PACIFIC
CONVENIENCE & FUELS LLC

LBermudez@pcandf.com
Direct: 925-931-5760
Fax: 925-905-2746

May 15, 2012

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

RECEIVED

9:28 am, May 22, 2012

Alameda County
Environmental Health

Subject: **ISCO Pilot Test Work Plan**

Site: **76 Station No. 5191/5043**
449 Hegenberger Road
Oakland, California
Fuel Leak Case No. RO0000219

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:

Liz Bermudez
Pacific Convenience & Fuel
7180 Koll Center Parkway, Suite 100
Pleasanton, California 94566
Tel: (925) 931-5760
Fax: (925) 905-2746
lbermudez@pcandf.com

Sincerely,

PACIFIC CONVENIENCE & FUEL

L Bermudez

LIZ BERMUDEZ
Senior Paralegal
Division, Unit, or Group

Attachment

ISCO Pilot Test Work Plan

76 Station No. 5191/5043
449 Hegenberger Road
Oakland, California

Alameda County Health Care Services Agency
Fuel Leak Case No. RO0000219

San Francisco Bay, Regional Water Quality Control Board Case No. 01-1601

GeoTracker Global ID No.T0600101476

Antea Group Project No. I42705191
May 15, 2012

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

Prepared by:
Antea™Group
11050 White Rock Road
Rancho Cordova, CA 95670
+1 800 477 7411

Table of Contents

Tables

Figures

Appendices

ISCO Pilot Test Work Plan

76 Station No. 5191/5043
449 Hegenberger Road
Oakland, California

1.0 INTRODUCTION

Antea™Group is pleased to submit this *Pilot Test Work Plan* for in-situ chemical oxidation (ISCO) for the referenced site in Oakland, California (**Figure 1**). Primary contaminants of concern (COCs) include gasoline range organics (GRO), diesel range organics (DRO), benzene, and methyl-tertiary butyl ether (MTBE). This work plan details the approach for conducting an ISCO pilot test using alkaline activated sodium persulfate. Activated sodium persulfate has high oxidative strength that can persist for several months in the subsurface. Once oxidation effects diminish, the persulfate anion breaks down to release a sulfate by-product that can enhance anaerobic bioremediation. The alkaline activation chemical (calcium peroxide), in addition to its role as an alkaline activator for the persulfate, will contribute to an increase in dissolved oxygen enhancing aerobic bioremediation. This combination will make for a sustained, safe treatment of soil and groundwater at the site.

This work plan has received a technical review by Mr. Dennis S. Dettloff (Antea Group) California Professional Geologist No. 7480.

2.0 SITE DESCRIPTION

The site is currently an operating 76 station located at 449 Hegenberger Road in Oakland, California (**Figure 1**). The site contains six fuel dispensers on two islands under a single canopy, three fuel underground storage tanks (USTs) on the north side of the site, a carwash facility on the west side of the site, and a station building in the central portion of the site. The current site features are shown on **Figure 2.** A summary of previous site assessment, environmental investigations, remedial cativities, and sensitive receptors are presented in **Appendix A**.

3.0 SUMMARY OF SITE HYDROGEOLOGIC CONDITIONS

The site is underlain by Holocene-age bay mud. The bay mud typically consists of unconsolidated, saturated clay and sandy clay that is rich in organic material. The bay mud locally contains lenses and stringers of silt, well-sorted sand and gravel, and beds of peat. The most recent monitoring and sampling event was conducted at the site on March 6th, 2012. The measured depth to groundwater during that event ranged from 2.31 feet to 5.37 feet below top of casing (TOC). The groundwater flow direction was southeast with a hydraulic gradient of 0.02 foot per foot (ft/ft). This groundwater flow is consistent in direction with historical flows, although current gradient is lower than the historic average of 0.03 ft/ft.

4.0 REMEDIATION INVESTIGATION AND PILOT TEST

4.1 Remediation Investigation Design

4.1.1 Hydraulic Profiling Test

On March 6, 2012, Antea Group oversaw the advancement of five Hydraulic Profile Borings (HPB-1 through HPB-5) by Vironex, Inc. in order to evaluate the feasibility of ISCO remediation techniques through subsurface exploration of the site based on pressure and fluid flow characteristics at various depths. Each of the five borings were advanced to approximately thirteen (13) feet below ground surface (bgs) while pressure and flow data were continuously monitored. In each case, the data showed that fluid can be moved through the formation using acceptable pressures. This data is provided in **Appendix B** in the form of boring logs for each boring, with locations depicted on **Figure 3**.

