ND	ND	ND	ND	ND	33	--	--	--	--	--	--	--	--
	3/14/1997	11.15	9.35	NP	1.80	ND	ND												

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OAKLAND, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA													
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
U-4	6/6/2001	11.15	9.18	NP	1.97	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	9/24/2001	11.15	9.21	NP	1.94	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--	
	12/10/2001	11.15	7.32	NP	3.83	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--	
	3/11/2002	11.15	6.92	NP	4.23	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--	
	6/4/2002	11.15	7.57	NP	3.58	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--	
	9/3/2002	11.15	9.17	NP	1.98	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--	
	12/3/2002	11.15	9.19	NP	1.96	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	--	--	
	3/4/2003	11.15	9.31	NP	1.84	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	--	--	
	6/18/2003	11.15	7.65	NP	3.50	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	--	--	
	9/24/2003	11.15	8.26	NP	2.89	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	<500	--	--	
	12/2/2003	11.15	9.15	NP	2.00	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	<500	--	--	
	3/30/2004	11.15	7.46	NP	3.69	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<50	--	--	
	6/7/2004	11.15	8.93	NP	2.22	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<50	--	--	
	9/9/2004	11.15	9.82	NP	1.33	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<50	--	--	
	12/20/2004	11.15	8.27	NP	2.88	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<50	--	--	
	3/28/2005	11.15	6.34	NP	4.81	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<50	--	--	
	6/14/2005	11.15	8.10	NP	3.05	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<50	--	--	
	9/28/2005	11.15	9.59	NP	1.56	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<250	--	--	
	12/29/2005	11.15	7.13	NP	4.02	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<250	--	--	
	3/27/2006	11.15	6.26	NP	4.89	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<250	--	--	
	6/12/2006	11.15	8.44	NP	2.71	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<250	--	--	
	9/21/2006	11.15	9.63	NP	1.52	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	<250	--	--	
	12/21/2006	11.15	8.50	NP	2.65	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	<250	--	--	
	3/28/2007	11.15	8.00	NP	3.15	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	<250	--	--	
	6/27/2007	11.15	8.77	NP	2.38	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	<250	--	--	
	9/26/2007	11.15	9.07	NP	2.08	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	<250	--	--	
	12/27/2007	11.15	8.63	NP	2.52	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<250	--	--	
	3/26/2008	11.15	7.86	NP	3.29	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<250	--	--	
	6/18/2008	11.15	8.82	NP	2.33	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<250	--	--	
	9/24/2008	11.15	9.50	NP	1.65	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<250	--	--	
	12/22/2008	11.15	8.55	NP	2.60	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<250	--	--	
	3/26/2009	11.15	7.21	NP	3.94	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<250	--	--	
	6/23/2009	11.15	8.40	NP	2.75	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/3/2009	11.15	9.10	NP	2.05	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/4/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/28/2010	11.15	8.30	NP	2.85	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/30/2010	--	--	--	--	<50.0	<0.50	<0.50	<0.50	<1.5	--	<0.50	<0.50	<0.50	<0.50	<5.0	<250	<1.0	<1.0
	12/20/2010	11.15	7.60	NP	3.55	<50.0	<0.50	<0.50	<0.50	<1.5	--	<0.50	<0.50	<0.50	<0.50	<5.0	<250	<1.0	<1.0
U-5	6/3/2011	11.15	8.02	NP	3.13	<50.0	<0.50	<0.50	<0.50	<1.5	--	<0.50	<0.50	<0.50	<0.50	<5.0	<250	<1.0	<1.0
	12/5/2011	16.55	8.98	NP	7.57	<50.0	<0.50	<0.50	<0.50	<1.5	--	<0.50	<0.50	<0.50	<0.50	<5.0	<250	<1.0	<1.0
	6/6/2012	16.55	7.70	NP	8.85	<50.0	<0.50	<0.50	<0.50	<1.5	--	<0.50	<0.50	<0.50	<0.50	<5.0	<250	<1	

TABLE 2
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 SERVICE STATION NO. 5325
3200 LAKESHORE AVENUE
OAKLAND, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA													
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
U-5	9/19/1997	6.98	6.78	NP	0.20	6,300	160	13	370	1,000	480	--	--	--	--	--	--	--	
	12/12/1997	6.98	6.94	NP	0.04	60	1.3	ND	1.6	2.1	47	--	--	--	--	--	--	--	
	3/3/1998	6.98	6.50	NP	0.48	1,700	29	ND	150	190	330	--	--	--	--	--	--	--	
	6/15/1998	6.98	6.84	NP	0.14	1,500	32	ND	91	83	330	--	--	--	--	--	--	--	
	9/30/1998	6.98	7.30	NP	-0.32	1,700	44	ND	39	150	60	--	--	--	--	--	--	--	
	12/28/1998	6.98	7.25	NP	-0.27	1,400	59	ND	13	27	150	--	--	--	--	--	--	--	
	3/22/1999	6.98	6.86	NP	0.12	780	8.9	ND	0.76	4.5	350	--	--	--	--	--	--	--	
	6/9/1999	6.98	7.28	NP	-0.30	1,000	ND	ND	10	35	280	350	--	--	--	--	--	--	--
	9/8/1999	6.98	7.51	NP	-0.53	2,620	26.2	ND	32.2	157	280	239	--	--	--	--	--	--	--
	12/7/1999	6.98	7.67	NP	-0.69	949	9.26	ND	11.2	22.7	235	301	--	--	--	--	--	--	--
	3/13/2000	6.98	6.73	NP	0.25	880	12	1.0	5.6	8.7	46	37	--	--	--	--	--	--	--
	6/21/2000	6.98	7.38	NP	-0.40	700	4.0	ND	0.99	4.0	120	140	--	--	--	--	--	--	--
	9/27/2000	6.98	7.44	NP	-0.46	400	1.9	ND	ND	1.5	160	250	--	--	--	--	--	--	--
	12/12/2000	6.98	7.67	NP	-0.69	770	3.2	ND	ND	ND	27	13	--	--	--	--	--	--	--
	3/7/2001	6.98	6.82	NP	0.16	623	5.15	ND	ND	0.669	35.7	43.4	ND	ND	ND	ND	ND	ND	ND
	6/6/2001	6.98	7.42	NP	-0.44	110	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
	9/24/2001	6.98	7.50	NP	-0.52	270	<0.50	<0.50	<0.50	<0.50	40	42	<10	<10	<10	<200	<4000	<10	<10
	12/10/2001	6.98	6.65	NP	0.33	420	13	0.60	0.66	<0.50	<2.5	--	--	--	--	--	--	--	--
	3/11/2002	6.98	7.00	NP	-0.02	260	<0.50	<0.50	<0.50	<0.50	42	47	<2.0	<2.0	<2.0	<100	<500	<2.0	<2.0
	6/4/2002	6.98	6.71	NP	0.27	170	<0.50	0.77	0.87	0.69	29	--	--	--	--	--	--	--	--
	9/3/2002	6.98	7.46	NP	-0.48	<50	<0.50	<0.50	<0.50	<0.50	37	53	<2.0	<2.0	<2.0	<100	<500	<2.0	<2.0
	12/3/2002	6.98	6.63	NP	0.35	320	<0.50	<0.50	5.7	<1.0	--	11	<2.0	<2.0	<2.0	<100	<500	<2.0	<2.0
	3/4/2003	6.98	6.75	NP	0.23	100	<0.50	<0.50	<0.50	<1.0	--	44	<2.0	<2.0	<2.0	<100	<500	<2.0	<2.0
	6/18/2003	6.98	6.25	NP	0.73	51	<0.50	<0.50	<0.50	<1.0	--	36	<2.0	<2.0	<2.0	<100	<500	<2.0	<2.0
	9/24/2003	6.98	6.86	NP	0.12	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	<500	--	--	--
	12/2/2003	6.98	7.11	NP	-0.13	<50	<0.50	<0.50	<0.50	<1.0	--	24	--	--	--	<500	--	--	--
	3/30/2004	6.98	6.88	NP	0.10	100	<0.50	<0.50	<0.50	<1.0	--	130	<1.0	<0.50	<0.50	52	<50	<0.50	<0.50
	6/7/2004	6.98	8.52	NP	-1.54	250	<0.50	<0.50	<0.50	<1.0	--	160	<1.0	<0.5	<0.5	69	<50	<0.5	<0.5
	9/9/2004	6.98	12.27	NP	-5.29	340	<0.50	<0.50	<0.50	<1.0	--	260	<1.0	<0.50	<0.50	130	<50	<0.50	<0.50
	12/20/2004	6.98	7.51	NP	-0.53	130	<0.50	<0.50	1.9	2.0	--	120	--	--	--	<50	--	--	--
	3/28/2005	6.98	7.21	NP	-0.23	670	<2.0	<2.0	<2.0	<4.0	--	230	<0.50	<0.50	<0.50	150	<50	<0.50	<0.50
	6/14/2005	6.98	7.46	NP	-0.48	160	<0.50	<0.50	<0.50	<1.0	--	400	<0.50	<0.50	<0.50	160	<100	<0.50	<0.50
	9/28/2005	6.98	9.59	NP	-2.61	460	<0.50	<0.50	<0.50	<1.0	--	370	<0.50	<0.50	<0.50	220	<250	<0.50	<0.50
	12/29/2005	6.98	7.53	NP	-0.55	150	<0.50	<0.50	<0.50	<1.0	--	190	<0.50	<0.50	<0.50	280	<250	<0.50	<0.50
	3/27/2006	6.98	6.28	NP	0.70	450	<0.50	<0.50	8.3	<1.0	--	70	--	--	--	<250	--	--	--
	6/12/2006	6.98	6.44	NP	0.54	370	<0.50	<0.50	<0.50	<1.0	--	61	--	--	--	<250	--	--	--
	9/21/2006	6.98	6.59	NP	0.39	130	<0.50	<0.50	<0.50	<0.50	--	35	--	--	--	<250	--	--	--
	12/21/2006	6.98	6.92	NP	0.06	230	<0.50	<0.50	0.58	<0.50	--	11	--	--	--	<250	--	--	--
	3/28/2007	6.98	5.11	NP	1.87	400	<0.50	<0.50	5.4	<0.50	--	13	<0.50	<0.50	<0.50	870	<250	<0.50	<0.50
	6/27/2007	6.98	4.40	NP	2.58	210	<0.50	<0.50	2.4	<0.50	--	18	<0.50	<0.50	<0.50	220	<250	&	

