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Jennifer C. Sedlachek
Project Manager

ExxonMobil

December 5, 2008

Mr. Jerry T. Wickham
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, California 94502-6577

Subject: Fuel Leak Investigation Site No. RO0002635
Former Exxon RAS #74121, 10605 Foothill Boulevard, Oakland, California

Dear Mr. Wickham:

Attached for your review and comment is a copy of the *Revised Soil Vapor Sampling and Risk Assessment Work Plan* for the above-referenced site. The work plan, prepared by ETIC Engineering, Inc. of Pleasant Hill, California, is being submitted in response to correspondence from the Alameda County Health Care Services Agency dated October 7, 2008.

Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached report is true and correct.

If you have any questions or comments, please contact me at 510.547.8196.

Sincerely,

Jennifer C. Sedlachek
Project Manager

Attachment: ETIC Revised Soil Vapor Sampling and Risk Assessment Work Plan

c: w/ attachment:
Mr. Ken Phares - MacArthur Boulevard Associates, Oakland, California
Mr. Peter McIntyre - AEI Consultants

c: w/o attachment:
Mr. Bryan Campbell - ETIC Engineering, Inc.

Revised Soil Vapor Sampling and Risk Assessment Work Plan

Former Exxon Retail Site 74121
10605 Foothill Boulevard
Oakland, California

Prepared for

ExxonMobil Oil Corporation

Prepared by

ETIC Engineering, Inc.
2285 Morello Avenue
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(925) 602-4710

K. Erik Appel
Project Manager

December 5, 2008
Date

PROFESSIONAL GEOLOGIST
BRYAN CAMPBELL
No. 7724
Exp. 2/24/10
STATE OF CALIFORNIA

Bryan Campbell, P.G. #7724
Senior Geologist

12/5/08
Date

December 2008

SITE CONTACTS

Site Name:	Former Exxon Retail Site 74121
Site Address:	10605 Foothill Boulevard Oakland, California
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Regulatory Oversight:	Jerry T. Wickham Alameda County Health Care Services Agency Environmental Health Services 1131 Harbor Bay Parkway Alameda, California 94502-6577 (510) 567-6765

INTRODUCTION

At the request of ExxonMobil Environmental Services Company on behalf of ExxonMobil Oil Corporation (ExxonMobil), ETIC Engineering, Inc. (ETIC) has prepared this Revised Soil Vapor Sampling and Risk Assessment Work Plan for former Exxon Retail Site (RS) 74121, located at 10605 Foothill Boulevard, Oakland, California (Figures 1 and 2). This work plan is being submitted in response to letters from the Alameda County Health Care Services Agency (ACHCSA) dated 23 June 2008 and 7 October 2008. Agency correspondence is included in Appendix A.

In the 23 June 2008 letter, the ACHCSA requested the following items (enumerated below):

1. Additional soil vapor sampling to evaluate potential vapor intrusion onsite for future site occupants particularly in the location of the former underground storage tanks (USTs) outside of the excavation proposed in the Well Installation and Additional Risk Assessment Report dated May 2007 (ETIC 2007). The ACHCSA stated that this information would be used to assess whether the proposed excavation will be effective in mitigating potential vapor intrusion concerns.

2. The ACHCSA also requested further evaluation of concentrations of benzene in soil vapor near locations where previous soil vapor samples approached or exceeded the residential Environmental Screening Levels.

3. A plan to purge soil vapor and sample soil vapor from the five existing onsite soil vapor wells. Soil vapor could not previously be collected from these probes due to the presence of water (ETIC 2007).

In response to the 23 June 2008 letter, a Vapor Sampling Work Plan dated 22 August 2008 was submitted to the ACHCSA (ETIC 2008a). The work plan outlined a plan to purge soil vapor and sample the existing vapor wells including well VW5 which is located approximately 10 feet from the former USTs. The work plan indicated that based on the site conditions and on the previous attempts at collecting soil vapor samples, that it appears that perched water may exist within the shallow clay and silt soils at the site. The work plan stated the steps to be taken to avoid encountering water in the vapor wells and indicated that if vapor samples cannot be collected from the wells, then an evaluation of vapor intrusion will be made without vapor samples.

In the 7 October 2008 letter, the ACHCSA requested a revised work plan to include the installation of additional soil vapor sampling locations outside the area of the proposed excavation for the reasons outlined in its 23 June 2008 letter. This revised work plan outlines a scope of work for a risk assessment for the evaluation of potential vapor intrusion concerns.

SITE BACKGROUND

Former Exxon RS 74121 is currently a small landscaped area located at 10605 Foothill Boulevard, Oakland, California, on the south corner of the intersection of Foothill Boulevard and 106th Avenue (Figure 2). The property is currently owned by MacArthur Boulevard Associates and has a shopping center and a residential area nearby. According to internal Exxon Company,

U.S.A. correspondence, the USTs were removed from the site between 20 October 1981 and 15 June 1982. Site physical features are presented on Figure 2.

According to the property owner, a commercial retail structure is currently proposed for the north corner of the site. The remainder of the site will consist of paved areas.

SITE GEOLOGY AND HYDROGEOLOGY

The geology and hydrogeology of the site have been evaluated using the boring logs from previous site investigations. The typical soils at the site consist of mostly clay and silt from ground surface to approximately 17 feet below ground surface (bgs) and this is underlain by a layer of silty sand which is approximately 4 feet thick. The silty sand is underlain by sand and gravelly sand to a depth of at least 26.5 feet bgs, the maximum depth explored at the site. Although the layers of clay and silt may be water-bearing at lower depths, the layers of silty sand and sand and gravel found below approximately 17 feet bgs are not only water-bearing but are also more permeable.

Groundwater monitoring wells MW1 through MW3 and MW5 are screened from 10 to 25 feet bgs. The depth to groundwater in the wells has historically ranged from approximately 15 to 20 feet bgs. Groundwater flow directions are to the northwest although the topography of the surrounding area slopes to the southwest.

SUMMARY OF INVESTIGATION ACTIVITIES AND REMEDIAL MEASURES

In December 1998, AEI Consultants (AEI) performed a geophysical survey (magnetometry and ground-penetrating radar) to ascertain the presence of USTs at the site (AEI 2004). No underground anomalies indicative of remaining USTs were identified (AEI 2004). Also, an ACHCSA letter dated 22 March 2005 indicated that the UST system was removed from the site prior to December 1998.

In March 2004, AEI conducted a subsurface investigation at the site in order to collect soil and grab groundwater samples (AEI 2004). Four soil borings (SB1 through SB4) were advanced to depths of 8 feet bgs (SB3 and SB4), 16 feet bgs (SB1), and 22 feet bgs (SB2) (AEI 2004).

In May 2005, ETIC conducted a subsurface investigation at the site to collect soil and groundwater samples (ETIC 2005). Nine soil borings (SB5-SB13) were advanced to approximately 25 feet bgs.

In April and May 2006, ETIC conducted a subsurface investigation at the site and 17 soil borings (SB14-SB20 and V1-V10) were advanced to collect soil, groundwater, and soil vapor samples (ETIC 2006).

In January 2007, ETIC observed the installation of five soil vapor monitoring wells (VW1 through VW5) and four groundwater monitoring wells (MW1, MW2, MW3, and MW5) (ETIC 2007). Corrective action alternatives were evaluated as part of the report and excavation was the recommended corrective action for this site.

Groundwater monitoring and sampling activities have been conducted quarterly since March 2007. Well construction details are presented in Table 1. Soil sample analytical results are provided in Tables 2 and 3. Groundwater sample analytical results for temporary borings are provided in Table 4. Groundwater monitoring data are provided in Table 5. Physical properties analytical results for soil samples are provided in Table 6. Soil vapor analytical data are summarized in Table 7. Figure 2 shows the locations of wells and borings. Figure 3 shows the groundwater elevations, groundwater flow direction, and groundwater sample analytical results for the September 2008 monitoring event (ETIC 2008b). Figure 4 shows the outline of the area of the proposed excavation (ETIC 2007).

PROPOSED SCOPE OF WORK

The following work will be conducted and data will be collected to evaluate human health risks resulting from potential exposure to hydrocarbons beneath the site via the vapor migration pathway. The risk assessment will include a comparison of concentrations of chemicals of potential concern (COPCs) (Total Petroleum Hydrocarbons as gasoline [TPH-g], benzene, toluene, ethylbenzene, total xylenes [BTEX], and methyl tertiary butyl ether [MTBE]) to relevant environmental screening levels adopted by the Regional Water Quality Control Board (RWQCB) (RWQCB 2008). Any applicable permits or access will be obtained prior to the performance of this work.

An advisory published by the Department of Toxic Substances Control (DTSC) and the Los Angeles Regional Water Quality Control Board (DTSC/LARWQCB 2003) and vapor intrusion evaluation guidelines published by the DTSC (DTSC 2004) will be used as a reference for the collection of the shallow soil vapor samples proposed below.

ETIC proposes to conduct the following activities:

- Seven soil borings will be advanced at the proposed locations shown on Figure 4 (VW6 through VW12). Proposed boring locations VW6 through VW9 will be placed approximately 5 feet from each side of the proposed excavation (ETIC 2007) to address item #1 in the introduction section. Additional locations VW10 through VW12 are proposed to update vapor monitoring data near former temporary vapor probes V1, V6, and V9 to address item #2 in the introduction section. The proposed locations may be modified based on utilities or other obstacles that may be encountered. Drilling and sample collection methods are described in Appendix B.

- One soil sample will be collected from each location at approximately 5 to 5.5 feet bgs and one at approximately 5.5 to 6 feet bgs. The soil samples will be screened in the field with an organic vapor analyzer and logged. The samples will be preserved, stored in an ice-filled cooler, and delivered under chain of custody to a state-certified laboratory for analysis.

- The borings will be completed as vapor wells for collection of soil vapor samples from 5 to 6 feet bgs. A proposed well construction diagram is shown on Figure 5.

- Attempts will be made to collect soil vapor samples from the existing vapor wells (VW1 through VW5) as indicated in the previous work plan (ETIC 2008a) and from the proposed vapor wells (VW6 through VW12) to address item #3 in the introduction section.

- Prior to the collection of the vapor samples, irrigation of the onsite landscaping will be discontinued and the vapor sampling will not be conducted during periods of precipitation. Sample collection methods are described in Appendix B. Vapor samples will be collected in 1-liter Summa canisters and the samples will be submitted to a state-certified laboratory for analysis.

- Guidelines by the DTSC state that every attempt should be made to collect representative vapor samples but that it may not be possible to collect soil vapor samples from the subsurface in some instances including for sites with a "saturated vadose zone due to a

shallow water table or sites with clay-rich soil" (DTSC 2004). If water is encountered in the vapor wells during the proposed sampling, attempts will not be made to remove the water as this may preclude performing the proper purging of soil vapor before sampling. It may not be possible to collect soil vapor samples due to "low-flow" or "no-flow" conditions, often caused by the presence of clayey soils (DTSC/LARWQCB 2003). If vapor samples cannot be collected from the wells, then an evaluation of vapor intrusion without vapor samples will be considered.

- The analytical results for COPCs in the above-mentioned soil vapor samples will be used for evaluation of potential health risks.

The soil samples collected at approximately 5 to 5.5 feet bgs will be analyzed for:

- Moisture content by ASTM D2216.
- Porosity (including dry bulk density) by API RP40 or equivalent methods.

The soil samples collected at approximately 5.5 to 6 feet bgs will be analyzed for:

- TPH-g and TPH as diesel by EPA Method 8015B.
- BTEX by EPA Method 8021B.
- MTBE, tertiary butyl alcohol (TBA), diisopropyl ether (DIPE), tertiary amyl methyl ether (TAME), ethyl tertiary butyl ether (ETBE), 1,2-dibromoethane (EDB), and 1,2-dichloroethane (1,2-DCA) by EPA Method 8260B.