4.1.2 Soil Buffering Test

Prior to conducting the pilot test, soil buffering tests will be used to confirm the soil's ability to resist changes in pH when calcium peroxide is applied and provide a ratio of calcium peroxide per kilogram of soil required to maintain the pH of the soil system in the required highly alkaline range. This soil buffering test data will allow refinement of the injection strategy for this site. Additionally, the samples collected for the soil buffering test will facilitate determination of total organic content (TOC) and soil oxidant demand (SOD), two soil metrics required for proper ISCO system design. Using a hand auger, soil buffering samples will be collected in two locations at depths of up to 5 feet bgs, one in each pilot test area as shown on **Figure 4**.

4.1.3 Remediation System Final Design

Subsequent to the completion of the soil buffering test, the information gained will be used to determine the final configuration of the remediation system. This final design phase will include determination of ideal amendment concentrations, volumes, and injection pressures.

4.2 Pre-Field Activities

Prior to initiation of field activities, Antea Group will produce a health and safety plan (HASP) specific for alkaline activated sodium persulfate injection and obtain all necessary drilling permits. Copies of all appropriate material safety data sheets (MSDS) will be included in the HASP. Prior to drilling, each direct push injection (DPI) boring location will be cleared to a depth of 5 feet bgs with by a California-licensed C-57 driller. Additionally, Antea Group will contact Underground Service Alert (USA) North and conduct a private underground utility locate to mark the site for subsurface utilities. The locations of all utilities identified to date, on and surrounding the site are depicted on **Figure 2**. Antea Group's Standard Operating Procedures are included as **Appendix C**.

4.3 Scope of Work

The pilot test will consist of four phases:

1. Baseline groundwater characterization of Contaminants of Concern (COCs) and geochemical parameters in selected monitoring wells;
2. Initial round of ISCO injection in pilot test areas and process monitoring to optimize injection pressure and flow rates, spacing of injection points, and the volume and strength of amendment slurry. Proposed ISCO injection areas one and two are shown on **Figure 4**;
3. Performance monitoring and assessment;
4. Potential expansion of pilot test to additional areas throughout the site.

4.3.1 Baseline Groundwater Monitoring

Baseline groundwater characterization of COCs will be conducted using monitoring wells MW-6, MW-10, MW-12, MW-14, and MW-17 a minimum of two weeks prior to any chemical injection application. Groundwater samples will be submitted for analysis under chain of custody protocol to a state of California Environmental Laboratory Accreditation Program (ELAP) certified analytical laboratory for analysis of:

- GRO by California LUFT method;
- DRO by Environmental Protection Agency (EPA) 8015B;
- Benzene, toluene, ethyl benzene, total xylenes (collectively BTEX), MTBE, di-isopropyl ether (DIPE), ethyl tertiary-butyl ether (ETBE), tertiary-amyl methyl ether (TAME), tertiary-butyl alcohol (TBA), ethanol, 1,2-dichloroethane (1,2-DCA) and 1,2-dibromoethane (EDB) by EPA Method 8260.
- Geochemical parameters: methane (Method RSK 175), sulfate (EPA Method 300.0), sulfide (titrimetric, SM 4500-S2E), total iron (Method 6010), ferrous iron (Hach kit), ferric iron, nitrate (EPA 353.2), nitrite (EPA 352.2/354.1), alkalinity (SM 2330B), trivalent and hexavalent chromium (EPA 6010 and 7196, respectively), total and dissolved manganese (EPA 6010), and total dissolved solids (TDS) (SM 2540C).
- Field parameters: depth to water, groundwater temperature, pH, oxidation-reduction potential (ORP), specific conductance, and dissolved oxygen (D.O.) will be measured during sampling.