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HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 SERVICE STATION NO. 5325
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Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA												
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)
U-5	3/13/2013	12.77	7.62	NP	5.15	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/13/2013	12.77	7.16	NP	5.61	<50	<0.50	<0.50	<0.50	<0.50	--	12	<0.50	<0.50	200	<5.0	<0.50	<0.50
	6/22/1994	7.14	7.13	NP	0.01	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	9/22/1994	7.14	7.34	NP	-0.20	130	1.3	0.8	ND	0.73	--	--	--	--	--	--	--	--
	12/24/1994	7.14	6.67	NP	0.47	6,900	500	59	600	380	--	--	--	--	--	--	--	--
	3/25/1995	7.14	6.28	NP	0.86	47,000	450	1,300	1,700	8,200	--	--	--	--	--	--	--	--
	6/21/1995	7.14	7.59	NP	-0.45	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	9/19/1995	7.14	7.69	NP	-0.55	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	12/19/1995	7.14	7.75	NP	-0.61	210	2.5	1.0	2.9	17	--	--	--	--	--	--	--	--
	3/18/1996	7.14	6.86	NP	0.28	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	6/27/1996	7.14	6.51	NP	0.63	ND	ND	ND	ND	ND	510	--	--	--	--	--	--	--
	9/26/1996	7.14	7.61	NP	-0.47	ND	ND	ND	ND	ND	1,400	--	--	--	--	--	--	--
	12/9/1996	7.14	5.88	NP	1.26	1,200	29	48	6.4	140	58	--	--	--	--	--	--	--
	3/14/1997	7.14	7.30	NP	-0.16	ND	ND	ND	ND	ND	1,500	--	--	--	--	--	--	--
	6/30/1997	7.14	7.34	NP	-0.20	ND	ND	ND	ND	ND	990	--	--	--	--	--	--	--
	9/19/1997	7.14	7.25	NP	-0.11	ND	ND	ND	ND	ND	1,400	--	--	--	--	--	--	--
	12/12/1997	7.14	7.28	NP	-0.14	ND	ND	ND	ND	ND	680	--	--	--	--	--	--	--
	3/3/1998	7.14	7.00	NP	0.14	ND	ND	ND	ND	ND	1,600	--	--	--	--	--	--	--
	6/15/1998	7.14	7.17	NP	-0.03	ND	ND	ND	ND	ND	1,000	--	--	--	--	--	--	--
	9/30/1998	7.14	7.90	NP	-0.76	ND	ND	ND	ND	ND	1,200	--	--	--	--	--	--	--
	12/28/1998	7.14	7.78	NP	-0.64	ND	ND	ND	ND	ND	730	--	--	--	--	--	--	--
	3/22/1999	7.14	7.46	NP	-0.32	ND	ND	ND	ND	ND	1,800	--	--	--	--	--	--	--
	6/9/1999	7.14	7.73	NP	-0.59	ND	ND	ND	ND	ND	1,000	850	--	--	--	--	--	--
	9/8/1999	7.14	7.94	NP	-0.80	ND	ND	ND	ND	ND	851	1,040	--	--	--	--	--	--
	12/7/1999	7.14	8.10	NP	-0.96	ND	ND	ND	ND	ND	1,140	1,150	--	--	--	--	--	--
	3/13/2000	7.14	6.94	NP	0.20	ND	ND	ND	ND	ND	560	670	--	--	--	--	--	--
	6/21/2000	7.14	7.84	NP	-0.70	ND	ND	ND	ND	ND	400	590	--	--	--	--	--	--
	9/27/2000	7.14	7.67	NP	-0.53	ND	ND	ND	ND	ND	2,500	2,800	--	--	--	--	--	--
	12/12/2000	7.14	7.73	NP	-0.59	ND	ND	ND	ND	ND	590	580	--	--	--	--	--	--
U-6	3/7/2001	7.14	7.26	NP	-0.12	ND	ND	ND	ND	ND	310	321	ND	ND	ND	ND	ND	ND
	6/6/2001	7.14	7.80	NP	-0.66	ND	ND	ND	ND	ND	250	330	ND	ND	ND	ND	ND	ND
	9/24/2001	7.14	7.82	NP	-0.68	<50	<0.50	<0.50	<0.50	<0.50	530	660	<100	<100	<100	<2000	<40000	<100
	12/10/2001	7.14	7.15	NP	-0.01	<50	<0.50	<0.50	<0.50	<0.50	220	220	<5.0	<5.0	<5.0	<200	<400	<5.0
	3/11/2002	7.14	7.32	NP	-0.18	<50	<0.50	<0.50	<0.50	<0.50	720	760	<8.0	<8.0	<8.0	<400	<2000	<8.0
	6/4/2002	7.14	7.17	NP	-0.03	250	<1.0	<1.0	<1.0	<1.0	470	--	--	--	--	--	--	--
	9/3/2002	7.14	7.71	NP	-0.57	420	<2.5	<2.5	<2.5	4.7	860	1,200	<40	<40	<40	<2000	<10000	<40
	12/3/2002	7.14	6.92	NP	0.22	<500	<5.0	<5.0	<5.0	<10	--	870	<20	<20	<20	<1000	<5000	<20
	3/4/2003	7.14	7.01	NP	0.13	--	<10	<10	<10	<20	--	2,700	<40	<40	<40	<2000	<10000	<40
	6/18/2003	7.14	6.59	NP	0.55	--	<10	<10	<10	<20	--	1,700	<40	<40	<40	<2000	<10000	<40
	9/24/2003	7.14	7.23	NP	-0.09	--	<100	<100	<100	<200	--	1,500	<400	<400	<400	<20000	<100000	<400
	12/2/2003	7.14	7.80	NP	-0.66	--	<10	<10	<10	<20	--	1,800	--	--	--	<10000	--	--
	3/30/2004	7.14	7.32	NP	-0.18	--	<10	<10	<10	<20	--	1,700	<20	<10	<10	770	<1000	<10
	6/7/2004	7.14	9.35	NP	-2.21	--	<10	<10	<10	<20	--	1,800	<20	<10	<10	110	<1000	<10
	9/9/2004	7.14	12.81	NP	-5.67	--	<10	<10	<10	<20	--	1,400	<20	<10	<10	1,900	<1000	<10
	12/20/2004	7.14	7.96	NP	-0.82	--	<2.5	<2.5	<2.5	<5.0	--	65	<5.0	<2.5	<2.5	5,000	<250	<2.5
	3/28/2005	7.14	7.07	NP	0.07	--	<0.50	<0.50	<0.50	<1.0	--	150						

TABLE 2
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 SERVICE STATION NO. 5325
3200 LAKESHORE AVENUE
OAKLAND, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA													
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
U-6	3/26/2008	7.14	6.55	NP	0.59	--	<0.50	<0.50	<0.50	<1.0	--	2.3	--	--	--	<250	--	--	
	6/18/2008	7.14	6.71	NP	0.43	--	<0.50	<0.50	<0.50	<1.0	--	0.59	--	--	--	<250	--	--	
	9/24/2008	7.14	5.50	NP	1.64	--	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<250	--	--	
	12/22/2008	7.14	6.48	NP	0.66	--	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<250	--	--	
	3/26/2009	7.14	6.09	NP	1.05	--	<2.5	<2.5	<2.5	<5.0	--	<2.5	--	--	--	<1200	--	--	
	6/23/2009	7.14	4.80	NP	2.34	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/3/2009	7.14	5.31	NP	1.83	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/28/2010	7.14	4.77	NP	2.37	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/30/2010	7.14	4.97	NP	2.17	--	<0.50	<0.50	<0.50	<1.5	--	<0.50	<0.50	<0.50	11.4	<250	<1.0	<1.0	
	12/20/2010	7.14	4.59	NP	2.55	--	<0.50	<0.50	<0.50	<1.5	--	<0.50	<0.50	<0.50	<5.0	<250	<1.0	<1.0	
	6/3/2011	7.14	5.26	NP	1.88	--	<0.50	<0.50	<0.50	<1.5	--	<0.50	<0.50	<0.50	<5.0	<250	<1.0	<1.0	
	12/5/2011	12.88	5.35	NP	7.53	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/6/2012	12.88	7.03	NP	5.85	--	<0.50	<0.50	<0.50	<1.5	--	0.79	<0.50	<0.50	<0.50	9.2	<250	<1.0	<1.0
	12/19/2012	12.88	7.71	NP	5.17	--	<0.50	<0.50	<0.50	<0.50	--	1.5	<0.50	<0.50	<0.50	42	<5.0	<0.50	<0.50
	3/13/2013	12.88	7.90	NP	4.98	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/13/2013	12.88	7.67	NP	5.21	--	<0.50	<0.50	<0.50	<0.50	--	2.8	<0.50	<0.50	<0.50	37	<5.0	<0.50	<0.50