The soil vapor samples will be analyzed for:

- TPH-g by EPA Method TO-3M.
- BTEX by EPA Method TO-15.
- MTBE, TBA, DIPE, ETBE, TAME, EDB, and 1,2-DCA by EPA Method TO-15.
- Oxygen/argon, methane, and carbon dioxide by ASTM D1946.
- 1,1-Difluoroethane (as a tracer) by EPA Method TO-15.

SCHEDULE AND REPORTING

Completion of the field work is contingent upon approval of this work plan by the ACHCSA and acquiring any necessary permits. A report of the investigation and the results of the risk evaluation will be submitted following completion of the field work. ETIC will keep the ACHCSA informed of the progress of the field investigation activities.

Additionally, in the event that the work scope must be altered significantly due to access issues and/or other unexpected issues, ETIC will notify ACHCSA personnel prior to implementing changes to the work scope.

REFERENCES

AEI (AEI Consultants). 2004. Phase II Subsurface Investigation Report, Project No. 8311, 10605 Foothill Boulevard, Oakland, California. AEI, Walnut Creek, California. 7 April.

DTSC (Department of Toxic Substances Control). 2004. Guidance for the Evaluation and Mitigation of Substance Vapor Intrusion to Indoor Air – Interim Final. 15 December.

DTSC/LARWQCB (Department of Toxic Substances Control and California Regional Water Quality Control Board – Los Angeles Region). 2003. Advisory – Active Soil Gas Investigations. DTSC and LARWQCB, Glendale and Los Angeles, California. 28 January.

ETIC (ETIC Engineering, Inc.). 2005. Subsurface Investigation Report, Former Exxon Retail Site 7-4121, 10605 Foothill Boulevard, Oakland, California. ETIC, Pleasant Hill, California. July.

ETIC (ETIC Engineering, Inc.). 2006. Subsurface Investigation and Risk Assessment Report, Former Exxon Retail Site 7-4121, 10605 Foothill Boulevard, Oakland, California. ETIC, Pleasant Hill, California. July.

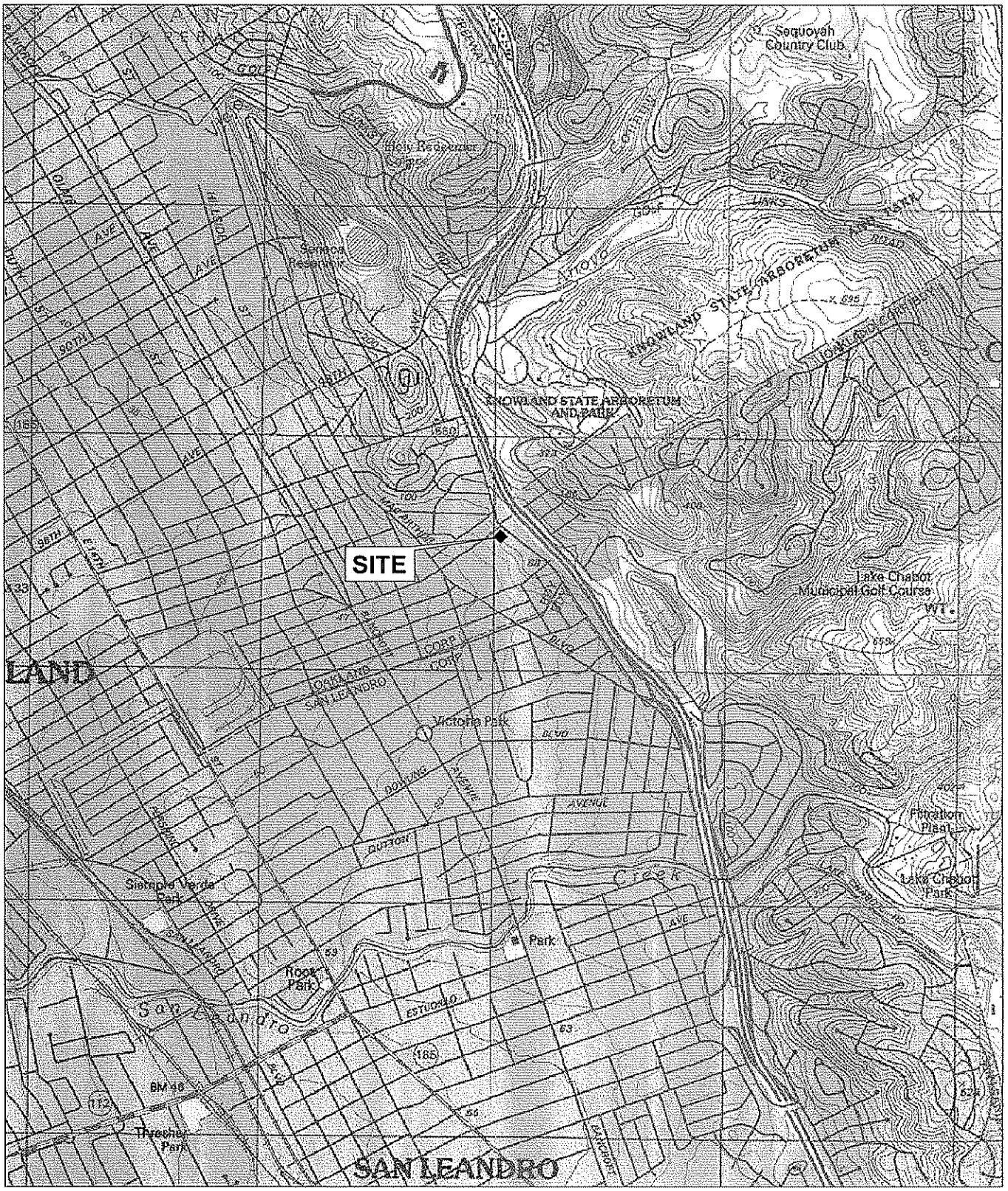
ETIC (ETIC Engineering, Inc.). 2007. Well Installation and Additional Risk Assessment Report, Former Exxon Retail Site 7-4121, 10605 Foothill Boulevard, Oakland, California. ETIC, Pleasant Hill, California. May.

ETIC (ETIC Engineering, Inc.). 2008a. Vapor Sampling Work Plan, Former Exxon Retail Site 74121, 10605 Foothill Boulevard, Oakland, California. ETIC, Pleasant Hill, California. 22 August.

ETIC (ETIC Engineering, Inc.). 2008b. Report of Groundwater Monitoring, Third Quarter 2008, Former Exxon Retail Site 74121, 10605 Foothill Boulevard, Oakland, California. ETIC, Pleasant Hill, California. October.

RWQCB (California Regional Water Quality Control Board, San Francisco Bay Region). 2008. Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater. RWQCB, Oakland, California. November 2007 with May 2008 updates.

Figures



SOURCE: USGS Topographic Map

0 2000

Scale (feet)