4.3.2 Injection of Oxygen BioChem (OBC)™

Antea Group proposes to use direct-push technology to advance the injection points. Up to 8 injection points with spacing approximately 7-feet apart in a grid pattern are proposed in both Areas 1 and 2:

- Area 1 (approximately 20 feet by 30 feet with injection depth interval of 5 to 16 bgs) – centered approximately 60 feet south of the car wash building. Historically MW-14 has shown GRO concentrations of 51,600 micrograms per liter (ug/L) and total xylenes concentrations of 13,400 ug/L within the groundwater plume.

- Area 2 (20 feet by 25 feet with injection depth interval of 5 to 16 feet bgs) – located east of the dispenser islands in the vicinity of monitoring well MW-17. Historically, MW-17 has reported GRO concentrations of 47,200 ug/L and benzene concentrations approaching 10,000 ug/L within the groundwater plume.

The final number of injection points and their locations will be determined in the field based upon the results of the soil buffering test, hydraulic profile testing, and discussion with the remediation injection subcontractor. These final locations are also subject to restrictions based on the position of utility lines, existing wells, USTs and UST process lines within the test areas. As a safety factor, DPI points will be located at least 10 feet away from the edge of the UST pit. Upon completing each direct-push injection boring, the boreholes will be backfilled with neat cement grout and capped with concrete dyed to match the existing surface grade.

This remediation strategy will target dissolved and adsorbed hydrocarbon impacts in the shallow groundwater zone. Current soil impacts in Area 1 are concentrated in samples collected at 10 feet bgs from well MW-14. Current soil impacts in Area 2 range from 8 ft to 20 ft bgs. The final depths of each DPI boring will be based on site lithology and injection pressures, and will generally conform to the depths summarized in the Area 1 and Area 2 descriptions above.

OBC™ is a proprietary blend of sodium persulfate and calcium peroxide (as an activator) that is mixed with water to create an approximately 20 - 30 percent by weight slurry. Further data regarding this product is found in **Appendix D**. The slurry is then injected at the various DPI locations. Based on the site specific data, Antea Group's remediation injection contractor will determine the quantity of slurry needed to stoichiometrically remediate the primary COCs in the injection area. Actual quantities and concentrations of slurry added in specific locations will depend on field conditions, the results of the soil buffering test, and local contaminant concentrations.

Immediately before, during, and immediately following the amendment injections in the pilot test areas, the following field parameters will be periodically monitored and recorded in vicinity wells MW-6, MW-10, MW-12, MW-14, and MW-17: depth to water, groundwater temperature, pH, ORP, specific conductance, D.O., and residual persulfate. A field test kit will also be used to periodically monitor for residual persulfate or sulfate in each of the aforementioned wells.

4.3.3 Performance Monitoring and Assessment

At approximately 30 days, 60 days, 90 days, and 120 days following the initial pilot test, groundwater samples from selected wells MW-6, MW-10, MW-12, MW-14, and MW-17, will be collected under chain of custody protocol and sent to a California ELAP certified analytical laboratory for analysis of the following constituents:

- GRO by California LUFT method; and
- DRO by EPA 8015B; and
- BTEX, MTBE, DIPE, ETBE, TAME, TBA, ethanol, 1,2-DCA and EDB by EPA Method 8260; and
- Geochemical parameters: methane (Method RSK 175), sulfate (EPA Method 300.0), sulfide (titrimetric, SM 4500-S2E), total iron (Method 6010), ferrous iron (Hach kit), ferric iron, nitrate (EPA 353.2), nitrite (EPA 352.2/354.1), alkalinity (SM 2330B), trivalent and hexavalent chromium (EPA 6010 and 7196, respectively), total and dissolved manganese (EPA 6010), and TDS (SM 2540C).

During each of the performance monitoring sampling events, each well will be gauged for depth to water and monitored for groundwater temperature, pH, ORP, specific conductance, D.O., and residual persulfate. If possible, Antea Group will coordinate the quarterly monitoring and sampling event to be conducted in place of a separate performance monitoring event.

4.3.4 Expansion of Pilot Test

Based on the laboratory analytical results, Antea Group will determine effectiveness of the initial pilot test injection round. If positive groundwater monitoring results are reported, the pilot test may be expanded to additional areas throughout the site using the general methodology described above, adjusted according to the information gathered during the pilot test. As needed, an addendum to this work plan will be prepared to provide detailed information for a second phase of the ISCO Pilot Test.