Gauging Notes:

TOC - Top of Casing

ft - Feet

NP - LNAPL not present

LNAPL - Light non-aqueous phase liquid

* - Corrected for LNAPL if present (assumes LNAPL specific gravity = 0.75)

NG - Not gauged

WI - Well Inaccessible

NSVD - Not surveyed

DRY - Well is dry

-- - No information available

Analytical Notes:

< - Below Laboratory's indicated reporting limit

DRY - Well was Dry; sample could not be taken

LPH - Liquid Phase Hydrocarbons

ND - Not detected, and detection limit is not known

ug/L - micrograms/liter

WI - Well Inaccessible

TPHg- Total petroleum hydrocarbons as gasoline

MTBE- Methyl tertiary-butyl ether

DIPE- Di-isopropyl ether

ETBE- Ethyl tertiary-butyl ether

TAME- Tertiary-amyl methyl ether

TBA- Tertiary-butyl alcohol

Bold - Above the laboratory's indicated reporting limit

Case Closure Request
76 Service Station No. 5325
Antea Group Project No. I40255325



Appendix D

Boring Logs and Well Construction Details

Exact location or borehole number:

Address:

City:

Project No.: T-814 Date: 5/24/90 Boring No.:

Client: UNOCAL BOSTON

Location: 3220 LAKESHORE AV

City: OAKLAND

Logged by: D. J. RYAN Driller: D. J. RYAN

Casing installation date:

Drilling method: HAND AUGER

Hole diameter: 4"

Depth ft (m)	Sample No.	Sample Number	Depth ft (m)	Sample	Weight lb (kg)	Grain Size mm
0			0			
1			1			
2			2			
3			3			
4	NA	Hand Drive U-B-4.5	4 mm ←			
5			5			
6			6			
7			7			
8	NA	Hand Drive U-B-8.5	8 mm ←			
9			9			
10	NA	Hand Drive U-B-10.5	10 mm ←			
11			11			
12			12			

Remarks:

BACK FILLED

Top of Box Elevation:	Datum:
Water Level	
Time	
Date	

Description

BANKMENT SECTION - 4 INCHES

GLACIAL

GROUT - Light tan color

FILL - Clay (CL) Brown (Oxidized), moist no chemical odor

Change of Color to Black (oxidized) at 5 feet

FILL - CLAY (CL) to Clayey Sand (SC) yellowish brown (Oxidized). Moist, medium dense to loose. Moderate to strong chemical odor.

C.Y. -

CLAY (CL) BLOCK (oxidized) Saturated; medium stiff, 10% - 20% peat, moderate chemical odor

Color changes to Dark Grey (Pyrite) with increasing Organic Content.

No sample recovered at 11.5 feet
No chemical odor in cuttings at 11.5 feet

Bottom of Boring at 11.5 feet

Field location of boring:

Project No.: 14158931517 Date: 01/12/12 Boring No.: 1
 Client: N.D.C. GATEWAY INC.
 Location: 3725 N.W. 10TH AVENUE
 City: BOCA RATON, FLORIDA
 Logged by: D. RAYMOND DILLON, INC.
 Casing Installation date:

Drilling method: **HAND AUGER**Hole diameter: **4"**

P.D. depth ft	Sample No.	Sample Date	Sample No.	Sample Date	Depth ft	Group of SCS	Top of Box Elevation:		Datum:
							Water Level	Exc. Time	Date
0									
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

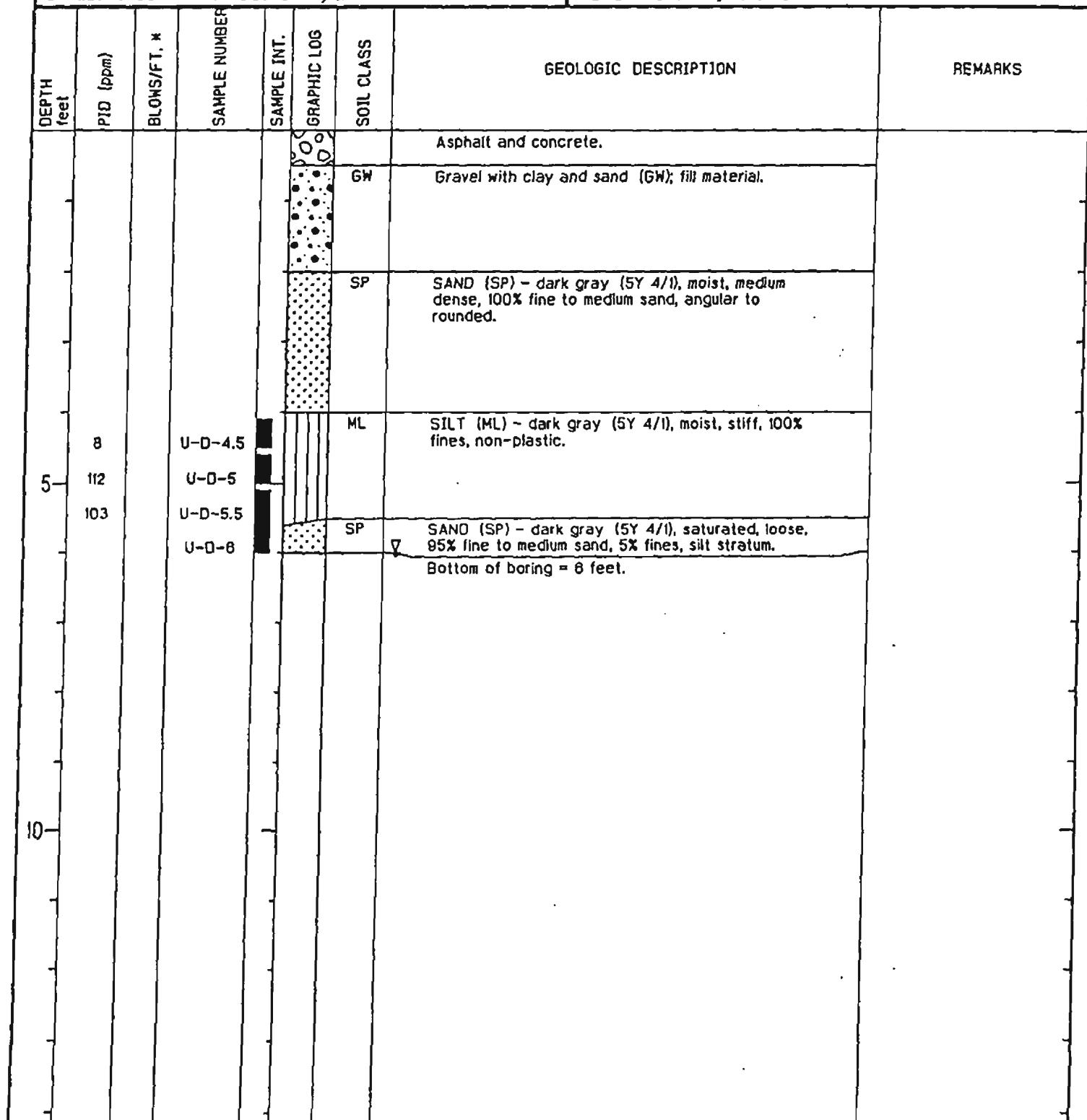
Remarks:



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Log of Boring U-D

PROJECT: Unocal Station No. 5325	LOCATION: 3220 Lakeshore Avenue, Oakland, CA
GSI PROJECT NO.: 7814.21	CASING ELEVATION:
DATE STARTED: 06/23/97	WL (ft. bgs): 6 DATE: 06/23/97 TIME: 10:50 am
DATE FINISHED: 06/23/97	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: Hand auger	TOTAL DEPTH: 6 Feet
DRILLING COMPANY: Gettler-Ryan	GEOLOGIST: Clyde Galantine





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Log of Boring U-E

PROJECT: Unocal Station No. 5325

LOCATION: 3220 Lakeshore Avenue, Oakland, CA

GSI PROJECT NO.: 7814.21

CASING ELEVATION:

DATE STARTED: 06/23/97

WL (ft. bgs): 6.5 DATE: 06/23/97 TIME: 12:50 pm

DATE FINISHED: 06/23/97

WL (ft. bgs): DATE: TIME:

DRILLING METHOD: Hand auger

TOTAL DEPTH: 7 Feet

DRILLING COMPANY: Gettler-Ryan

GEOLOGIST: Clyde Galantine

DEPTH feet	P/D (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
						ML	Silt (ML), backfill material for planter, brick fragments; fill.	
5			U-E-5.5			SP	SAND (SP) - yellowish brown (10YR 5/4), moist, medium dense, 100% fine with medium sand, subangular to rounded. Color change to dark gray (5Y 4/1), silt stratum, size increases to coarse with depth.	
8			U-E-8.5			GW	GRAVEL WITH SAND (GW) - very dark gray (2.5Y N3/1), saturated, medium dense, 65% fine gravel, 35% fine to coarse sand, subangular to rounded.	
11			U-E-7			ML	SILT (ML) - dark gray (5Y 4/1), wet, stiff, 100% fines, non-plastic. Bottom of boring = 7 feet.	