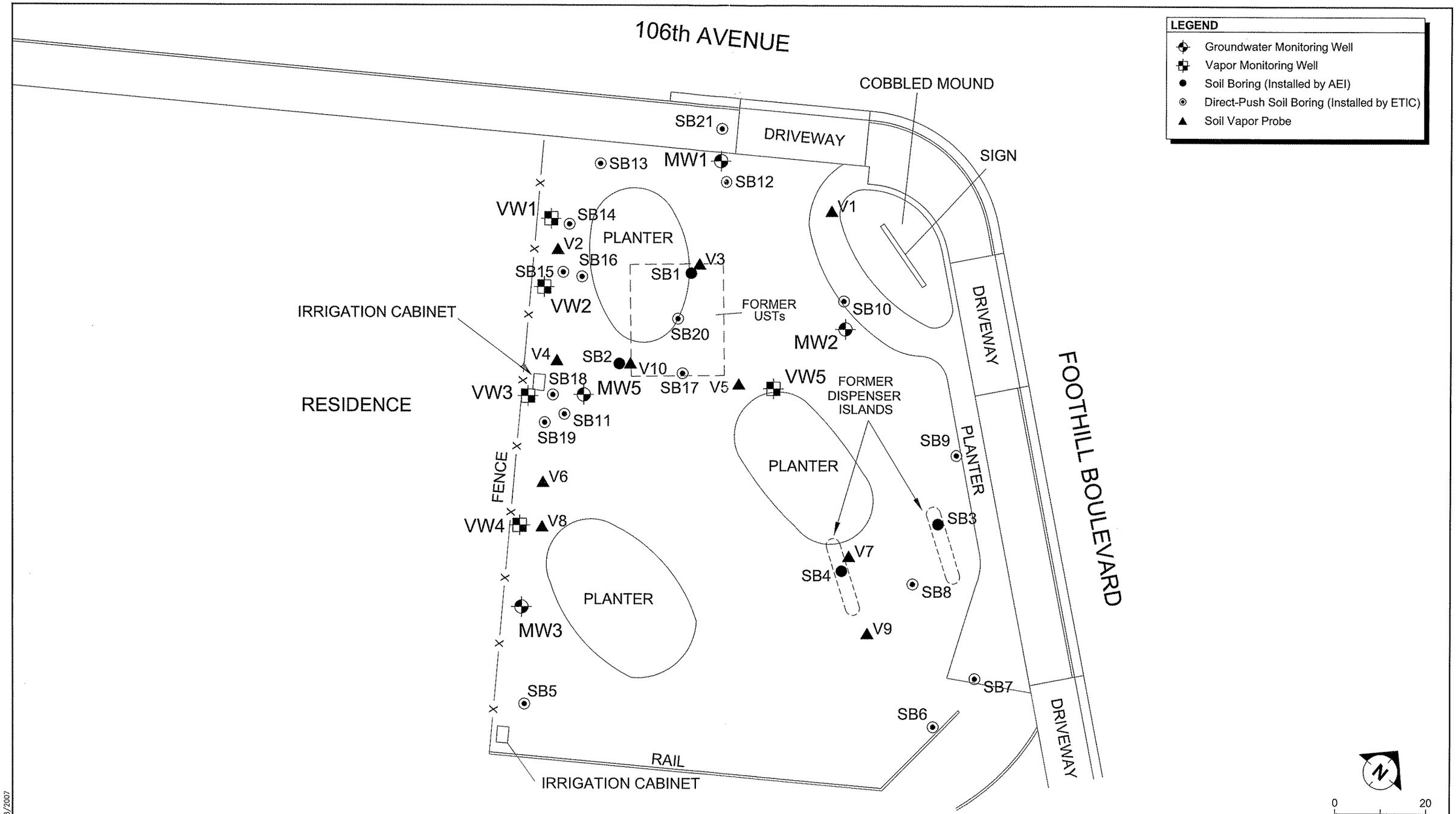
N

ETIC ENGINEERING

SITE LOCATION AND TOPOGRAPHIC MAP
FORMER EXXON RS 74121
10605 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

FIGURE: 1

FILENAME: TOPO0405.DWG 04/15/05

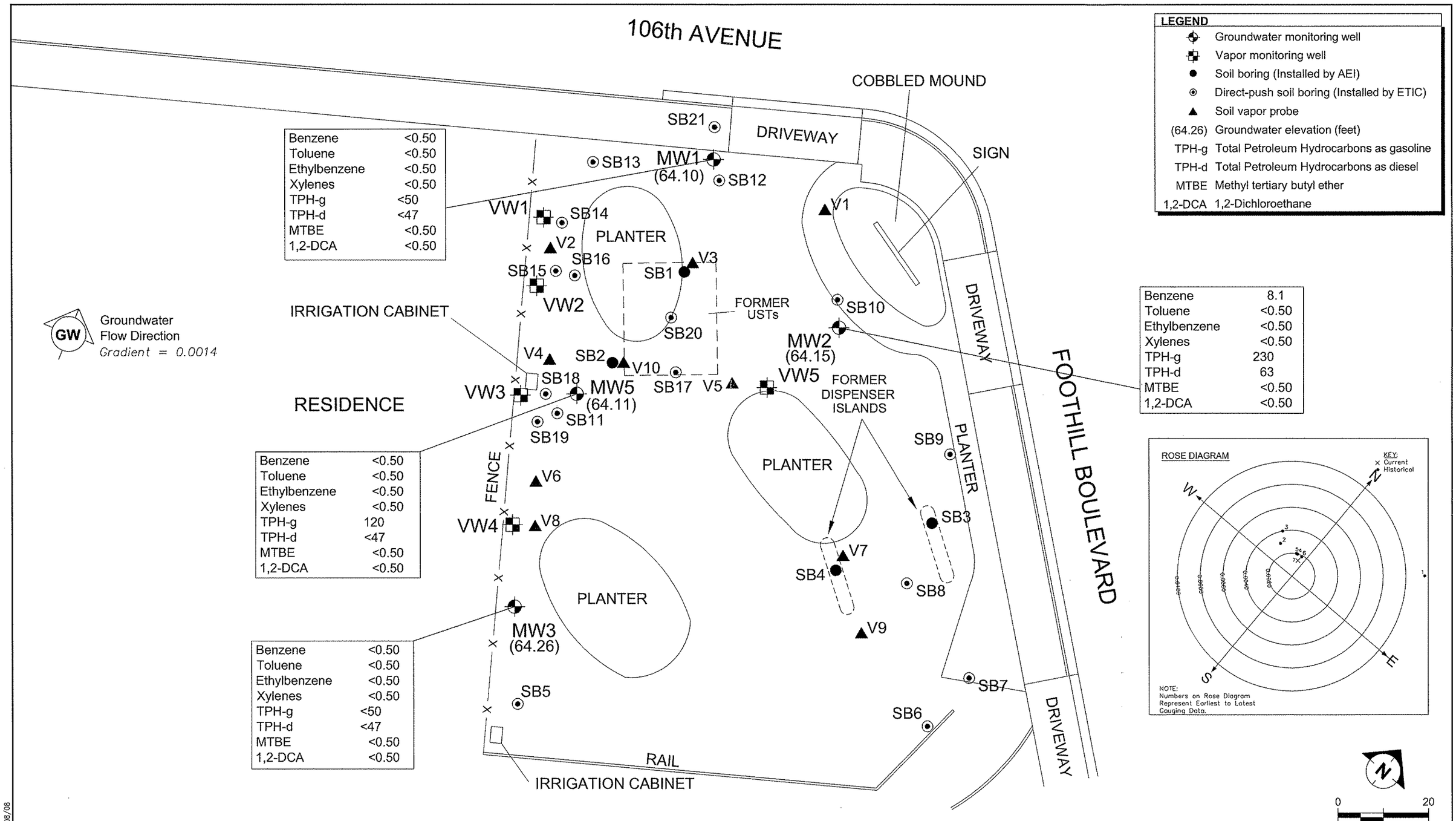


FILENAME: 202007.DWG 06/28/2007

ETIC ENGINEERING

SITE MAP
FORMER EXXON RS 74121
10605 FOOTHILL BOULEVARD,
OAKLAND, CALIFORNIA

FIGURE:
2

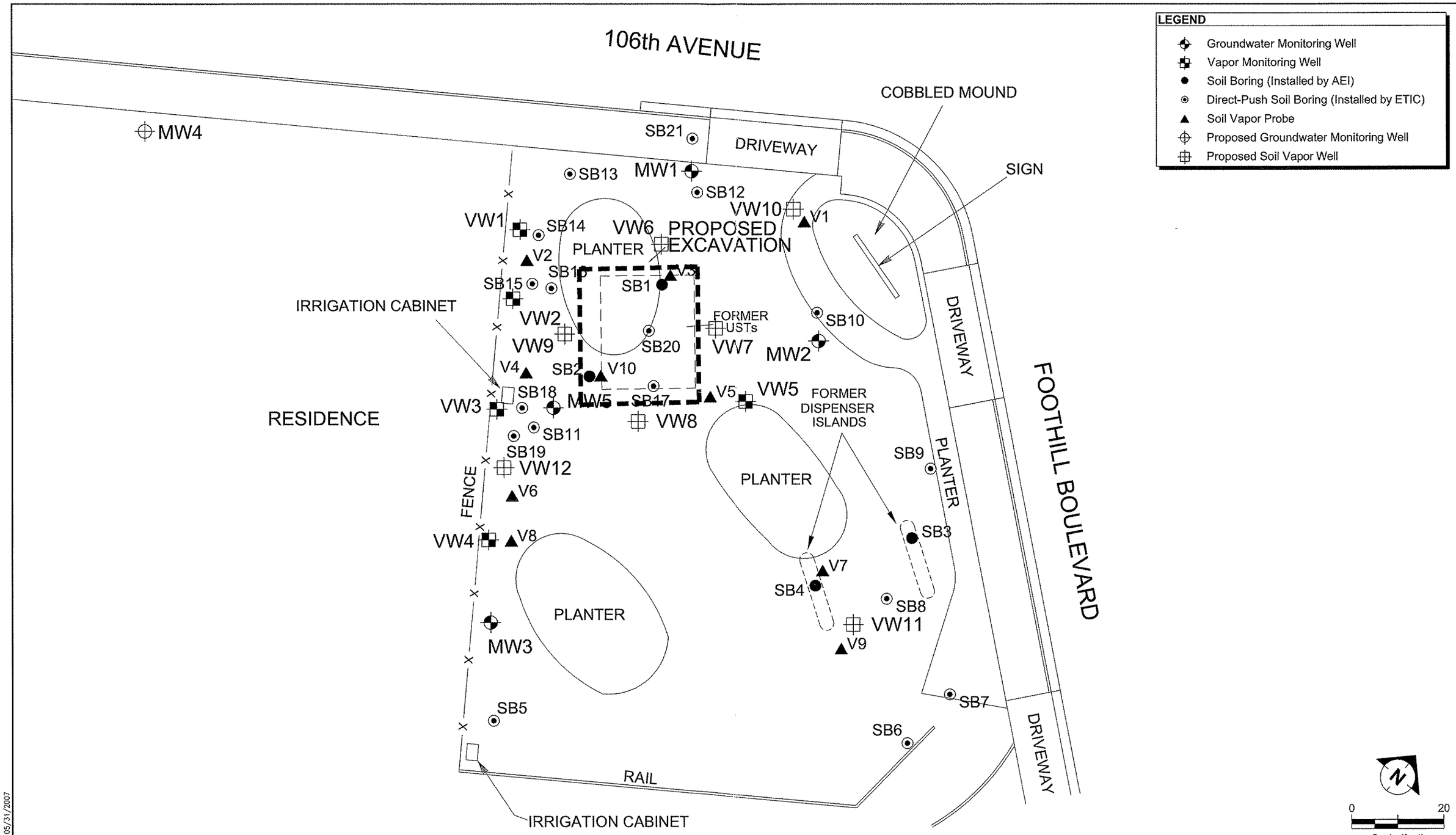


FILENAME: 3Q2008.DWG 10/08/08

ETIC ENGINEERING

SITE MAP SHOWING GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS
FORMER EXXON RS 74121
10605 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA
16 SEPTEMBER 2008

FIGURE:
3

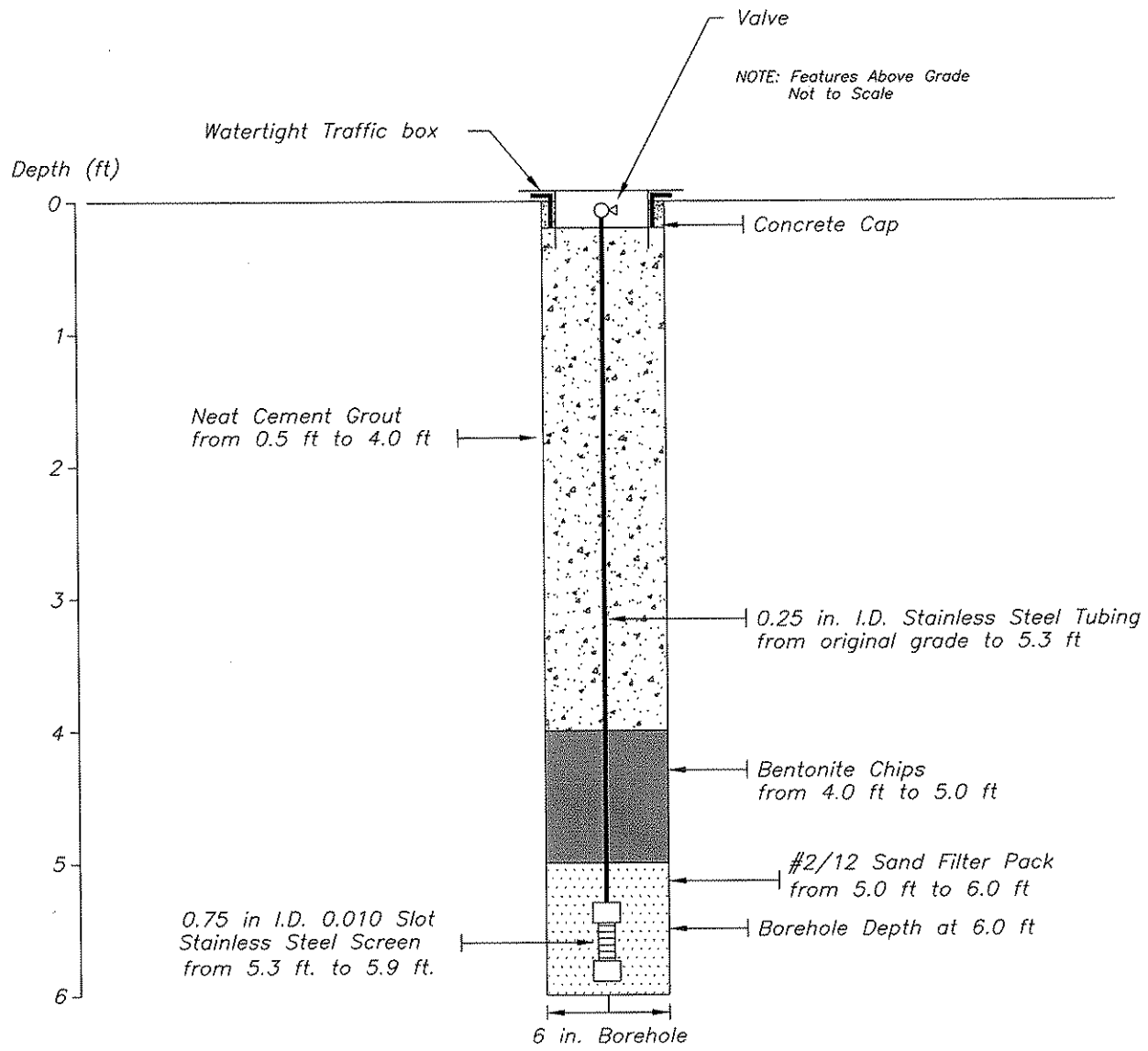


FILENAME: PROP0507.DWG 05/31/2007

ETIC ENGINEERING

SITE MAP SHOWING PROPOSED EXCAVATION AND PROPOSED SOIL VAPOR WELLS
FORMER EXXON RS 74121
10605 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

FIGURE:
4



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WELL COMPLETION DIAGRAM FOR
PROPOSED SOIL VAPOR MONITORING WELLS
FORMER EXXON RS 74121
10605 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

FIGURE: **5**

Tables

TABLE 1 WELL CONSTRUCTION DETAILS, FORMER EXXON RS 74121, 10605 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

Well Number		Well Installation Date	Elevation TOC (feet)	Casing Material	Total Depth (feet)	Well Depth (feet)	Borehole Diameter (inches)	Casing Diameter (inches)	Screened Interval (feet)	Slot Size (inches)	Filter Pack Interval (feet)	Filter Pack Material
MW1	a	01/23/07	82.47	PVC	26.5	25	8	2	10 - 25	0.010	8 - 25	#2/12 Sand
MW2	a	01/23/07	84.40	PVC	26.5	25	8	2	10 - 25	0.010	8 - 25	#2/12 Sand
MW3	a	01/24/07	83.25	PVC	26.5	25	8	2	10 - 25	0.010	8 - 25	#2/12 Sand
MW5	a	01/23/07	82.65	PVC	26.5	25	8	2	10 - 25	0.010	8 - 25	#2/12 Sand
VW1	a	01/22/07	--	SS	6	6	6	0.125	5.25 - 5.75	0.010	5 - 6	#2/12 Sand
VW2	a	01/22/07	--	SS	6	6	6	0.125	5.25 - 5.75	0.010	5 - 6	#2/12 Sand
VW3	a	01/22/07	--	SS	6	6	6	0.125	5.25 - 5.75	0.010	5 - 6	#2/12 Sand
VW4	a	01/22/07	--	SS	6	6	6	0.125	5.25 - 5.75	0.010	5 - 6	#2/12 Sand
VW5	a	01/22/07	--	SS	6	6	6	0.125	5.25 - 5.75	0.010	5 - 6	#2/12 Sand

Notes:

a Well surveyed on 12 March 2007 by Morrow Surveying.