4.4 Disposal of Drill Cuttings and Wastewater

Wastewater and waste soil generated from utility clearance, purging, and/or equipment decontamination activities associated with the pilot test and sampling of the monitoring wells, will be placed into appropriately labeled 55-gallon Department of Transportation (DOT) approved steel drums and temporarily stored onsite. Waste containing ISCO chemicals will be stored in poly drums but otherwise handled in the same fashion as non-ISCO waste. Representative samples of the soil cuttings and the wastewater will be collected for waste characterization. The representative samples will be submitted to a California-certified laboratory and analyzed for GRO, BTEX, and MTBE by EPA Method 8260B and total lead by EPA Method 6010. Subsequent to receiving the laboratory analytical results, the drummed soil cuttings and drummed wastewater will be profiled, transported, and disposed of at an approved facility.

5.0 SCHEDULING AND REPORTING

Upon approval of this work plan by the Alameda County Health Care Services Agency (ACHCSA), Antea Group will begin preparation for field activities such as submittal of permit applications and obtaining borehole clearance. Once the permits and borehole clearances have been received, Antea Group will commence field activities.

Upon completion of all pilot test activities and receipt of final post-pilot test laboratory analytical results, a Pilot Test Report summarizing the effectiveness of the pilot test including details of the field activities, analytical results, findings, conclusions, and recommendations will be prepared and submitted to the ACHCSA. Reporting will include supporting documentation including but not limited to site data maps, pilot test data, sampling logs, chain of custody documents, interpretation of results, and waste disposal manifests.

The proposed activities outlined in this work plan and the corresponding reports, will be performed and prepared under the direction of a California Professional Geologist.

In accordance with State of California requirements for the GeoTracker database, the report, maps, and all analytical data will be uploaded to the GeoTracker system per current standard.

6.0 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. For any reports cited that were not generated by Delta or Antea Group, the data from those reports is used "as is" and is assumed to be accurate. Antea Group does not guarantee the accuracy of this data for the referenced work performed nor the inferences or conclusions stated in these reports. 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:

Joshua L. Wolff, E.I.T.
Staff Engineer

for Josh Mahoney
Senior Project Manager

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.

PROFESSIONAL GEOLOGIST
DENNIS SHANNON DETTLOFF
No. 7480
STATE OF CALIFORNIA

Licensed Approver:

Date: 5/15/12

Dennis S. Dettloff
Project Manager
California Registered Professional Geologist No. 7480

cc: GeoTracker (upload)

Tables

TABLE 1

CURRENT AND HISTORICAL SOIL ANALYTICAL RESULTS
76 Station No. 5191/5043
449 Hegenberger Raod, Oakland, California