Field location of boring: (See Plate 2)							Project No.: 7814	Date: 09/24/90	Boring No: U-1
							Client: UNOCAL Service Station		
							Location: 3220 Lakeshore		
							City: Oakland, California	Sheet 1 of 2	
							Logged by: RAL	Driller: Bayland	
							Casing installation data:		
Drilling method: Hollow Stem Auger							(See Well Construction Detail)		
Hole diameter: 8-Inches							Top of Box Elevation:	Datum:	
PID (ppm)	Blosoft/ Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description	
				0				PAVEMENT SECTION - 1.0 foot	
				1				FILL - Sandy Silt (ML) - yellowish brown (10YR 5/4), medium stiff, moist; 70% silt; 30% fine to coarse sand; strong chemical odor.	
				2				CLAYEY SILT with SAND (ML/CL) - very dark gray (10YR 3/1), stiff, moist, medium plasticity; 50% silt; 30% clay; 20% fine sand; moderate chemical odor.	
				3				SANDY SILT (ML) - dark gray (N4/0), medium stiff, moist; 75% silt; 25% fine sand; strong chemical odor.	
				4					
				5					
466	350	S&H		6					
	400		U1-	7					
	450		6.5	8					
				9					
				10		▽ ▼		saturated; increasing clay to 25%; 10% peat; 10% dispersed gravel; no chemical odor.	
		1	S&H	11					
13	2		U1-	12					
	3		11.5	13					
				14					
				15					
		9	S&H	16				SAND with GRAVEL (SW) - light olive brown (10YR 5/4), medium dense, saturated; 85% fine to coarse sand; 15% fine to coarse gravel; no chemical odor.	
2	10		U1-	17					
	13		16.5	18					
				19					
Remarks:									



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Log of Boring

BORING NO.

U-1

JOB NUMBER
7814

REVIEWED BY AG/CEG

DATE
09/90

REVISED DATE

REVISED DATE

Field location of boring:

(See Plate 2)

Project No.:	7814	Date:	09/24/90	Boring No:
Client:	UNOCAL Service Station			U-1
Location:	3220 Lakeshore			
City:	Oakland, California			Sheet 2
Logged by:	RAL	Driller:	Bayland	of 2

Casing installation data:

Drilling method: Hollow Stem Auger

Hole diameter: 8-Inches

P/D (ppm)	Blows/L or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Top of Box Elevation:	Datum:
								Water Level	
								Time	
								Date	
								Description	
7	S&H	U1-							
2	5		21.5	20					
	7			21					
				22					
				23					
				24					
				25					
1	7			26					
13	SPT			27					
17				28					
				29					
				30					
				31					
				32					
				33					
				34					
				35					
				36					
				37					
				38					
				39					

Remarks:



GeoStrategies Inc.

Log of Boring

BORING NO.

U-1

JOB NUMBER
7814

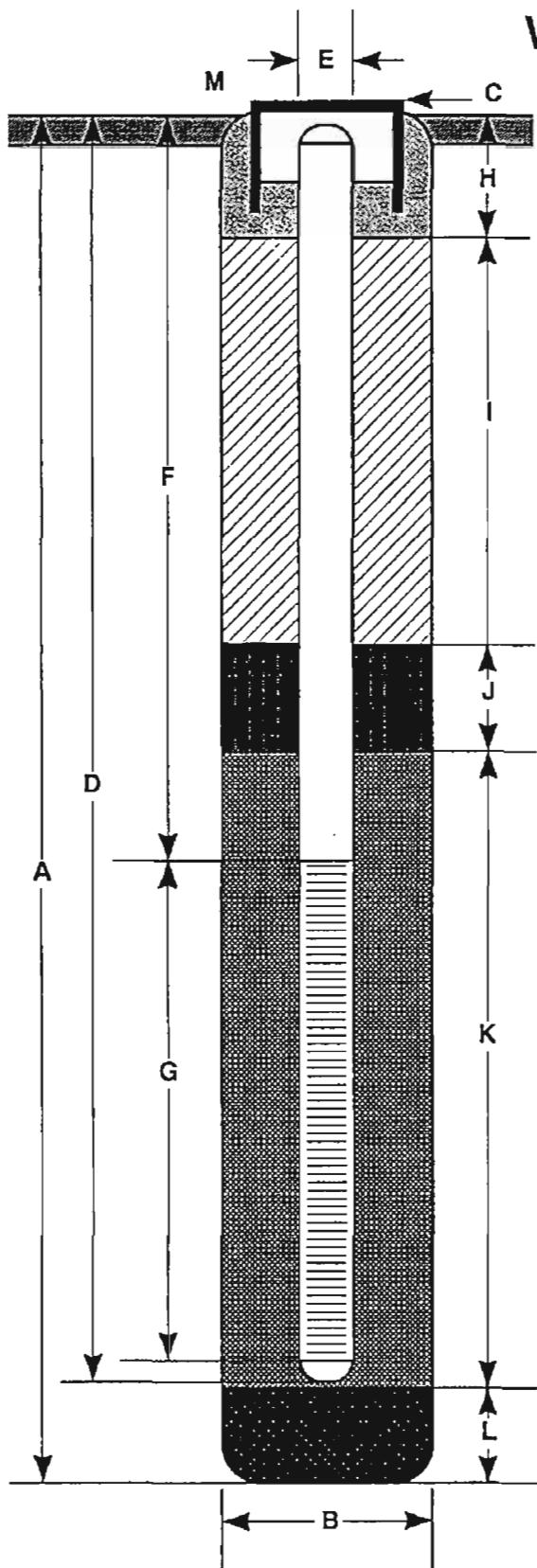
REVIEWED BY PG/CEG

DATE
09/90

REVISED DATE

REVISED DATE

WELL CONSTRUCTION DETAIL



- A Total Depth of Boring 26.5 ft.
- B Diameter of Boring 8.0 in.
Drilling Method Hollow Stem Auger
- C Top of Box Elevation _____ ft.
 Referenced to Mean Sea Level
 Referenced to Project Datum
- D Casing Length 20.5 ft.
Material Schedule 40 PVC
- E Casing Diameter 3.0 in.
- F Depth to Top Perforations 5.0 ft.
- G Perforated Length 15.0 ft.
Perforated Interval from 5.0 to 20.0 ft.
Perforation Type Machine Slot
Perforation Size 0.020 in.
- H Surface Seal from 0 to 1.5 ft.
Seal Material Concrete
- I Backfill from 1.5 to 3.0 ft.
Backfill Material Concrete
- J Seal from 3.0 to 4.0 ft.
Seal Material Bentonite
- K Gravel Pack from 4.0 to 20.0 ft.
Pack Material Lonestar #2/12 Sand
- L Bottom Seal 3.0 ft.*
Seal Material Bentonite
- M Vault with locking well cap and lock.

* Slough from 23.0 to 26.5 feet.

Note: Depth measured from initial ground surface.
Bottom 1.0 foot of casing is blank.



GeoStrategies Inc.

Well Construction Detail

WELL NO.

U-1

JOB NUMBER
7814

REVIEWED BY RG/CEG

DATE
09/90

REVISED DATE

REVISED DATE

Field location of boring:						Project No.: 7814	Date: 09/24/90	Boring No: U-2	
(See Plate 2)						Client: UNOCAL Service Station	Location: 3220 Lakeshore	Sheet 1 of 2	
						City: Oakland, California	Logged by: RAL Driller: Bayland		
						Casing installation data:			
						(See Well Construction Detail)			
Drilling method: Hollow Stem Auger						Top of Box Elevation:		Datum:	
Hole diameter: 8-Inches						Water Level	10.0'	18.0'	16.0'
PID (psi)	Blows/ft or Pressure (psi)	Type of Sample	Sample Number	Depth (ft)	Sample	Well Detail	Date	Time	
				0			09/24/90	11:15	
				1				11:45	
				2				13:10	
				3					
				4					
				5					
846	350	S&H	U2-	6					
	400		6.0	7					
	450			8					
				9					
				10					
66	3	S&H	U2-	11					
	2		11.5	12					
	4			13					
				14					
				15					
1	4	S&H		16					
	6		U2-	17					
	9		16.5	18					
				19					
						Description			
						PAVEMENT SECTION - 1.0 foot			
						SANDY SILT (ML) - dark greenish gray (5G 4/1), medium stiff, moist, non plastic; 70% silt; 30% fine sand; moderate chemical odor.			
						SAND with GRAVEL (SW) - dark greenish gray (5GY 4/1), medium dense, moist; 85% fine sand; 15% fine gravel; strong chemical odor.			
						CLAYEY SILT with SAND (ML/CL) - very dark gray (10YR 3/1), medium stiff, saturated; 45% silt; 30% clay; 25% fine to coarse sand; sand evenly dispersed; roots and rootholes; moderate chemical odor.			
						CLAY (CL) - light olive brown (2.5Y 5/4), stiff, moist; 100% clay; trace fine to coarse gravel interspersed; no chemical odor.			



GeoStrategies Inc.