PVC Polyvinyl chloride.
SS Stainless steel.
TOC Top of casing.

TABLE 2 SOIL SAMPLE ANALYTICAL RESULTS BY EPA METHOD 8015B AND 8021B, FORMER EXXON RETAIL SITE 74121, 10605 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

			Concentration (mg/kg)						
Sample ID	Date	Depth (feet)	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	TPH-d	MTBE
SB1	03/19/04	11	0.55	11	0.92	2.6	1,000	590	<2.5
SB2	03/19/04	18	<0.05	0.39	0.40	0.13	65	37	<0.5
SB3	03/19/04	5	<0.005	<0.005	<0.005	<0.005	<1.0	<1.0	<0.05
SB4	03/19/04	5	<0.005	<0.005	<0.005	<0.005	<1.0	2.1	<0.05
SB5	05/26/05	5-5.5	<0.001	<0.005	<0.005	<0.005	<4.98	<10.1	<0.002[a]
SB5	05/26/05	17.5-18	<0.001	<0.005	<0.005	<0.005	<4.97	<9.92	<0.002[a]
SB5	05/26/05	24.5-25	<0.001	<0.005	<0.005	<0.005	<4.99	10.6	<0.002[a]
SB6	05/26/05	5-5.5	<0.001	<0.005	<0.005	<0.005	<5.03	10.2	<0.002[a]
SB6	05/26/05	19.5-20	<0.001	<0.005	<0.005	<0.005	<5.03	<10.1	<0.002[a]
SB6	05/26/05	21.5-22	<0.001	<0.005	<0.005	<0.005	<4.96	<10	<0.002[a]
SB6	05/26/05	24.5-25	<0.001	<0.005	<0.005	<0.005	<4.98	<10	<0.002[a]
SB7	05/26/05	5-5.5	<0.001	<0.005	<0.005	<0.005	<5.02	<10.2	<0.002[a]
SB7	05/26/05	18-18.5	<0.001	<0.005	<0.005	<0.005	<5	<10	<0.002[a]
SB7	05/26/05	22.5-23	<0.001	<0.005	<0.005	<0.005	<4.96	<10	<0.002[a]
SB7	05/26/05	24.5-25	<0.001	<0.005	<0.005	<0.005	<5.02	<10.2	<0.002[a]
SB8	05/26/05	5-5.5	<0.001	<0.005	<0.005	<0.005	<4.97	<9.92	<0.002[a]
SB8	05/26/05	17.5-18	0.0010[b]	<0.005	<0.005	<0.005	<4.96	<9.92	<0.002[a]
SB8	05/26/05	21.5-22	0.0307	<0.005	0.0120	0.0205	11.2	<10	<0.002[a]
SB8	05/26/05	24.5-25	0.0414	0.0153	0.0184	0.0197	10.2	<10	<0.002[a]
SB9	05/27/05	5-5.5	<0.001	<0.005	<0.005	<0.005	<5.02	<9.80	<0.002[a]
SB9	05/27/05	18-18.5	<0.001	<0.005	<0.005	<0.005	<5	<10	<0.002[a]
SB9	05/27/05	19.5-20	<0.001	<0.005	<0.005	<0.005	<4.96	<10	<0.002[a]
SB9	05/27/05	24.5-25	1.58	1.10	0.400	1.72	279	<9.88	<0.002[a]
SB10	05/27/05	5-5.5	<0.001	<0.005	<0.005	<0.005	<5.01	<9.92	<0.002[a]

TABLE 2 SOIL SAMPLE ANALYTICAL RESULTS BY EPA METHOD 8015B AND 8021B, FORMER EXXON RETAIL SITE 74121, 10605 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

			Concentration (mg/kg)						
Sample ID	Date	Depth (feet)	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	TPH-d	MTBE
SB10	05/27/05	17.5-18	<0.001	<0.005	<0.005	<0.005	<5.03	<10	<0.002[a]
SB10	05/27/05	24.5-25	<0.001	<0.005	<0.005	<0.005	<5.01	<10	<0.002[a]
SB11	05/27/05	5-5.5	<0.001	<0.005	<0.005	<0.005	<4.99	<10.2	<0.002[a]
SB11	05/27/05	18.5-19	<0.001	<0.005	<0.005	<0.005	<4.95	<10	<0.002[a]
SB11	05/27/05	24.5-25	0.0082	<0.005	<0.005	0.0053	<4.98	<10	<0.002[a]
SB12	05/27/05	5-5.5	<0.001	<0.005	<0.005	<0.005	<4.97	<10	<0.002[a]
SB12	05/27/05	16.5-17	<0.001	<0.0051	<0.0051	<0.0051	<5.05	<9.88	<0.002[a]
SB12	05/27/05	25.5-26	<0.001	<0.005	<0.005	<0.005	<4.98	<9.96	<0.002[a]
SB13	05/27/05	5-5.5	<0.001	<0.005	<0.005	<0.005	<5.02	<9.92	<0.002[a]
SB13	05/27/05	18.5-19	<0.001	<0.0051	<0.0051	<0.0051	<5.05	<9.92	<0.002[a]
SB13	05/27/05	24.5-25	0.0011	<0.005	<0.005	<0.005	<4.95	<9.92	<0.002[a]
SB14	05/02/06	5-5.5	<0.001	<0.001	<0.001	<0.001	<0.1	3.2	<0.005[a]
SB14	05/02/06	10-10.5	<0.001	<0.001	<0.001	<0.001	<0.1	6.5	<0.005[a]
SB14	05/02/06	15-15.5	<0.001	<0.001	<0.001	<0.001	<0.1	2.1	<0.005[a]
SB14	05/02/06	20-20.5	<0.001	<0.001	<0.001	0.0088	1.300	2.8	<0.005[a]
SB14	05/02/06	24.5-25	<0.001	<0.001	<0.001	<0.001	<0.1	2.2	<0.005[a]
SB15	05/02/06	5-5.5	<0.001	<0.001	<0.001	<0.001	<0.1	3.1	<0.005[a]
SB15	05/02/06	15-15.5	<0.001	<0.001	<0.001	<0.001	<0.1	8.7	<0.005[a]
SB15	05/02/06	20-20.5	<0.001	<0.001	0.0016	<0.001	0.160	2.5	<0.005[a]
SB15	05/02/06	24.5-25	<0.001	<0.001	0.0069	<0.001	0.270	1.3	<0.005[a]
SB16	05/02/06	5-5.5	<0.001	<0.001	<0.001	<0.001	<0.1	14	<0.005[a]
SB16	05/02/06	10-10.5	<0.001	<0.001	<0.001	<0.001	<0.1	5.2	<0.005[a]
SB16	05/02/06	15-15.5	<0.001	<0.001	<0.001	<0.001	<0.1	4.2	<0.005[a]
SB16	05/02/06	20-20.5	0.120	0.052	0.043	0.060	14	9.3	<0.005[a]
SB16	05/02/06	24.5-25	<0.001	<0.001	0.0018	<0.001	<0.1	<1.0	<0.005[a]

TABLE 2 SOIL SAMPLE ANALYTICAL RESULTS BY EPA METHOD 8015B AND 8021B, FORMER EXXON RETAIL SITE 74121, 10605 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

			Concentration (mg/kg)						
Sample ID	Date	Depth (feet)	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	TPH-d	MTBE
SB17	05/02/06	5.5-6	<0.001	<0.001	<0.001	<0.001	<0.1	18	<0.005[a]
SB17	05/02/06	10-10.5	<0.01	0.030	0.310	<0.01	38	260	<0.12[a]
SB17	05/02/06	15-15.5	0.018	0.0028	0.017	0.0040	0.700	3.5	<0.005[a]
SB17	05/02/06	19.5-20	3.2	2.0	8.8	31	320	18	<1.2[a]
SB17	05/02/06	24.5-25	<0.001	<0.001	<0.001	0.0011	<0.1	1.1	<0.005[a]
SB18	05/03/06	5-5.5	<0.001	<0.001	<0.001	<0.001	<0.1	<1.0	<0.005[a]
SB18	05/03/06	10-10.5	<0.001	<0.001	<0.001	<0.001	<0.1	<1.0	<0.005[a]
SB18	05/03/06	15-15.5	<0.001	<0.001	<0.001	<0.001	<0.1	<1.0	<0.005[a]
SB18	05/03/06	19.5-20	<0.10	<0.10	<0.10	<0.10	29	14	<0.005[a]
SB18	05/03/06	24.5-25	<0.001	<0.001	<0.001	<0.001	<0.1	<1.0	<0.005[a]
SB19	05/02/06	5-5.5	<0.001	<0.001	<0.001	<0.001	<0.1	1.4	<0.005[a]
SB19	05/02/06	10-10.5	<0.001	<0.001	<0.001	0.0015	0.230	4.8	<0.005[a]
SB19	05/02/06	15-15.5	<0.001	<0.001	<0.001	<0.001	<0.1	1.2	<0.005[a]
SB19	05/02/06	20-20.5	<0.10	<0.10	<0.10	0.15	19	5.8	<0.005[a]
SB19	05/02/06	24.5-25	<0.001	<0.001	<0.001	<0.001	<0.1	1.7	<0.005[a]
SB20	05/02/06	5.5-6	<0.001	<0.001	<0.001	<0.001	<0.1	14	<0.005[a]
SB20	05/02/06	10-10.5	0.58	0.60	0.80	0.72	76	98	<0.051[a]
SB20	05/02/06	15-15.5	26	39	24	12	1,300	270	<0.12[a]
SB20	05/02/06	19.5-20	20	18	66	280	2,700	250	<2.5[a]
SB20	05/02/06	23.5-24	0.013	0.0047	0.023	0.0082	0.610	7.0	<0.005[a]
SB21	05/02/06	8-8.5	<0.001	<0.001	<0.001	<0.001	<0.1	1.4	<0.005[a]
SB21	05/02/06	13-13.5	<0.001	<0.001	<0.001	<0.001	<0.1	<1.0	<0.005[a]
SB21	05/02/06	18-18.5	<0.001	<0.001	<0.001	<0.001	<0.1	1.7	0.0088[a]
SB21	05/02/06	19.5-20	<0.001	<0.001	<0.001	0.014	<1	2.4	0.012[a]
SB21	05/02/06	23-23.5	<0.001	<0.001	<0.001	<0.001	<0.1	<1.0	<0.005[a]
SB21	05/02/06	24.5-25	<0.001	<0.001	<0.001	<0.001	<0.1	<1.0	<0.005[a]