Sample ID	Date	Sample Depth (feet)	TPHg (mg/kg)	TPHg* (mg/kg)	DRO (mg/kg)	DRO* (mg/Kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	TAME (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	Ethanol (mg/kg)	EDB (mg/kg)	1,2-DCA (mg/kg)	Lead (mg/kg)
P1	10/25/1991	3	**3,200**	NA	**420**	NA	**33**	**120**	**110**	**540**	NA	NA	NA	NA	NA	NA	NA	NA	NA
P2	10/25/1991	3	**9,000**	NA	**8,400**	NA	**46**	**120**	**330**	**1,500**	NA	NA	NA	NA	NA	NA	NA	NA	NA
P3	10/25/1991	3	**7,100**	NA	**1,100**	NA	**48**	**410**	**220**	**1,200**	NA	NA	NA	NA	NA	NA	NA	NA	NA
P4	10/25/1991	3	**370**	NA	**460**	NA	**7.4**	**39**	**12**	**77**	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW1(2.5)	2/5/1992	2.5	**14,000**	NA	**1,200**	NA	**160**	**680**	**470**	**2,400**	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW2(3.5)	2/5/1992	3.5	**9,000**	NA	**2,400**	NA	**74**	**440**	**280**	**1,400**	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW2(4.5)	2/5/1992	4.5	**31**	NA	**29**	NA	**2.4**	**0.14**	**3**	**9**	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW3(3)	2/5/1992	3	<1.0	NA	**49**	NA	<0.005	<0.005	<0.005	**0.011**	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW3(4.5)	2/5/1992	4.5	<1.0	NA	<1.0	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW4(5)	8/21/1992	5	<1.0	NA	<1.0	NA	<0.005	<0.005	<0.005	**0.0066**	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW5(6)	8/21/1992	6	**340**	NA	**43**	NA	**1.1**	**1.2**	**7.8**	**13**	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW6(5)	8/21/1992	5	**3.7**	NA	**1.2**	NA	**0.9**	<0.005	**1**	**0.05**	NA	NA	NA	NA	NA	NA	NA	NA	NA
WO1	9/20/1994	9	<1.0	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	5.0
MW9(3)	1/25/1995	3	**1.7**	NA	**2.6**	NA	**0.016**	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW10(2.5)	1/25/1995	2.5	**44**	NA	**17**	NA	**2**	**1.5**	**2.3**	**5.4**	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW1	3/10/1995	8	**11**	NA	NA	NA	**2.8**	<0.005	**1.6**	**0.067**	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW2	3/10/1995	8	**11**	NA	NA	NA	**3.8**	<0.005	**0.79**	**0.034**	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW2(4)	3/10/1995	4	**2,000**	NA	**140**	NA	<0.005	**53**	**42**	**240**	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW3	3/10/1995	8	**1**	NA	<1.0	NA	**0.009**	**0.006**	**0.007**	**0.014**	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW4	3/10/1995	8	<1.0	NA	**1.8**	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW5	3/10/1995	8	<1.0	NA	**1.4**	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW6	3/10/1995	8	<1.0	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW7	3/10/1995	8	<1.0	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW8	3/10/1995	8	**140**	NA	NA	NA	**2.6**	**5.3**	**2.7**	**12**	NA	NA	NA	NA	NA	NA	NA	NA	NA
D1	3/24/1995	3	**760**	NA	**46**	NA	**1.5**	**19**	**15**	**73**	NA	NA	NA	NA	NA	NA	NA	NA	NA
D2	3/24/1995	3	**1,200**	NA	**97**	NA	**1.6**	**16**	**22**	**110**	NA	NA	NA	NA	NA	NA	NA	NA	NA
B1	3/28/1995	6	<1.0	NA	<1.0	NA	**0.13**	**0.026**	**0.0088**	**0.059**	NA	NA	NA	NA	NA	NA	NA	NA	NA