Log of Boring

BORING NO.

U-2

JOB NUMBER

REVIEWED BY PG/CEG

DATE
09/90

REVISED DATE

REVISED DATE

Field location of boring: (See Plate 2)							Project No.: 7814	Date: 09/24/90	Boring No: U-2						
							Client: UNOCAL Service Station								
							Location: 3220 Lakeshore								
							City: Oakland, California	Sheet 2 of 2							
							Logged by: RAL	Driller: Bayland							
Casing installation data:															
Drilling method: Hollow Stem Auger							Top of Box Elevation:	Datum:							
Hole diameter: 8-Inches							Water Level								
P/D (μ pm)	Blows/ft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Time								
							Date								
Soil Group Symbol (USCS)															
Description															
no chemical odor.															
2	3	S&H		20											
	6		U2-	21											
	15		21.5	22											
				23											
				24											
				25											
				26											
				27											
				28											
				29											
				30											
				31											
				32											
				33											
				34											
				35											
				36											
				37											
				38											
				39											
Remarks:															



GeoStrategies Inc.

Log of Boring

BORING NO.

U-2

JOB NUMBER
7814

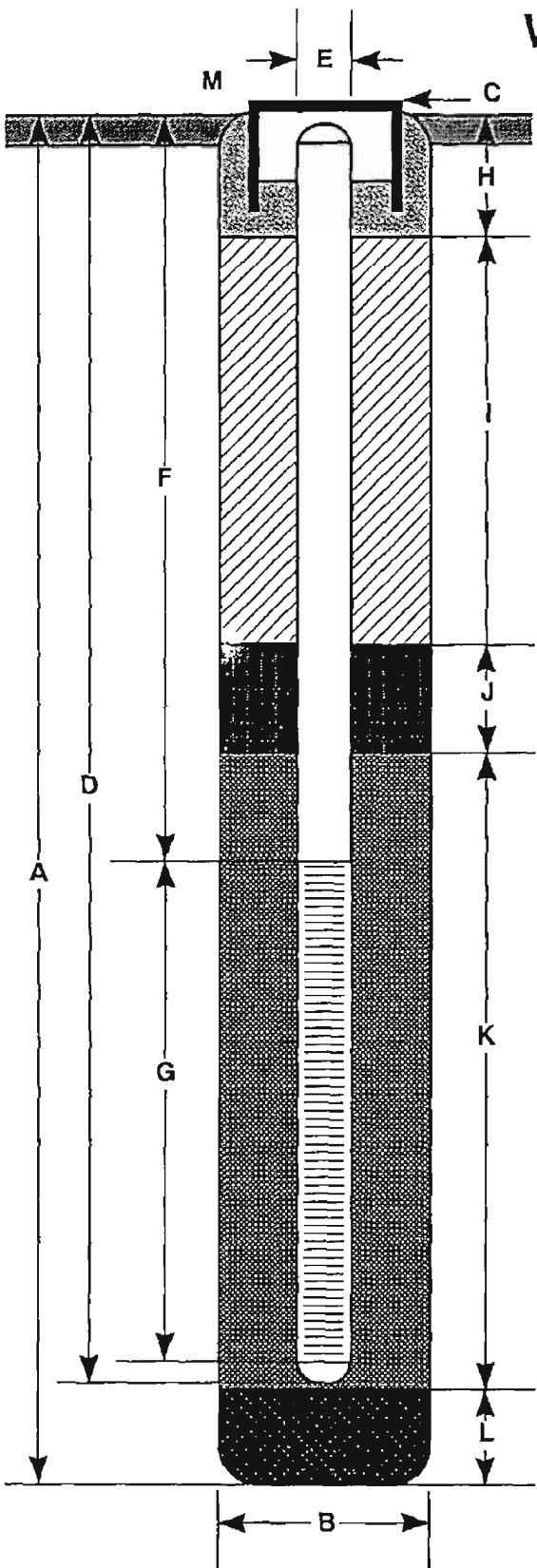
REVIEWED BY RG/CEG

DATE
09/90

REVISED DATE

REVISED DATE

WELL CONSTRUCTION DETAIL



- A Total Depth of Boring 21.5 ft.
- B Diameter of Boring 8.0 in.
Drilling Method Hollow Stem Auger
- C Top of Box Elevation _____ ft.
 Referenced to Mean Sea Level
 Referenced to Project Datum
- D Casing Length 20.5 ft.
Material Schedule 40 PVC
- E Casing Diameter 3.0 in.
- F Depth to Top Perforations 5.0 ft.
- G Perforated Length 15.0 ft.
Perforated Interval from 5.0 to 20.0 ft.
Perforation Type Machine Slot
Perforation Size 0.020 in.
- H Surface Seal from 0 to 1.5 ft.
Seal Material Concrete
- I Backfill from 1.5 to 3.0 ft.
Backfill Material Concrete
- J Seal from 3.0 to 4.0 ft.
Seal Material Bentonite
- K Gravel Pack from 4.0 to 20.0 ft.
Pack Material Lonestar #2/12 Sand
- L Bottom Seal 1.5 ft.
Seal Material Native Material
- M Vault with locking well cap and lock.

Note: Depths measured from initial ground surface.
Bottom 1.0 foot of casing is blank.



GeoStrategies Inc.

Well Construction Detail

WELL NO.

U-2

JOB NUMBER
7814

REVIEWED BY PGAC/EG

DATE
09/90

REVISED DATE

REVISED DATE

Field location of boring: (See Plate 2)							Project No.: 7814	Date: 09/24/90	Boring No: U-3
							Client: UNOCAL Service Station		
							Location: 3220 Lakeshored		
							City: Oakland, California	Sheet 1 of 2	
							Logged by: RAL	Driller: Bayland	
Casing installation data:							(See Well Construction Detail)		
Drilling method: Hollow Stem Auger							Top of Box Elevation:	Datum:	
Hole diameter: 8-Inches							Water Level	10.5'	14.0'
PID (ppm)	Blows/fL or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description	
				0				PAVEMENT SECTION - 1.0 foot	
				1				SANDY SILT (ML) - very dark gray (5Y 3/1); 70% silt; 30% fine to coarse sand; weak chemical odor.	
				2					
				3					
				4					
				5					
	300	S&H	U3-	6				no chemical odor.	
3	400		6.5	7					
	450			8					
				9					
				10					
	0	S&H	U3-	11				SILTY SAND (SM) - dark greenish gray (5GY 4/1), loose, saturated; 75% fine sand; 25% silt; no chemical odor.	
2	2	S&H	11.5	12					
	2			13					
				14					
				15				SILT with SAND (ML) - light olive brown (2.5Y 5/4), stiff, very moist; 80% silt; 20% fine sand; no chemical odor.	
	300			16					
1	500	S&H	U3-	17					
	500		16.5	18					
				19					
Remarks:									



GeoStrategies Inc.

Log of Boring

BORING NO.

U-3

JOB NUMBER
7814

REVIEWED BY RG/CEG

DATE
09/90

REVISED DATE

REVISED DATE

Field location of boring: (See Plate 2)								Project No.: 7814	Date: 09/24/90	Boring No:
								Client: UNOCAL Service Station		U-3
								Location: 3220 Lakeshore		
								City: Oakland, California	Sheet 2	
								Logged by: RAL	Driller: Bayland	of 2
Casing installation data:										
Drilling method: Hollow Stem Auger								Top of Box Elevation:	Datum:	
Hole diameter: 8-Inches								Water Level		
								Time		
								Date		
								Description		
P/D (ppm)	Blows/ft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCSs)			
				20						
				21				no chemical odor.		
1	300	U3-								
	500	S&H	21.5							
	600									
				22						
				23						
				24						
				25						
				26						
				27						
				28						
				29						
				30						
				31						
				32						
				33						
				34						
				35						
				36						
				37						
				38						
				39						
Remarks:										



GeoStrategies Inc.

Log of Boring

BORE NO.