TABLE 2 SOIL SAMPLE ANALYTICAL RESULTS BY EPA METHOD 8015B AND 8021B, FORMER EXXON RETAIL SITE 74121, 10605 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

Sample ID	Date	Depth (feet)	Concentration (mg/kg) Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	TPH-d	MTBE
V3	05/03/06	9.5-10	<0.001	<0.001	<0.001	<0.001	<0.1	<1.0	<0.005[a]
V4	05/03/06	5-5.5	<0.001	<0.001	<0.001	<0.001	<0.1	<1.0	<0.005[a]
V4	05/03/06	7.5-8	<0.001	<0.001	<0.001	<0.001	<0.1	<1.0	<0.005[a]
V5	05/03/06	5-5.5	<0.001	<0.001	<0.001	<0.001	<0.1	<1.0	<0.005[a]
V5	05/03/06	7.5-8	<0.001	<0.001	<0.001	<0.001	0.240	<1.0	<0.005[a]
V8	05/03/06	5-5.5	<0.001	<0.001	<0.001	<0.001	<0.1	<1.0	<0.005[a]
V8	05/03/06	7.5-8	<0.001	<0.001	<0.001	<0.001	<0.1	1.0	<0.005[a]
VW1	01/22/07	5.5-6	<0.00101	<0.00101	<0.00101	<0.00303	<0.101	<3.96	<0.00200[a]
VW2	01/22/07	5.5-6	<0.000990	<0.000990	<0.000990	<0.00297	<0.0990	<3.91	<0.00200[a]
VW3	01/22/07	5.5-6	<0.00101	<0.00101	<0.00101	<0.00302	<0.101	<3.87	<0.00200[a]
VW4	01/22/07	5.5-6	<0.00101	<0.00101	<0.00101	<0.00303	<0.101	8.73	<0.00200[a]
VW5	01/22/07	5.5-6	<0.000990	<0.000990	<0.000990	<0.00297	<0.0990	<3.86	<0.00200[a]
MW1	01/23/07	6-6.5	<0.000992	<0.000992	<0.000992	<0.00298	<0.0992	<3.95	<0.00200[a]
MW1	01/23/07	8-8.5	<0.000994	<0.000994	<0.000994	<0.00298	<0.0994	<3.91	<0.00200[a]
MW1	01/23/07	10-10.5	<0.00100	<0.00100	<0.00100	<0.00300	<0.100	<3.88	<0.00200[a]
MW1	01/23/07	11.5-12	<0.000994	<0.000994	<0.000994	<0.00298	<0.0994	<3.91	<0.00200[a]
MW1	01/23/07	12-12.5	<0.000996	<0.000996	<0.000996	<0.00299	<0.0996	<3.93	<0.00200[a]
MW1	01/23/07	14-14.5	<0.00101	<0.00101	<0.00101	<0.00302	<0.101	<3.89	<0.00200[a]
MW1	01/23/07	15.5-16	<0.00100	<0.00100	<0.00100	<0.00300	<0.100	<3.96	<0.00200[a]
MW1	01/23/07	16-16.5	<0.000990	0.00121	<0.000990	<0.00297	<0.0990	<3.92	<0.00200[a]
MW1	01/23/07	17.5-18	0.00857	0.00493	0.00126	0.00459	0.720	<3.97	<0.00200[a,c]
MW1	01/23/07	18-18.5	<0.00100	0.00128	<0.00100	<0.00301	<0.100	<3.88	<0.00200[a]

TABLE 2 SOIL SAMPLE ANALYTICAL RESULTS BY EPA METHOD 8015B AND 8021B, FORMER EXXON RETAIL SITE 74121, 10605 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

			Concentration (mg/kg)						
Sample ID	Date	Depth (feet)	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	TPH-d	MTBE
MW1	01/23/07	19.5-20	<0.00101	<0.00101	<0.00101	0.00413	0.454	<3.92	<0.00200[a]
MW1	01/23/07	20-20.5	0.00128	0.00387	0.00220	0.0120	1.38	<3.85	<0.00200[a]
MW1	01/23/07	22-22.5	0.00539	0.00651	0.00471	0.0336	3.92	<3.91	<0.00200[a]
MW2	01/23/07	6-6.5	<0.00100	<0.00100	<0.00100	<0.00301	<0.100	<4.00	<0.00200[a]
MW2	01/23/07	8-8.5	0.00104	0.00112	<0.00101	<0.00302	<0.101	<3.87	<0.00200[a]
MW2	01/23/07	10-10.5	<0.00101	0.00110	<0.00101	<0.00302	<0.101	<3.93	<0.00200[a]
MW2	01/23/07	12-12.5	<0.00101	<0.00101	<0.00101	<0.00303	<0.101	<3.84	<0.00200[a]
MW2	01/23/07	14-14.5	<0.000990	<0.000990	<0.000990	<0.00297	<0.0990	<3.94	<0.00200[a]
MW2	01/23/07	15.5-16	<0.000994	<0.000994	<0.000994	<0.00298	<0.0994	<3.86	<0.00200[a]
MW2	01/23/07	16-16.5	0.00133	<0.00101	<0.00101	<0.00303	<0.101	<3.97	<0.00200[a]
MW2	01/23/07	18-18.5	0.00492	<0.000992	<0.000992	<0.00298	0.508	<3.91	<0.00200[a]
MW2	01/23/07	19.5-20	<0.000992	<0.000992	<0.000992	<0.00298	<0.0992	<3.74	<0.00200[a]
MW2	01/23/07	20-20.5	0.00633	<0.00101	0.00128	<0.00303	0.672	<3.83	<0.00200[a]
MW2	01/23/07	21.5-22	0.00369	<0.00100	0.00235	0.0105	2.85	<3.86	<0.00200[a]
MW2	01/23/07	22-22.5	0.00643	<0.000996	0.00299	0.0138	3.32	<3.81	<0.00200[a]
MW2	01/23/07	23.5-24	0.00185	<0.00101	<0.00101	<0.00302	0.591	<3.76	<0.00200[a]
MW2	01/23/07	24-24.5	0.00136	0.00678	0.0141	0.0891	18.7	<3.73	<0.00200[a]
MW2	01/23/07	26-26.5	4.40	2.12	2.29	3.79	964	10.6	<0.00200[a]
MW3	01/24/07	6-6.5	<0.00101	<0.00101	<0.00101	<0.00302	<0.101	<3.82	<0.00200[a]
MW3	01/24/07	8-8.5	<0.000992	<0.000992	<0.000992	<0.00298	<0.0992	<3.79	<0.00200[a]
MW3	01/24/07	10-10.5	0.00231	0.00114	<0.00101	<0.00302	0.141	<3.70	<0.00200[a]
MW3	01/24/07	12-12.5	0.00102	<0.00101	<0.00101	<0.00302	<0.101	<3.99	<0.00200[a]
MW3	01/24/07	14-14.5	0.00484	0.00206	<0.00101	<0.00301	0.363	<3.80	<0.00200[a]
MW3	01/24/07	16-16.5	<0.00101	<0.00101	<0.00101	<0.00303	<0.101	<3.95	<0.00200[a]
MW3	01/24/07	18-18.5	0.00917	0.00404	0.00151	<0.00301	0.794	<3.71	<0.00200[a]
MW3	01/24/07	20-20.5	<0.00101	<0.00101	<0.00101	<0.00303	<0.101	<3.96	<0.00200[a]
MW3	01/24/07	22-22.5	0.00174	<0.000990	<0.000990	<0.00297	<0.0990	<3.71	<0.00200[a]
MW3	01/24/07	24-24.5	<0.000996	<0.000996	<0.000996	<0.00299	<0.0996	<3.76	<0.00200[a]

TABLE 2 SOIL SAMPLE ANALYTICAL RESULTS BY EPA METHOD 8015B AND 8021B, FORMER EXXON RETAIL SITE 74121, 10605 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

			Concentration (mg/kg)						
Sample ID	Date	Depth (feet)	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	TPH-d	MTBE
MW3	01/24/07	26-26.5	<0.000992	<0.000992	<0.000992	<0.00298	<0.0992	<3.89	<0.00200[a]
MW5	01/23/07	6-6.5	<0.00100	<0.00100	<0.00100	<0.00301	<0.100	<3.79	<0.00200[a]
MW5	01/23/07	8-8.5	<0.00100	<0.00100	<0.00100	<0.00301	<0.100	<3.76	<0.00200[a]
MW5	01/23/07	10-10.5	0.00265	<0.000996	<0.000996	<0.00299	0.274	<3.94	<0.00200[a]
MW5	01/23/07	12-12.5	<0.000998	<0.000998	<0.000998	<0.00299	<0.0998	<3.82	<0.00200[a]
MW5	01/23/07	14-14.5	<0.00100	<0.00100	<0.00100	<0.00301	<0.100	<3.92	<0.00200[a]
MW5	01/23/07	16-16.5	<0.00100	<0.00100	<0.00100	<0.00301	<0.100	<3.98	<0.00200[a]
MW5	01/23/07	18-18.5	0.00189	<0.000994	<0.000994	<0.00298	0.385	<3.90	<0.00200[a]
MW5	01/23/07	19.5-20	0.0102	0.00149	0.00211	0.0125	2.01	<3.83	<0.00200[a]
MW5	01/23/07	20-20.5	0.0138	<0.000994	0.00279	0.0104	2.66	<3.98	<0.00200[a]
MW5	01/23/07	22-22.5	0.00111	<0.00100	<0.00100	<0.00301	0.603	<3.80	<0.00200[a]
MW5	01/23/07	24-24.5	0.00666	<0.000996	<0.000996	<0.00299	0.138	<3.81	<0.00200[a]
MW5	01/23/07	26-26.5	0.00288	<0.000992	<0.000992	<0.00298	<0.0992	<3.74	<0.00200[a]

Notes: TPH-g and TPH-d analyses performed by EPA Method 8015B unless otherwise specified.
BTEX and MTBE analyses perfoermed by EPA Method 8021B unless otherwise specified.

a Methyl tertiary butyl ether by 8260B.
b Estimated value below reporting limit.
c Secondary ion abundances were outside method requirements. Identification based on analytical judgment.

BTEX Bezene, toluene, ethylbenzene, and xylenes.
MTBE Methyl tertiary butyl ether.
mg/kg Milligrams per kilogram.
TPH-d Total Petroleum Hydrocarbons as diesel.
TPH-g Total Petroleum Hydrocarbons as gasoline.