B2	3/28/1995	6	**3.4**	NA	<1.0	NA	**2.8**	**0.041**	**0.19**	**0.28**	NA	NA	NA	NA	NA	NA	NA	NA	NA
B3	3/28/1995	6	<1.0	NA	<1.0	NA	<0.005	**0.01**	<0.005	**0.017**	NA	NA	NA	NA	NA	NA	NA	NA	NA
B4	3/28/1995	6	<1.0	NA	<1.0	NA	<0.005	**0.017**	<0.005	**0.032**	NA	NA	NA	NA	NA	NA	NA	NA	NA
BD1	3/28/1995	6	<1.0	NA	<1.0	NA	**0.21**	**0.011**	**0.018**	**0.038**	NA	NA	NA	NA	NA	NA	NA	NA	NA
BD2	3/28/1995	6	**12**	NA	**4.8**	NA	**2.6**	**0.68**	**0.56**	**1.7**	NA	NA	NA	NA	NA	NA	NA	NA	NA
BD3	3/28/1995	6	<1.0	NA	<1.0	NA	**0.012**	**0.014**	**0.012**	**0.043**	NA	NA	NA	NA	NA	NA	NA	NA	NA
BD4	3/28/1995	6	<1.0	NA	<1.0	NA	<0.005	**0.011**	**0.0072**	**0.037**	NA	NA	NA	NA	NA	NA	NA	NA	NA
S1	3/28/1995	4	**110**	NA	<1.0	NA	**3.5**	**0.61**	**7**	**13**	NA	NA	NA	NA	NA	NA	NA	NA	NA
S2	3/28/1995	4	**1.4**	NA	**9.4**	NA	**0.028**	**0.012**	**0.015**	**0.019**	NA	NA	NA	NA	NA	NA	NA	NA	NA
S3	3/28/1995	4	**22**	NA	**2.9**	NA	**1.2**	**1.2**	**0.65**	**1.9**	NA	NA	NA	NA	NA	NA	NA	NA	NA
S4	3/28/1995	4	**150**	NA	**5.8**	NA	**6.8**	**5.6**	**5.3**	**27**	NA	NA	NA	NA	NA	NA	NA	NA	NA
RF1	3/31/1995	3	**2,000**	NA	**330**	NA	**8.8**	**68**	**55**	**280**	NA	NA	NA	NA	NA	NA	NA	NA	NA
RF2	3/31/1995	3	**3,300**	NA	**230**	NA	**18**	**160**	**110**	**550**	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW8(6)	4/3/1995	8	<1.0	NA	<1.0	NA	**0.0085**	<0.005	**0.0084**	**0.011**	NA	NA	NA	NA	NA	NA	NA	NA	NA
FB1	4/3/1995	4.5	**25**	NA	**8.6**	NA	**2.1**	**0.058**	**2.2**	**1.3**	NA	NA	NA	NA	NA	NA	NA	NA	NA
FB2	4/3/1995	4.5	**7.1**	NA	**1.6**	NA	**0.4**	**0.018**	**0.81**	**1.7**	NA	NA	NA	NA	NA	NA	NA	NA	NA
FB3	4/3/1995	4.5	**1.6**	NA	<1.0	NA	**0.028**	<0.005	**0.13**	**0.26**	NA	NA	NA	NA	NA	NA	NA	NA	NA
FB4	4/3/1995	4.5	**1.4**	NA	<1.0	NA	**0.23**	**0.022**	**0.05**	**0.15**	NA	NA	NA	NA	NA	NA	NA	NA	NA
FBSW1	4/3/1995	3	**7.4**	NA	**1.3**	NA	**0.066**	**0.021**	**1**	**<0.005**	NA	NA	NA	NA	NA	NA	NA	NA	NA
FBSW2	4/3/1995	3	**70**	NA	**7.6**	NA	**0.11**	**0.096**	**2.1**	**6.7**	NA	NA	NA	NA	NA	NA	NA	NA	NA
FBSW3	4/3/1995	3	**2.3**	NA	**7.8**	NA	**0.012**	**0.01**	**0.018**	**0.012**	NA	NA	NA	NA	NA	NA	NA	NA	NA
FBSW4	4/3/1995	3	**9**	NA	**3.7**	NA	**0.25**	**0.036**	**0.93**	**0.062**	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW1SW1	4/5/1995	5	**25**	NA	**2.8**	NA	**2.1**	**0.025**	**2.4**	**0.19**	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW1SW2	4/5/1995	5	**4.2**	NA	**1.2**	NA	**0.17**	**0.01**	**0.68**	**0.048**	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE1	4/5/1995	4.5	**26**	NA	**3.4**	NA	**0.31**	**0.3**	**0.59**	**2.6**	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE2	4/5/1995	4.5	**2.7**	NA	**5.1**	NA	**0.0054**	**0.0065**	**0.038**	**0.17**	NA	NA	NA	NA	NA	NA	NA	NA	NA
WE3	4/5/1995	4.5	**8.2**	NA	**1.6**	NA	**0.21**	**0.074**	**1.6**	**0.0076**	NA	NA	NA	NA	NA	NA	NA	NA	NA
FS-1	4/5/1995	4	**12**	NA	<1.0	NA	**0.28**	<0.005	**1.5**	**0.016**	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW8(6)	4/21/1997	6	**1.3**	NA	<1.0	NA	**0.0051**	<0.005	**0.015**	**0.041**	<0.005	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 1