U-3

JOB NUMBER
7814

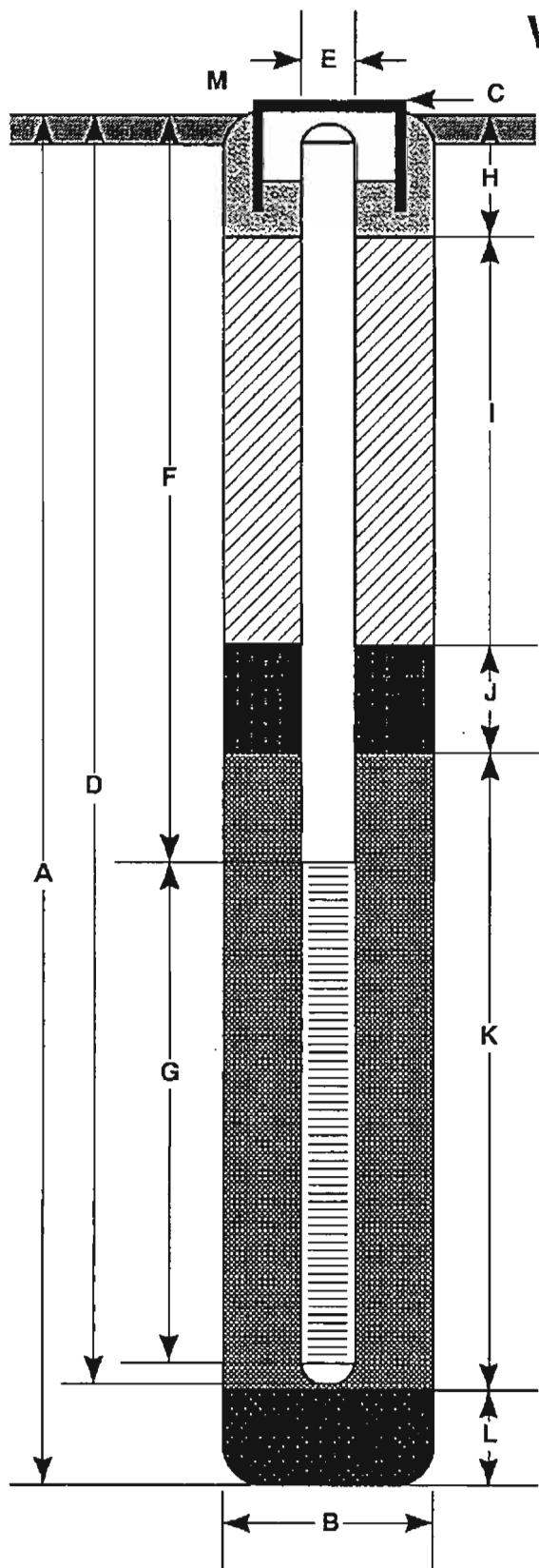
REVIEWED BY RG/CEG

DATE
09/90

REVISED DATE

REVISED DATE

WELL CONSTRUCTION DETAIL



- A Total Depth of Boring 21.5 ft.
- B Diameter of Boring 8.0 in.
Drilling Method Hollow Stem Auger
- C Top of Box Elevation _____ ft.
 Referenced to Mean Sea Level
 Referenced to Project Datum
- D Casing Length 20.5 ft.
Material Schedule 40 PVC
- E Casing Diameter 3.0 in.
- F Depth to Top Perforations 5.0 ft.
- G Perforated Length 15.0 ft.
Perforated Interval from 5.0 to 20.0 ft.
Perforation Type Machine Slot
Perforation Size 0.020 in.
- H Surface Seal from 0 to 1.5 ft.
Seal Material Concrete
- I Backfill from 1.5 to 3.0 ft.
Backfill Material Concrete
- J Seal from 3.0 to 4.0 ft.
Seal Material Bentonite
- K Gravel Pack from 4.0 to 20.0 ft.
Pack Material Lonestar #2/12 Sand
- L Bottom Seal 1.5 ft.
Seal Material Native Material
- M Vault with locking well cap and lock.

Note: Depths measured from initial ground surface.
Bottom 1.0 foot of casing is blank.



GeoStrategies Inc.

Well Construction Detail

WELL NO.

U-3

JOB NUMBER
7814

REVIEWED BY RG/CEG

DATE
09/90

REVISED DATE

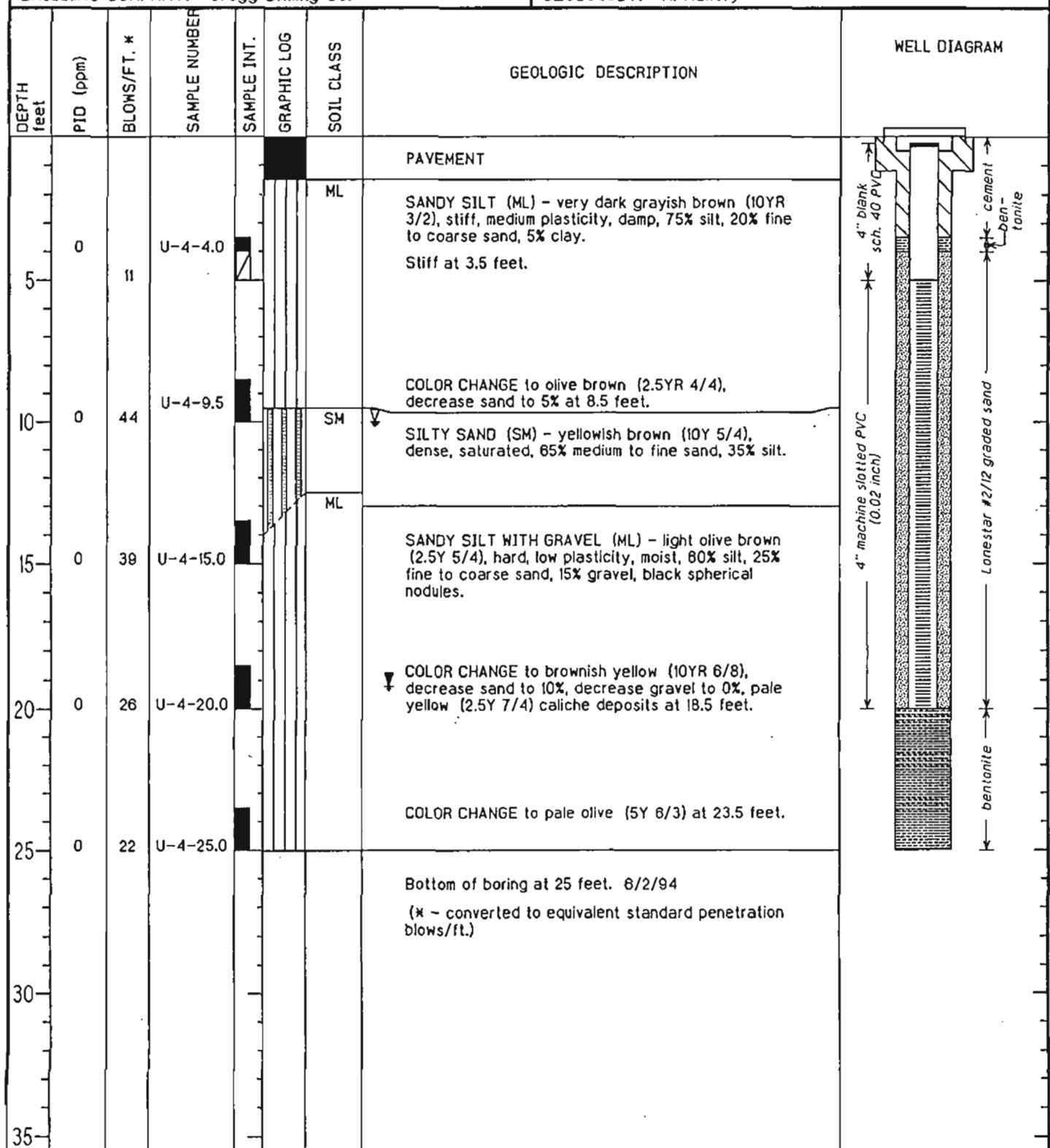
REVISED DATE



GeoStrategies, Inc.

Log of Boring U-4

PROJECT: UNOCAL STATION #5325	LOCATION: 3220 Lakeshore Avenue, Oakland, CA.
GSI PROJECT NO.: 4814.702	CASING ELEVATION: 11.15 MSL
DATE STARTED: 6/2/94	WL (ft. bgs): 10 DATE: 6/2/94 TIME: 07:46
DATE FINISHED: 6/2/94	WL (ft. bgs): 19.2 DATE: 6/2/94 TIME: 14:25
DRILLING METHOD: 10 in. Hollow Stem Auger	TOTAL DEPTH: 25 Feet
DRILLING COMPANY: Gregg Drilling Co.	GEOLOGIST: R. Mallory





GeoStrategies, Inc.