TABLE 3 SOIL SAMPLE ANALYTICAL RESULTS BY EPA METHOD 8260B, FORMER EXXON RETAIL SITE 74121,
10605 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

Sample ID	Date	Depth (feet)	Concentration (mg/kg)										
			Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	DIPE	ETBE	1,2-DCA	TAME	1,2-EDB
SB1	03/19/04	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB2	03/19/04	18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB3	03/19/04	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB4	03/19/04	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB5	05/26/05	5-5.5	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB5	05/26/05	17.5-18	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB5	05/26/05	24.5-25	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB6	05/26/05	5-5.5	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB6	05/26/05	19.5-20	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB6	05/26/05	21.5-22	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB6	05/26/05	24.5-25	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB7	05/26/05	5-5.5	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB7	05/26/05	18-18.5	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB7	05/26/05	22.5-23	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB7	05/26/05	24.5-25	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB8	05/26/05	5-5.5	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB8	05/26/05	17.5-18	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB8	05/26/05	21.5-22	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB8	05/26/05	24.5-25	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB9	05/27/05	5-5.5	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB9	05/27/05	18-18.5	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB9	05/27/05	19.5-20	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB9	05/27/05	24.5-25	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB10	05/27/05	5-5.5	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB10	05/27/05	17.5-18	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB10	05/27/05	24.5-25	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB11	05/27/05	5-5.5	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA

TABLE 3 SOIL SAMPLE ANALYTICAL RESULTS BY EPA METHOD 8260B, FORMER EXXON RETAIL SITE 74121,
10605 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

Sample ID	Date	Depth (feet)	Concentration (mg/kg)										
			Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	DIPE	ETBE	1,2-DCA	TAME	1,2-EDB
SB11	05/27/05	18.5-19	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB11	05/27/05	24.5-25	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB12	05/27/05	5-5.5	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB12	05/27/05	16.5-17	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB12	05/27/05	25.5-26	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB13	05/27/05	5-5.5	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB13	05/27/05	18.5-19	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB13	05/27/05	24.5-25	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	NA
SB14	05/02/06	5-5.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB14	05/02/06	10-10.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB14	05/02/06	15-15.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB14	05/02/06	20-20.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB14	05/02/06	24.5-25	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB15	05/02/06	5-5.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB15	05/02/06	15-15.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB15	05/02/06	20-20.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB15	05/02/06	24.5-25	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB16	05/02/06	5-5.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB16	05/02/06	10-10.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB16	05/02/06	15-15.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB16	05/02/06	20-20.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB16	05/02/06	24.5-25	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB17	05/02/06	5.5-6	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB17	05/02/06	10-10.5	NA	NA	NA	NA	<0.12	<25	<0.12	<0.12	<0.12	<0.12	<0.12
SB17	05/02/06	15-15.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB17	05/02/06	19.5-20	NA	NA	NA	NA	<1.2	<250	<1.2	<1.2	<1.2	<1.2	<1.2
SB17	05/02/06	24.5-25	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB18	05/03/06	5-5.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB18	05/03/06	10-10.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB18	05/03/06	15-15.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

TABLE 3 SOIL SAMPLE ANALYTICAL RESULTS BY EPA METHOD 8260B, FORMER EXXON RETAIL SITE 74121,
10605 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

Sample ID	Date	Depth (feet)	Concentration (mg/kg)										
			Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	DIPE	ETBE	1,2-DCA	TAME	1,2-EDB
SB18	05/03/06	19.5-20	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB18	05/03/06	24.5-25	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB19	05/02/06	5-5.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB19	05/02/06	10-10.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB19	05/02/06	15-15.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB19	05/02/06	20-20.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB19	05/02/06	24.5-25	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB20	05/02/06	5.5-6	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB20	05/02/06	10-10.5	NA	NA	NA	NA	<0.051	<0.200	<0.051	<0.051	<0.051	<0.051	<0.051
SB20	05/02/06	15-15.5	NA	NA	NA	NA	<0.12	<25	<0.12	<0.12	<0.12	<0.12	<0.12
SB20	05/02/06	19.5-20	NA	NA	NA	NA	<2.5	<500	<2.5	<2.5	<2.5	<2.5	<2.5
SB20	05/02/06	23.5-24	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB21	05/02/06	8-8.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB21	05/02/06	13-13.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB21	05/02/06	18-18.5	NA	NA	NA	NA	0.0088	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB21	05/02/06	19.5-20	NA	NA	NA	NA	0.012	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB21	05/02/06	23-23.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB21	05/02/06	24.5-25	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
V3	05/03/06	9.5-10	NA	NA	NA	<0.001	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
V4	05/03/06	5-5.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
V4	05/03/06	7.5-8	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
V5	05/03/06	5-5.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
V5	05/03/06	7.5-8	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
V8	05/03/06	5-5.5	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
V8	05/03/06	7.5-8	NA	NA	NA	NA	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
VW1	01/22/07	5.5-6	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
VW2	01/22/07	5.5-6	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200

TABLE 3 SOIL SAMPLE ANALYTICAL RESULTS BY EPA METHOD 8260B, FORMER EXXON RETAIL SITE 74121,
10605 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

Sample ID	Date	Depth (feet)	Concentration (mg/kg)										
			Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	DIPE	ETBE	1,2-DCA	TAME	1,2-EDB
VW3	01/22/07	5.5-6	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
VW4	01/22/07	5.5-6	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
VW5	01/22/07	5.5-6	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	6-6.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	8-8.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	10-10.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	11.5-12	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	12-12.5	<0.00200	0.00211	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	14-14.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	15.5-16	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	16-16.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	17.5-18	<0.00200	0.00221	<0.00200	<0.00500	<0.00200a	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	18-18.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	19.5-20	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	20-20.5	<0.00200	0.00403	0.00202	0.00546	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	22-22.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	6-6.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	8-8.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	10-10.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	12-12.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	14-14.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	15.5-16	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	16-16.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	18-18.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	19.5-20	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	20-20.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	21.5-22	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	22-22.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	23.5-24	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	24-24.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	26-26.5	<0.00200	0.00944	<0.00200	0.0268	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW3	01/24/07	6-6.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200

TABLE 3 SOIL SAMPLE ANALYTICAL RESULTS BY EPA METHOD 8260B, FORMER EXXON RETAIL SITE 74121,
10605 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

Sample ID	Date	Depth (feet)	Concentration (mg/kg) Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	DIPE	ETBE	1,2-DCA	TAME	1,2-EDB
MW3	01/24/07	8-8.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW3	01/24/07	10-10.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW3	01/24/07	12-12.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW3	01/24/07	14-14.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW3	01/24/07	16-16.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW3	01/24/07	18-18.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW3	01/24/07	20-20.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW3	01/24/07	22-22.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW3	01/24/07	24-24.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW3	01/24/07	26-26.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	6-6.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	8-8.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	10-10.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	12-12.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	14-14.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	16-16.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	18-18.5	<0.00200	0.00229	0.00217	0.00878	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	19.5-20	<0.00200	<0.00200	<0.00200	0.00562	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	20-20.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	22-22.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	24-24.5	0.00517	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	26-26.5	<0.00200	<0.00200	<0.00200	<0.00500	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200

Notes:

a Secondary ion abundances were outside method requirements. Identification based on analytical judgment.

1,2-DCA 1,2-Dichloroethane.
1,2-EDB 1,2-Dibromoethane.
DIPE Diisopropyl ether.
ETBE Ethyl tertiary butyl ether.
mg/kg Milligrams per kilogram.
MTBE Methyl tertiary butyl ether.
NA Not analyzed.
TAME Tertiary amyl methyl ether.
TBA Tertiary butyl alcohol.

TABLE 4 GROUNDWATER SAMPLE ANALYTICAL RESULTS FOR TEMPORARY BORINGS, FORMER EXXON RETAIL SITE 74121, 10605 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

Boring ID	Date	Depth to Water	Concentration (µg/L)							
			Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH-g	TPH-d	MTBE	VOCs
SB1	03/19/04	13.3-16	250	22	310	71	3,200	4,200	<17[a]	NA
SB2	03/19/04	14-22	17	24	68	21	7,000	26,000	<17[a]	NA
SB5	05/26/05	20[b]	<0.5	<0.5	<0.5	<0.5	<50	341	<0.5	NA
SB6	05/26/05	22[b]	<0.5	<0.5	<0.5	<0.5	<50	<56	<0.5	NA
SB7	05/26/05	19[b]	<0.5	<0.5	<0.5	<0.5	<50	57	<0.5	NA
SB8	05/26/05	18[b]	75.7	0.5	4.7	4.7	824	801	<0.5	NA
SB9	05/27/05	20[b]	<0.5	<0.5	<0.5	<0.5	<50	<50	<0.5	NA
SB10	05/27/05	20[b]	<0.5	<0.5	<0.5	0.7	54.5	<50	<0.5	NA
SB11	05/27/05	20[b]	<0.5	<0.5	1.9	0.5	2,250	701	<0.5	NA
SB12	05/27/05	20[b]	<0.5	0.5	1.0	<0.5	1,060	305	4.30	NA
SB13	05/27/05	20[b]	<0.5	<0.5	0.6	<0.5	447	121	14.2	NA
SB14	05/02/06	20[b]	1.89	<0.500	102	5.56	2,340	820[c]	<0.500	ND
SB15	05/02/06	20[b]	18.4	<0.500	42.6	4.16	831	440[c]	<0.500	ND
SB16	05/02/06	20[b]	30.3	0.820	410	11.3	5,940	1,700[c]	<0.500	ND
SB17	05/02/06	20[b]	2,140	1,400	4,690	11,100	60,800	7,500[c]	<25.0	ND

TABLE 4 GROUNDWATER SAMPLE ANALYTICAL RESULTS FOR TEMPORARY BORINGS, FORMER EXXON RETAIL SITE 74121, 10605 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

Boring ID	Date	Depth to Water	Concentration (µg/L)							
			Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH-g	TPH-d	MTBE	VOCs
SB18	05/03/06	20[b]	<25.0	<25.0	159	<25.0	10,100	1,700[c]	<25.0	ND
SB19	05/02/06	20[b]	4.19	<0.500	5.78	6.29	3,100	720[c]	<0.500	ND
SB20	05/02/06	20[b]	3,240	53.2	3,670	4,170	41,800	4,300[c]	<0.500	ND
SB21	05/02/06	22[b]	<0.500	<0.500	<0.500	<0.500	1,390	440[c]	83.3	ND

Notes: TPH-g and TPH-d analyses performed by EPA Method 8015B unless otherwise specified.
BTEX and MTBE analyses performed by EPA Method 8260 unless otherwise specified.
VOCs analyses were performed by EPA Method 8260B unless otherwise specified.
VOCs of concern are tertiary amyl methyl ether, 1,2-dibromoethane, 1,2-dichloroethane, ethyl tertiary butyl ether, diisopropyl ether, and tertiary butyl alcohol.

a Methyl tertiary butyl ether by EPA Method 8021B.
b Depth of grab groundwater sample.
c Hydrocarbon pattern is present within the requested fuel quantitation range but does not resemble the pattern of the requested fuel.

BTEX Benzene, toluene, ethylbenzene, and xylenes.
MTBE Methyl tertiary butyl ether.
NA Not analyzed.
ND Not detected at or above laboratory reporting limits.
TPH-d Total Petroleum Hydrocarbons as diesel.
TPH-g Total Petroleum Hydrocarbons as gasoline.
VOCs Volatile organic compounds.

µg/L Micrograms per liter.