CURRENT AND HISTORICAL SOIL ANALYTICAL RESULTS

76 Station No. 5191/5043

449 Hegenberger Raod, Oakland, California

Sample ID	Date	Sample Depth (feet)	TPHg (mg/kg)	TPHg* (mg/kg)	DRO (mg/kg)	DRO* (mg/Kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	TAME (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	Ethanol (mg/kg)	EDB (mg/kg)	1,2-DCA (mg/kg)	Lead (mg/kg)
Delta 2009																			
B-4@6	12/17/2009	6	**20.4**	NA	**11.4**	**10.1**	**0.046**	**0.18**	**1**	**4.2**	**0.061**	**0.091**	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	NA
B-4@15	12/17/2009	15	<4.9	NA	<5.8	<5.8	**0.0036**	**0.0069**	**0.011**	**0.049**	**0.0081**	**0.036**	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	NA
B-4@20	12/17/2009	20	<4.9	NA	<5.6	<5.6	<0.003	<0.003	<0.003	<0.006	<0.003	<0.015	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	NA
B-5@8	12/17/2009	8	**1,060**	NA	**285**	**269**	**6.2**	**21.6**	**30.9**	**143**	<0.0029	**0.079**	**0.068**	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	NA
B-5@17.5	12/17/2009	17.5	**136**	NA	**27.8**	**26.9**	**0.55**	**1.4**	**2.7**	**15.8**	<0.003	**0.035**	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	NA
B-5@26.5	12/17/2009	26.5	**1,570**	NA	**338**	**346**	**16.2**	**73.5**	**52.8**	**255**	**0.02**	**0.11**	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	NA
B-5@32	12/17/2009	32	<4.8	NA	<5.9	<5.9	**0.007**	**0.0087**	**0.0057**	**0.031**	<0.0029	<0.015	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	NA
Delta 2010																			
MW-11@10	6/22/2010	10	NA	<0.18	NA	**3.2**	<0.0022	<0.0022	<0.0022	<0.0066	**0.011**	<0.011	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	**6.1**
MW-11@20	6/22/2010	20	NA	<0.25	NA	**27.3**	<0.0027	<0.0027	<0.0027	<0.0081	<0.0027	<0.013	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	**3.4**
MW-12@8	6/22/2010	8	NA	**210**	NA	**45.7**	**5.2**	**9.1**	**6.7**	**33.3**	<0.0028	**0.021**	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	**8.6**
MW-12@10	6/22/2010	10	NA	**422**	NA	**73.6**	**4**	**3.5**	**11.0**	**31.4**	<0.0029	<0.015	**0.023**	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	**9.5**
MW-12@20	6/22/2010	20	NA	<0.24	NA	<2.0	**0.019**	<0.0028	<0.0028	<0.0085	<0.0028	<0.014	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	**6.6**
MW-12A@26	6/23/2010	26	NA	**6,840**	NA	**2,210**	**80.9**	**232**	**178**	**607**	<0.0027	<0.014	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	**13.1**
MW-12A@32	6/23/2010	32	NA	**943**	NA	**267**	**4.9**	**15.5**	**12.0**	**42.6**	**0.045**	**0.044**	**0.048**	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	**6.6**
MW-12A@34	6/23/2010	34	NA	<0.22	NA	<1.9	<0.0027	**0.0097**	**0.0074**	**0.033**	<0.0027	<0.013	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	**4.9**
MW-13@8	6/22/2010	8	NA	<0.21	NA	<2.0	<0.0026	<0.0026	<0.0026	<0.0077	**0.064**	<0.013	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	**3.6**
MW-13@15	6/22/2010	15	NA	<0.24	NA	<2.0	<0.0029	<0.0029	<0.0029	<0.0087	<0.0029	<0.014	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	**5.9**
Antea Group 2011																			