Log of Boring U-5

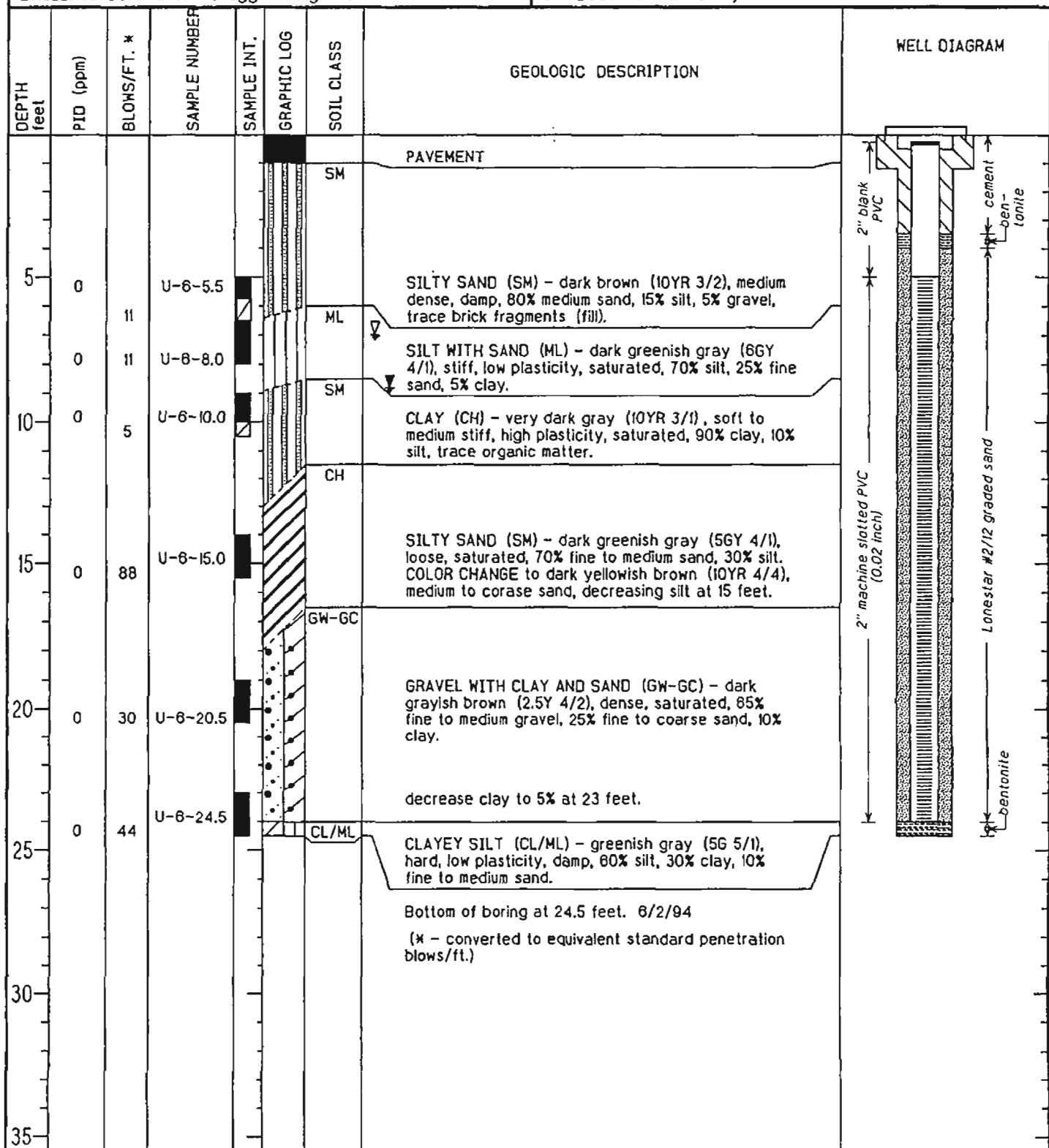
PROJECT: UNOCAL STATION #5325					LOCATION: 3220 Lakeshore Avenue, Oakland, CA.					
GSI PROJECT NO.: 4814.702					CASING ELEVATION: 6.98 MSL					
DATE STARTED: 6/2/94		WL (ft. bgs): 6.25 DATE: 6/2/94 TIME: 11:32								
DATE FINISHED: 6/2/94		WL (ft. bgs): 10.6 DATE: 6/2/94 TIME: 14:00								
DRILLING METHOD: 10 in. Hollow Stem Auger					TOTAL DEPTH: 21.5 Feet					
DRILLING COMPANY: Gregg Drilling Co.					GEOLOGIST: R. Mallory					
DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT. GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM			
5.0						PAVEMENT				
5.88	15	U-5-6.0		SP		SAND (SP) - olive gray (5YR 4/2), loose, damp, 100% medium sand, brick fragments (fill).				
10.0	4	U-5-11.5		ML		SILT (ML) - dark greenish gray (5GY 4/1), stiff, medium plasticity, moist, 90% silt, 10% fine sand, organic matter.				
11.0				SP		SAND (SP) - dark greenish dray (5GY 4/1), medium dense, saturated, 95% sand, 5% silt.				
15.0	15	U-5-16.5		ML/CL		SILTY CLAY (ML/CL) - very dark grayish brown (IOYR 3/2), medium stiff, high plasticity, saturated, 60% clay, 40% silt, rootholes, roots.				
20.0				CL		CLAY (CL) - very dark grayish brown (IOYR 3/2), stiff, medium plasticity, saturated, 80% clay, 30% silt, rootholes, roots.				
21.5	10	U-5-21.5				Increase fine sand to 15% at 20 feet. COLOR CHANGE to light olive brown (2.5Y 5/4) at 21 feet.				
25.0						Bottom of boring at 21.5 feet. 6/2/94				
30.0						(* - converted to equivalent standard penetration blows/ft.)				
35.0										



GeoStrategies, Inc.

Log of Boring U-6

PROJECT: UNOCAL STATION #5325	LOCATION: 3220 Lakeshore Avenue, Oakland, CA.
GSI PROJECT NO.: 4814.702	CASING ELEVATION: 7.14 MSL
DATE STARTED: 6/2/94	WL (ft. bgs): 7 DATE: 6/2/94 TIME: 04:35
DATE FINISHED: 6/2/94	WL (ft. bgs): 8.8 DATE: 6/2/94 TIME: 14:05
DRILLING METHOD: 8 in. Hollow Stem Auger	TOTAL DEPTH: 24.5 Feet
DRILLING COMPANY: Gregg Drilling Co.	GEOLOGIST: R. Mallory





GeoStrategies

Log of UST Observation Well

PROJECT: Unocal Station No. 5325

LOCATION: 3220 Lakeshore Avenue, Oakland, CA

GSI PROJECT NO.: 7814.21

CASING ELEVATION:

DATE STARTED: 06/23/97

WL (ft. bgs): DATE: TIME:

DATE FINISHED: 06/23/97

WL (ft. bgs): DATE: TIME:

DRILLING METHOD: 10 in. hollow-stem auger

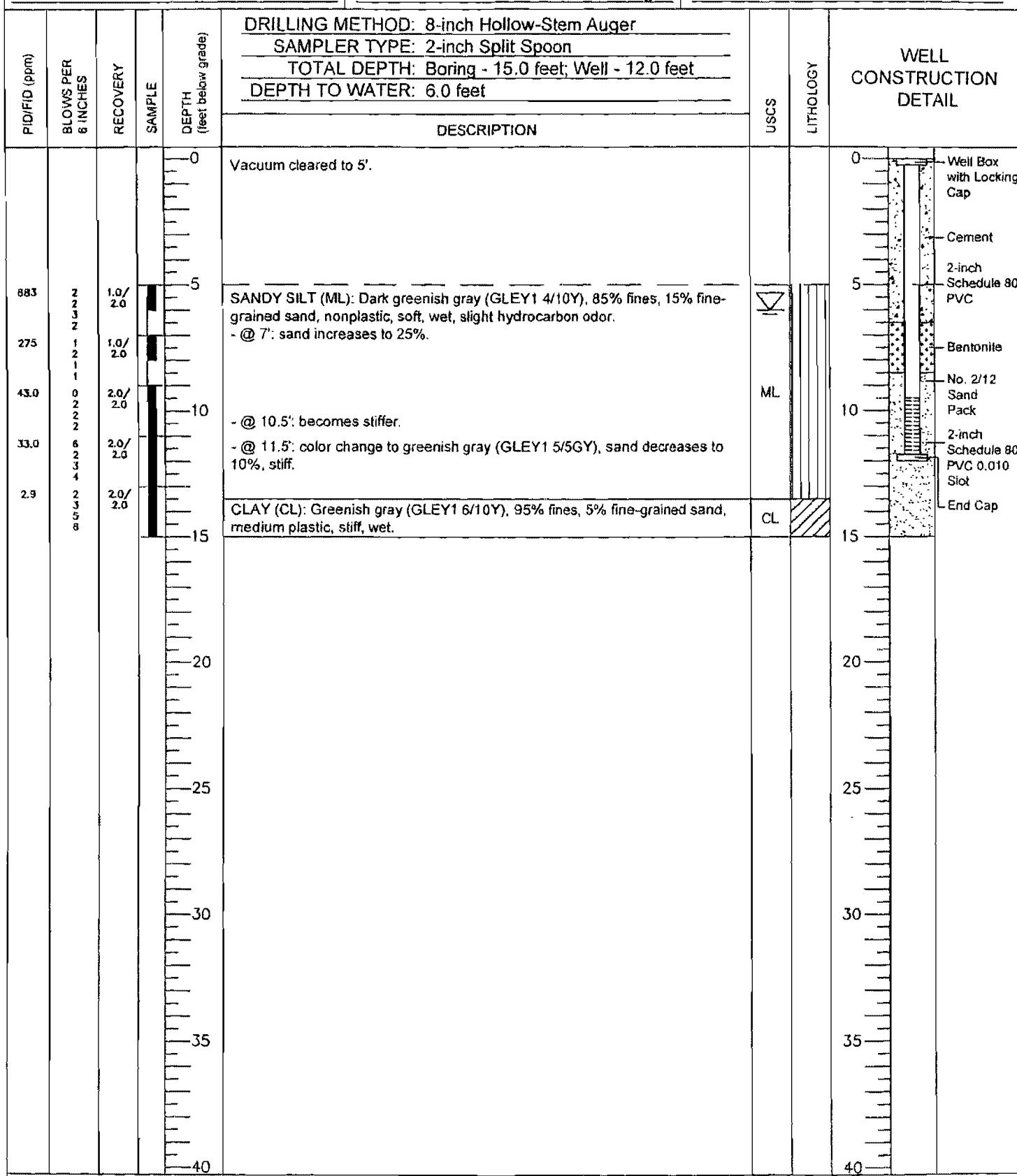
TOTAL DEPTH: 15 Feet

DRILLING COMPANY: Woodward Drilling

GEOLOGIST: Clyde Galantine

DEPTH feet	PDI (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION			WELL DIAGRAM
							WL (ft. bgs)	DATE	TIME	
5							Pea gravel (fill material).			<p>4" blank Schedule 40 PVC</p> <p>4" machine slotted PVC (0.03 inch)</p> <p>pea gravel</p> <p>concrete</p>
10										
15										
20										
25										
30										
35										