TABLE 5 GROUNDWATER MONITORING DATA, FORMER EXXON RETAIL SITE 74121, 10605 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	LPH Thickness (feet)	Concentration (µg/L)												
						Benzene	Toluene	Ethyl-benzene	Xylenes	TPH-g	TPH-d	MTBE	TBA	DIPE	ETBE	1,2-DCA	TAME	EDB
MW1	03/08/07	82.47	15.10	67.37	0.00	<1.00	1.21	<1.00	<3.00	440	119	1.91	<10.0	<0.500	<0.500	<0.500	0.560	<0.500
MW1	06/08/07	82.47	16.47	66.00	0.00	<0.50	<0.50	<0.50	<0.50	127	<47.6	0.880	<10.0[a,b]	<0.500	<0.500	<0.500	<0.500	<0.500
MW1	09/06/07	82.47	17.47	65.00	0.00	<0.50	<0.50	<0.50	<0.50	78.0	<47.2	0.590	<10.0[a,b]	<0.500	<0.500	<0.500	<0.500	<0.500
MW1	12/03/07	82.47	18.10	64.37	0.00	<0.50	<0.50	<0.50	<0.50	<50	<47	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW1	03/19/08	82.47	16.20	66.27	0.00	<0.50	<0.50	<0.50	<0.50	51.3	61[e]	3.08	<10.0	<0.500	<0.500	<0.500	0.930	<0.500
MW1	06/11/08	82.47	17.24	65.23	0.00	<0.50	<0.50	<0.50	<0.50	<50	<47	0.99	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW1	09/16/08	82.47	18.37	64.10	0.00	<0.50	<0.50	<0.50	<0.50	<50	<47	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	03/08/07	84.40	16.97	67.43	0.00	1.33	3.52	2.41	<3.00	1,620	550	<0.500	<10.0	<0.500	<0.500	<0.500	<0.500	<0.500
MW2	06/08/07	84.40	18.34	66.06	0.00	21.8	2.45	0.66	<0.50	2,120	395	<0.500	10.0[c]	<0.500	<0.500	<0.500	<0.500	<0.500
MW2	09/06/07	84.40	19.33	65.07	0.00	4.66	0.70	<0.50	1.25	470	208	<0.500	<10.0[a,c]	<0.500	<0.500	<0.500	<0.500	<0.500
MW2	12/03/07	84.40	19.97	64.43	0.00	22[d]	<0.50	<0.50	<0.50	560	120[e]	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	03/19/08	84.40	18.07	66.33	0.00	5.33	<0.50	<0.50	0.82	630	200[e]	<0.500	<10.0	<0.500	<0.500	<0.500	<0.500	<0.500
MW2	06/11/08	84.40	19.13	65.27	0.00	<0.50	<0.50	<0.50	<0.50	430	110[e]	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	09/16/08	84.40	20.25	64.15	0.00	8.1[d]	<0.50	<0.50	<0.50	230	63[e]	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW3	03/08/07	83.25	15.49	67.76	0.00	<1.00	<1.00	<1.00	<3.00	<100	52.9	<0.500	<10.0	<0.500	<0.500	<0.500	<0.500	<0.500
MW3	06/08/07	83.25	17.02	66.23	0.00	<0.50	<0.50	<0.50	<0.50	<50.0	<47.6	<0.500	<10.0[a,b]	<0.500	<0.500	<0.500	<0.500	<0.500
MW3	09/06/07	83.25	18.07	65.18	0.00	<0.50	<0.50	<0.50	<0.50	<50.0	<47.2	<0.500	<10.0[a,b]	<0.500	<0.500	<0.500	<0.500	<0.500
MW3	12/03/07	83.25	18.69	64.56	0.00	<0.50	<0.50	<0.50	<0.50	<50	<47	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW3	03/19/08	83.25	16.79	66.46	0.00	<0.50	<0.50	<0.50	<0.50	<50.0	<47	<0.500	<10.0	<0.500	<0.500	<0.500	<0.500	<0.500
MW3	06/11/08	83.25	17.82	65.43	0.00	<0.50	<0.50	<0.50	<0.50	<50	<47	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW3	09/16/08	83.25	18.99	64.26	0.00	<0.50	<0.50	<0.50	<0.50	<50	<47	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW5	03/08/07	82.65	14.31	68.34	0.00	<1.00	<1.00	<1.00	<3.00	187	59.2	<0.500	<10.0	<0.500	<0.500	<0.500	<0.500	<0.500
MW5	06/08/07	82.65	16.64	66.01	0.00	4.38	0.72	<0.50	<0.50	780	90.3	<0.500	<10.0[a,b]	<0.500	<0.500	<0.500	<0.500	<0.500
MW5	09/06/07	82.65	17.62	65.03	0.00	<0.50	<0.50	<0.50	<0.50	<50.0	121	<0.500	<10.0[a,b]	<0.500	<0.500	<0.500	<0.500	<0.500
MW5	12/03/07	82.65	18.27	64.38	0.00	<0.50	<0.50	<0.50	<0.50	100	65[e]	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW5	03/19/08	82.65	16.37	66.28	0.00	0.69	<0.50	<0.50	0.87	237	110[e]	<0.500	<10.0	<0.500	<0.500	<0.500	<0.500	<0.500
MW5	06/11/08	82.65	17.40	65.25	0.00	<0.50	<0.50	<0.50	0.65	83	77[e]	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW5	09/16/08	82.65	18.54	64.11	0.00	<0.50	<0.50	<0.50	<0.50	120	<47	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50

Notes: TPH-g and TPH-d analyzed by EPA Method 8015B unless otherwise specified.
MTBE analyzed by EPA Method 8260B unless otherwise indicated.

a Calibration verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
b Laboratory control sample and/or laboratory control sample duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.
c Initial analysis within holding time. Reanalysis for the required dilution or confirmation was past holding time.
d The relative percent difference between the primary and confirmatory analysis exceeded 40%. Per EPA Method 8000B, the higher value was reported.
e Does not match typical pattern.

1,2-DCA 1,2-Dichloroethane.
DIPE Diisopropyl ether.
EDB 1,2-Dibromoethane.
ETBE Ethyl tertiary butyl ether.
MTBE Methyl tertiary butyl ether.
TAME Tertiary amyl methyl ether.
TBA Tertiary butyl alcohol.
TPH-d Total Petroleum Hydrocarbons as diesel.

TABLE 5 GROUNDWATER MONITORING DATA, FORMER EXXON RETAIL SITE 74121, 10605 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	LPH Thickness (feet)	Concentration (µg/L)												
						Benzene	Toluene	Ethyl-benzene	Xylenes	TPH-g	TPH-d	MTBE	TBA	DIPE	ETBE	1,2-DCA	TAME	EDB

TPH-g Total Petroleum Hydrocarbons as gasoline.

µg/L Micrograms per liter.

TABLE 6 PHYSICAL PROPERTIES ANALYTICAL RESULTS FOR SOIL SAMPLES,
FORMER EXXON RETAIL SITE 74121, 10605 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

Boring ID	Sample Date	Sample Depth (feet bgs)	Moisture Content (%)	Porosity (pore volume %)	Specific Gravity (gm/cc)
SB14	04/26/06	2.5	23.91	38.57	2.63
SB15	04/27/06	2.5	22.08	42.04	2.63
SB16	04/27/06	2.5	20.18	46.82	2.57
SB17	04/26/06	2.5	20.32	39.20	2.56
SB18	04/26/06	3.0	23.88	43.45	2.61
SB19	04/26/06	2.5	23.54	41.35	2.58
SB20	04/26/06	2.5	21.83	43.04	2.54
SB21	05/02/06	2.5	20.89	38.81	2.65
VW1	01/22/07	5.5	23.4	35	NA
VW2	01/22/07	5.5	17.4	37	NA
VW3	01/22/07	5.5	21.6	38	NA
VW4	01/22/07	5.5	21.7	49	NA
VW5	01/22/07	5.5	24.3	43	NA

feet bgs Feet below ground surface.
gm/cc Grams per cubic centimeter.
% Percent.
NA Not analyzed.

TABLE 7 SOIL VAPOR SAMPLE ANALYTICAL RESULTS, FORMER EXXON RETAIL SITE 74121, 10605 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

Boring ID	Depth (feet bgs)	Date	Oxygen (% by Volume)	Concentration (µg/m^3) Benzene	Toluene	Ethyl-benzene	m,p-Xylene	o-Xylene	TPH-g	MTBE	1,1-DFA	TBA	DIPE	ETBE	1,2-DCA	TAME	1,2-EDB
V1	5.5	05/01/06	9.4	200	<100	<100	<100	<100	790,000	<100	<10,000	--	--	--	--	--	--
V2[a]	--	05/01/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
V3	5.5	05/01/06	19	120	160	140	<100	<100	110,000	<100	<10,000	--	--	--	--	--	--
V3[a]	10	05/01/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
V4[a]	--	05/01/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
V5[a]	--	05/01/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
V6	7.0	05/01/06	9.1	170	<100	540	410	<100	880,000	<100	<10,000	--	--	--	--	--	--
V7	7.5	05/01/06	21	84	140	<100	110	<100	2,200	<100	<10,000	--	--	--	--	--	--
V7 dup	7.5	05/01/06	20	<80	110	<100	<100	<100	2,400	<100	<10,000	--	--	--	--	--	--
V8[a]	--	05/01/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
V9	7.5	05/01/06	19	<80	<100	<100	<100	<100	360,000	<100	<10,000	--	--	--	--	--	--
V10	8.0	05/01/06	11	1,100	130	340	180	<100	6,600,000	<100	<10,000	--	--	--	--	--	--
V10	10.0	05/01/06	9.0	1,900	<100	<100	<100	<100	17,000,000	<100	<10,000	--	--	--	--	--	--
VW1[b]	5 - 6	4/27/07	11.1	<2.4	12	<3.2	10	4.8	<20,000	<11	<8.1	<9.0	<12	<12	<3.0	<19	<5.7
VW2[c]	--	4/27/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VW3[c]	--	4/27/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VW4[c]	--	4/27/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VW5[b]	5 - 6	4/27/07	3.49	4.4	11	4.4	12	4.8	<23,000	<12	<8.9	<9.9	<14	<14	<3.3	<21	<6.3

Note: Soil vapor samples in soil borings V1 through V10 were collected after purging 7 casing volumes or approximately 70 cc of vapor from the tubing (10 cc per 12 feet of tubing).

a Soil vapor could not be extracted at depths between 4 and 10 feet bgs from this boring.
b Soil vapor samples were collected without purging (grab samples).
c Soil vapor samples were not collected due to the presence of water.

feet bgs Feet below ground surface.

TABLE 7 SOIL VAPOR SAMPLE ANALYTICAL RESULTS, FORMER EXXON RETAIL SITE 74121, 10605 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

Boring ID	Depth (feet bgs)	Date	Oxygen (% by Volume)	Concentration (µg/m^3) Benzene	Toluene	Ethyl-benzene	m,p-Xylene	o-Xylene	TPH-g	MTBE	1,1-DFA	TBA	DIPE	ETBE	1,2-DCA	TAME	1,2-EDB

1,1-DFA 1,1-Difluoroethane.
1,2-DCA 1,2-Dichloroethane.
1,2-EDB 1,2-Dibromoethane.
DIPE Diisopropyl ether.
ETBE Ethyl tertiary butyl ether.
MTBE Methyl tertiary butyl ether.
TAME Tertiary amyl methyl ether.
TBA Tertiary butyl alcohol.
TPH-g Total Petroleum Hydrocarbons as gasoline reported as C6-C12.

dup Duplicate.

-- Not analyzed.
µg/m^3 micrograms per cubic meter.

Appendix A

Regulatory Correspondence

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

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

June 23, 2008

Ms. Jennifer Sedlachek
Exxon Mobil
4096 Piedmont, #194
Oakland, CA 94611

Mr. John Jay
C/o Jay Phares Corporation
10700 MacArthur Boulevard, Suite #200
Oakland, CA 94605

Subject: Fuel Leak Case No. RO0002635 and Geotracker Global ID T0600120383, Exxon #7-4121, 10605 Foothill Boulevard, Oakland, CA 94605

Dear Ms. Sedlacheck and Mr. Jay:

I am the caseworker recently assigned to the above-referenced fuel leak case. Please send future correspondence for this site to my attention. Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site, including the document entitled, "*Well Installation and Additional Risk Assessment Report*," dated May 30, 2007. The "*Well Installation and Additional Risk Assessment Report*," presents subsurface investigation results, a human health risk assessment, and a corrective action plan.

Five soil vapor probes were installed at the site in January 2007. Two of the five soil vapor probes were sampled but three of the soil vapor probes could not be sampled due to water in the probes. In addition, the two probes that were sampled were not purged prior to sampling. As discussed in the technical comments below, additional soil vapor sampling is required in order to assess potential vapor intrusion for the site and off-site. Since the potential vapor intrusion pathway has not been adequately evaluated, we cannot comment on the adequacy of the proposed excavation. Therefore, we request that you conduct the soil vapor sampling discussed in the technical comments below prior to completion of a Corrective Action Plan.

We request that you address the technical comments below, perform the proposed work, and submit the work plan requested below.

TECHNICAL COMMENTS

1. **Proposed Excavation.** Excavation of the former tank pit area to a depth of approximately 20 feet bgs is proposed in the "*Well Installation and Additional Risk Assessment Report*," dated May 30, 2007. Although we do not necessarily object to the proposal to excavate soil in the source area, we request that you further evaluate potential vapor intrusion concerns to assess whether the scope of the proposed excavation is adequate to address site risks as discussed in technical comments 2 and 3.

2. **Tier 1 Screening of Potential Health Risks.** The *"Well Installation and Additional Risk Assessment Report,"* includes a Tier 1 screening of potential human health risks. In the Tier 1 screening, soil vapor data from two soil vapor probes sampled in January 2007 are compared to Environmental Screening Levels ([ESLs] San Francisco Bay Regional Water Quality Control Board November 2007). Concentrations of VOCs in the two soil vapor samples were less than both commercial and residential ESLs for the vapor intrusion pathway. However, the Tier 1 screening did not include results from soil vapor sampling conducted in May 2006. During May 2006, soil vapor samples were collected from six soil vapor probes. The concentration of benzene in soil vapor exceeded the residential ESL (84 $\mu g/m^3$) in four of the six temporary borings and exceeded the commercial ESL in one of the six borings. Further evaluation of the elevated concentrations of benzene detected in the May 2006 soil vapor samples is required. Therefore, we request that you propose additional soil vapor sampling to evaluate potential vapor intrusion on site for future site occupants, particularly in the tank pit area outside the area of proposed excavation to help assess whether the proposed excavation will be effective in mitigating potential vapor intrusion concerns. Please include plans for soil vapor sampling in the Work Plan requested below.

3. **Soil Vapor Sampling Results.** Soil vapor samples were collected from two of the five soil vapor probes installed at the site in January 2007. Soil vapor samples could not be collected from three of the five soil vapor probes due to water in the probes. In addition, the two probes that were sampled were not purged prior to sampling. Four of the soil vapor probes are located along the western boundary of the site to help assess potential off-site vapor intrusion. Please include plans to purge and sample all five soil vapor probes in the work plan requested below.

4. **Public Participation.** Public participation is a requirement for the Corrective Action Plan process. Therefore, we request that you submit a Draft CAP for ACEH review. Upon ACEH approval of a Draft CAP, ACEH will notify potentially affected members of the public who live or own property in the surrounding area of the proposed remediation described in the Draft CAP. Public comments on the proposed remediation will be accepted for a 30-day period.

5. **Quarterly Groundwater Monitoring.** Please continue quarterly groundwater monitoring and present the results in the Quarterly Reports requested below.

TECHNICAL REPORT REQUEST

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

- **August 11, 2008** – Quarterly Groundwater Monitoring Report (Second Quarter 2008)
- **August 25, 2008** – Work Plan
- **November 11, 2008** – Quarterly Groundwater Monitoring Report (Third Quarter 2008)

- **February 11, 2009** – Quarterly Groundwater Monitoring Report (Fourth Quarter 2008)

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

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to 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 Instructions." 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. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all 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 monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is 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).

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.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

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 or send me an electronic mail message at jerry.wickham@acgov.org.

Sincerely,

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032

Bryan Campbell, ETIC Engineering, Inc., 2285 Morello Avenue, Pleasant Hill, CA 94523

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

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

October 7, 2008

Ms. Jennifer Sedlachek
Exxon Mobil
4096 Piedmont, #194
Oakland, CA 94611

Mr. John Jay
C/o Jay Phares Corporation
10700 MacArthur Boulevard, Suite #200
Oakland, CA 94605

Subject: Fuel Leak Case No. RO0002635 and Geotracker Global ID T0600120383, Exxon #7-4121, 10605 Foothill Boulevard, Oakland, CA 94605

Dear Ms. Sedlacheck and Mr. Jay:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site, including the recently submitted document entitled, "Vapor Sampling Work Plan," dated August 22, 2008. The "Vapor Sampling Work Plan," which was prepared by ETIC Engineering, Inc., presents plans for sampling five existing soil vapor probes that were installed at the site in January 2007. One of the existing probes is in the central portion of the site and the remaining four probes are located along the western property boundary. In our June 20, 2008 correspondence, we requested that you propose additional soil vapor sampling to evaluate potential vapor intrusion on site for future site occupants, particularly in the tank pit area outside the area of proposed excavation to help assess whether the proposed excavation will be effective in mitigating potential vapor intrusion concerns. Since no additional soil vapor sampling is proposed in the area outside the proposed excavation, the scope of work in the August 22, 2008 Work Plan does not fully address our technical comments. Therefore, we request that you revise the Work Plan to include additional soil vapor sampling locations outside the area of the proposed excavation to evaluate whether the proposed excavation will address potential vapor intrusion risks for future site occupants.

TECHNICAL COMMENTS

1. **Tier 1 Screening of Potential Health Risks.** The "Well Installation and Additional Risk Assessment Report," includes a Tier 1 screening of potential human health risks. In the Tier 1 screening, soil vapor data from two soil vapor probes sampled in January 2007 are compared to Environmental Screening Levels ([ESLs] San Francisco Bay Regional Water Quality Control Board November 2007). Concentrations of VOCs in the two soil vapor samples were less than both commercial and residential ESLs for the vapor intrusion pathway. However, the Tier 1 screening did not include results from soil vapor sampling conducted in May 2006. During May 2006, soil vapor samples were collected from six soil vapor probes. The concentration of benzene in soil vapor exceeded the residential ESL (84

µg/m^3) in four of the six temporary borings and exceeded the commercial ESL in one of the six borings. Further evaluation of the elevated concentrations of benzene detected in the May 2006 soil vapor samples is required. Therefore, we request that you revise the Work Plan to include additional soil vapor sampling locations outside the area of the proposed excavation to evaluate whether the proposed excavation will address potential vapor intrusion risks for future site occupants. Please include plans that include additional soil vapor sampling locations in the Revised Soil Vapor Sampling Work Plan requested below.

2. **Quarterly Groundwater Monitoring.** Please continue quarterly groundwater monitoring and present the results in the Quarterly Reports requested below.

TECHNICAL REPORT REQUEST

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

- **November 11, 2008** – Quarterly Groundwater Monitoring Report (Third Quarter 2008)
- **December 5, 2008** – Revised Soil Vapor Sampling Work Plan
- **February 11, 2009** – Quarterly Groundwater Monitoring Report (Fourth Quarter 2008)
- **May 11, 2009** – Quarterly Groundwater Monitoring Report (First Quarter 2009)

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

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to 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 Instructions." 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. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all 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 monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is 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).

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.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

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 or send me an electronic mail message at jerry.wickham@acgov.org.

Sincerely,

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032

K. Erik Appel, ETIC Engineering, Inc., 2285 Morello Avenue, Pleasant Hill, CA 94523

Peter McIntyre, AEI Consultants, 2500 Camino Diablo, Suite 100, Walnut Creek CA 94597

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	ISSUE DATE: July 5, 2005
	REVISION DATE: December 16, 2005
	PREVIOUS REVISIONS: October 31, 2005
SECTION: Miscellaneous Administrative Topics & Procedures	SUBJECT: Electronic Report Upload (ftp) Instructions

Effective **January 31, 2006**, 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.

REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection**. (Please do not submit reports as attachments to electronic mail.)
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:
  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Additional Recommendations

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in Excel format. These are for use by assigned Caseworker only.

Submission Instructions

1) Obtain User Name and Password:
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to dehloptoxic@acgov.org
      or
      ii) Send a fax on company letterhead to (510) 337-9335, to the attention of Alicia Lam-Finneke.
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for.**

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape and Firefox browsers will not open the FTP site.
   b) Click on File, then on Login As.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to dehloptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name at acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload)

Appendix B

Field Protocols

PROTOCOLS FOR INSTALLATION AND SAMPLING OF SOIL VAPOR WELLS

SUBSURFACE CLEARANCE SURVEY PROCEDURES

Prior to drilling, the proposed locations of borings will be marked with white paint. Underground Service Alert (USA) will be contacted prior to subsurface activities and a "ticket" will be issued for this investigation. USA members will mark underground utilities in the delineated areas using standard color code identifiers.

Once USA has marked the site, all proposed borehole locations will be investigated by subsurface clearance surveys to identify possible buried hazards (pipelines, drums, tanks). Subsurface clearance surveys use several geophysical methods to locate shallow buried man-made objects. The geophysical methods include electromagnetic induction (EMI) profiling, ground penetrating radar (GPR), and/or magnetic surveying. The choice of methods depends on the target object and potential interference from surrounding features.

Prior to drilling, all boreholes will be cleared of underground utilities to a depth of at least 4 feet below ground surface (bgs) in "non-critical zones" and to 8 feet bgs in "critical zones". Critical zones are defined as locations that are within 10 feet from the furthest edge of any underground storage tank (UST), within 10 feet of the product dispenser islands, the entire area between the UST field and the product dispenser islands, and within 10 feet of any suspected underground line. An 8- to 12-inch-diameter circle will be cut in the surface cover at each boring location. A hole will then be cleared at each boring location using a hand auger.

SOIL SAMPLING

Shallow soil samples are collected using a 6-inch sample barrel connected to a slide hammer and containing a 6-inch stainless steel sample sleeve. After driving the hammer 6 inches, the rods and sample barrel are withdrawn from the borehole and the sample sleeve is removed.

Soil from the hand auger is removed and placed in a sealed plastic bag. The soil is scanned with an organic vapor analyzer (OVA) equipped with a flame ionization detector (FID) or photoionization detector (PID), and the readings are noted on the soil boring logs. The remaining soil from the hand auger is examined and classified according to the Unified Soil Classification System (USCS).

Soil samples are delivered, under chain of custody, to a laboratory certified by the California Department of Health Services (DHS) for analyses.

SOIL VAPOR WELL INSTALLATION PROCEDURES

The vapor wells are constructed with 0.25-inch-diameter stainless steel tubing connected to 0.4-inch-diameter vapor sampling implant with a 0.0057-inch slot stainless steel screen and bottom implant anchor. All connections are sealed with Swagelok® type fittings. A filter pack of #2/12 sand is placed at the screened interval and above and below the slotted PVC casing for each well. The wells are then sealed with hydrated bentonite chips or granules, followed by neat cement grout to just

below ground surface. The tubing is sealed at the surface with a stainless steel Swagelok® valve and stainless steel cap.

The wells are finished at the surface with a slightly raised, watertight steel traffic-rated box set in concrete. The lid on the traffic-rated box is bolted to the rim of the well box.

SOIL VAPOR SAMPLING PROCEDURES

To allow for subsurface conditions to equilibrate, the wells are not disturbed for a period of at least 48 hours.

A vacuum tightness test is performed on each well. The test consists of the application of vacuum and monitoring of vacuum tightness using vacuum gauges and/or flow meter for 5 to 10 minutes.

A purge test will be conducted for one well. The selected well should be the one with the highest expected concentrations. The test consists of the collection of vapor samples using Tedlar bags after purging the well of one (1), three (3), and seven (7) purge volumes by drawing vapor using a syringe connected to a valve on the tubing or a vacuum pump. The purge volume is estimated based on the internal volume of the tubing used and the annular space around the slotted screen. The samples are collected through a particulate filter and flow controller which regulates the flow of soil gas to no more than 200 milliliters per minute. The results of the purge test are used to dictate the purge volume to be used during the sampling of subsequent wells.

The vapor samples are collected in 1-liter stainless steel Summa canisters. The samples are collected through a particulate filter and flow controller which regulates the flow of soil gas to no more than 200 milliliters per minute. To ensure air-tight connections between the tubing, sampling port, valves, and other connections, a tracer compound is applied to joints as a tracer. A leak will be evident if the tracer is detected in the analysis of the soil vapor samples.

The 1-liter Summa canisters are labeled and packaged for delivery to a state-certified laboratory for chemical analysis. The initial pressure and the final pressure readings taken from the gauges on the Summa canisters are recorded. A small vacuum of about 5 inches of mercury is left inside the sample canister and is recorded on the chain-of-custody. Upon receipt, the laboratory will check the pressure in the sample canister and compare it to the pressure recorded on the chain-of-custody for quality control purposes.