PROJECT NO.: 42-0137-07	DATE DRILLED: 4/12/06	NORTHING: NOT SURVEYED
LOCATION: 76 Station #5325	LOGGED BY: R. Dunn	EASTING: NOT SURVEYED
3200 Lakeshore Ave.	APPROVED BY: K. Woodburne, RG	ELEVATION: NOT SURVEYED
Oakland, California	DRILLING CO.: Woodward Drilling	

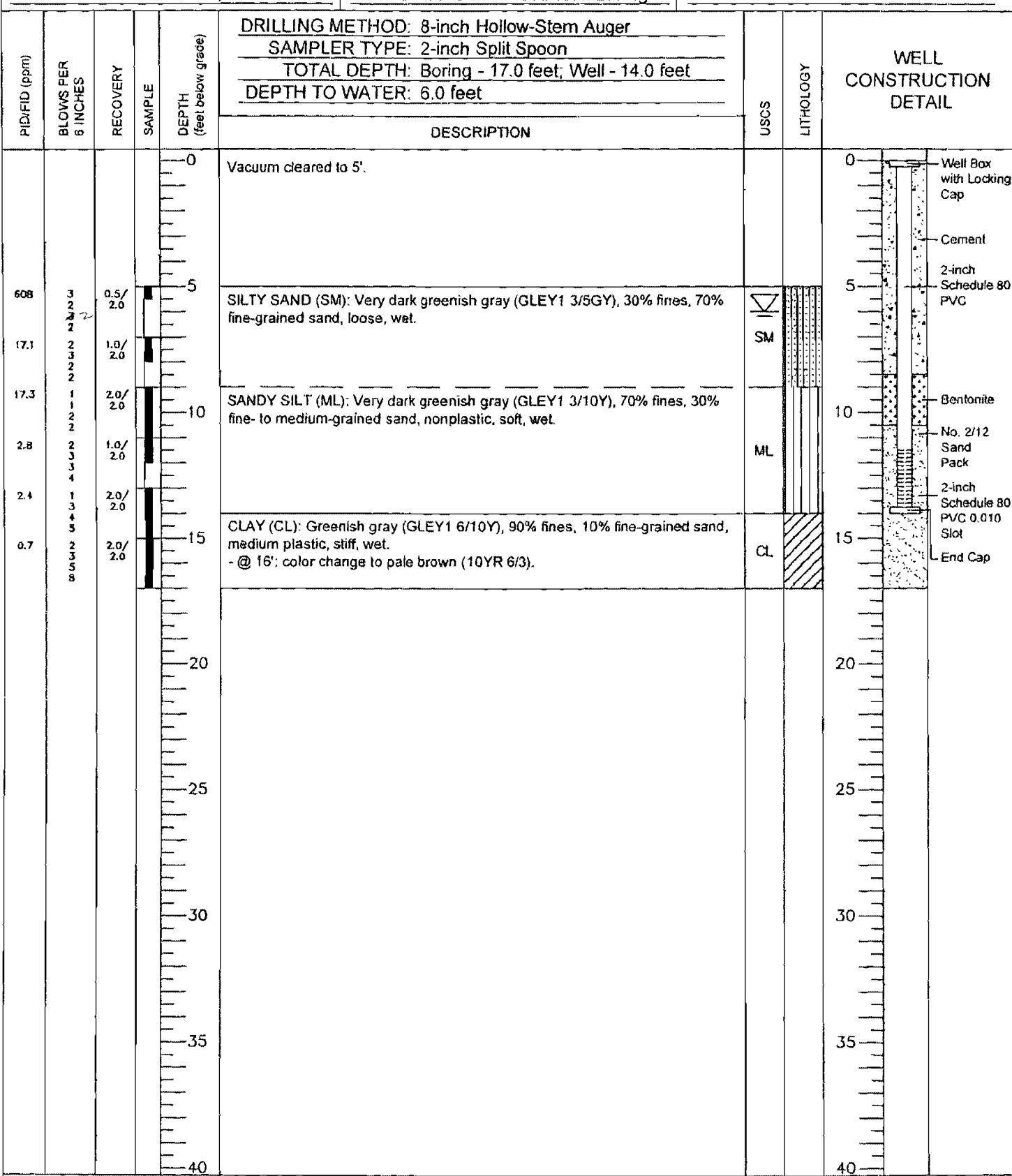


TRC

SPARGE POINT INSTALLATION LOG

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PAGE 1 OF 1

PROJECT NO.: 42-0137-07	DATE DRILLED: 4/12/06	NORTHING: NOT SURVEYED
LOCATION: 76 Station #5325	LOGGED BY: R. Dunn	EASTING: NOT SURVEYED
3200 Lakeshore Ave.	APPROVED BY: K. Woodburne, RG	ELEVATION: NOT SURVEYED
Oakland, California	DRILLING CO.: Woodward Drilling	

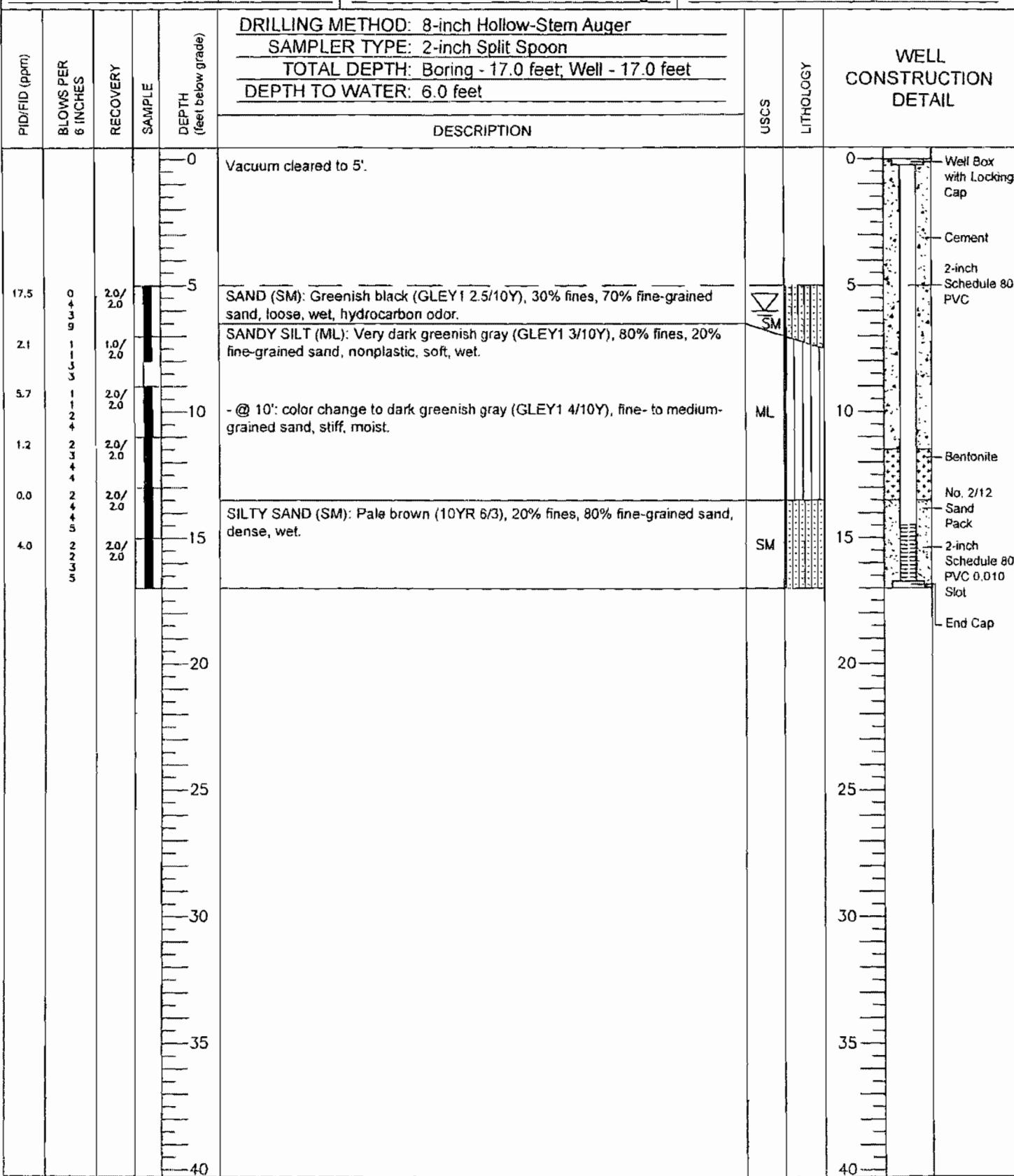


TRC

SPARGE POINT INSTALLATION LOG

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PROJECT NO.: 42-0137-07	DATE DRILLED: 4/12/06	NORTHING: NOT SURVEYED
LOCATION: 76 Station #5325	LOGGED BY: R. Dunn	EASTING: NOT SURVEYED
3200 Lakeshore Ave.	APPROVED BY: K. Woodburne, RG	ELEVATION: NOT SURVEYED
Oakland, California	DRILLING CO.: Woodward Drilling	



TRC

SPARGE POINT INSTALLATION LOG

C-3
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