MW-14d7	5/17/2011	7	NA	<0.23	<2.0	<2.0	<0.0027	<0.0027	<0.0027	<0.0081	<0.0027	<0.014	<0.0027	<0.0027	<0.0027	<0.36	<0.0027	<0.0027	**6.6**
MW-14d10	5/17/2011	10	NA	**1,740**	**45.5 1n**	**45.9 1n**	**1.8**	**0.2**	**44**	**140**	<0.0026	<0.013	<0.0026	<0.0026	<0.0026	<0.34	<0.0026	<0.0026	**7**
MW-14d13	5/17/2011	13	NA	**1**	<2.0	<2.0	<0.0027	<0.0027	**0.037**	**0.066**	<0.0027	<0.014	<0.0027	<0.0027	<0.0027	<0.36	<0.0027	<0.0027	**6.6**
MW-15d8	5/17/2011	8	NA	**2.3**	**6.2**	**5.2**	**0.023**	<0.0038	**1.9**	**0.25**	**0.19**	**0.16**	<0.0038	<0.0038	<0.0038	<0.51	<0.0038	<0.0038	**7**
MW-15d13	5/17/2011	13	NA	<0.23	<1.9	<1.9	<0.0028	<0.0028	<0.0028	<0.0083	**0.015**	**0.022**	<0.0028	<0.0028	<0.0028	<0.37	<0.0028	<0.0028	**7**
MW-16d8	5/17/2011	8	NA	<0.23	<2.0	<2.0	<0.0027	<0.0027	<0.0027	<0.0081	**0.15**	**0.014**	<0.0027	<0.0027	<0.0027	<0.36	<0.0027	<0.0027	**5.7**
MW-16d13	5/17/2011	13	NA	<0.23	<2.0	<2.0	<0.0028	<0.0028	<0.0028	<0.0084	<0.0028	<0.014	<0.0028	<0.0028	<0.0028	<0.37	<0.0028	<0.0028	**5.5**
MW-17d9	5/18/2011	9	NA	**633**	**39.6 1n**	**36.7 1n**	**6**	**14.1**	**17.9**	**58**	<0.0026	**0.03**	<0.0026	<0.0026	<0.0026	<0.35	<0.0026	<0.0026	**16.3**
MW-17d13	5/18/2011	13	NA	**5.4**	**2.9 1n**	**2.5 1n**	**2.7**	**0.46**	**1.4**	**2.8**	<0.0027	**0.029**	<0.0027	<0.0027	<0.0027	<0.36	<0.0027	<0.0027	**6.4**
B-6d9	5/18/2011	9	NA	**2,490**	**72.0 1n**	**68.6 1n**	**26.4**	**73.9**	**58.1**	**230**	<0.0031	<0.015	<0.0031	<0.0031	<0.0031	<0.41	<0.0031	<0.0031	**10.1**
B-6d14	5/18/2011	14	NA	**194**	**258 1n**	**250 1n**	**3.6**	**5.1**	**5.1**	**22**	<0.0025	<0.013	<0.0025	<0.0025	<0.0025	<0.33	<0.0025	<0.0025	**9.2**
B-6d21	5/18/2011	21	NA	**7.2**	<2.0	<2.0	**0.67**	**0.86**	**0.25**	**0.94**	**0.036**	**0.014**	<0.0027	<0.0027	<0.0027	<0.37	<0.0027	<0.0027	**6.8**
B-6d26	5/18/2011	26	NA	**17**	**3.4 1n**	**2.9 1n**	**0.83**	**1.2**	**0.46**	**1.7**	**0.086**	**0.021**	<0.0026	<0.0026	<0.0026	<0.34	<0.0026	<0.0026	**6.6**

Notes:

TPHg = total petroleum hydrocarbons as gasoline by EPA Method 8015
TPHg* = total petroleum hydrocarbons as gasoline by CA LUFT
DRO = Diesel Range Organics by EPA Method 8015B
DRO* = Diesel Range Organics by EPA Method 8015 Silica Gel Treated
BTEX = benzene, toluene, ethylbenzene, total xylenes by EPA Method 8260B
MTBE = methyl tertiary-butyl ether by EPA Method 8260
TBA = tertiary-butyl alcohol by EPA Method 8260
TAME = tert-amyl methyl ether by EPA Method 8260
DIPE = Diisopropyl ether by EPA Method 8260
ETBE = Ethyl-tert-butyl-ether by EPA Method 8260
EDB = 1,2-Dibromoethane by EPA Method 8260
1,2-DCA = 1,2-Dichloroethane by EPA Method 8260

mg/kg = milligrams per kilogram
NA = not applicable
< = below the laboratory's indicated reporting limit

TABLE 2
CURRENT AND HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 Station No. 5191/5043
449 HEGENBERGER RD
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)	DRO (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (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)
MW-1	2/18/1992	NSVD	NG	NG	NG	**13000**	**150000**	**17000**	**26000**	**5200**	**26000**	--	--	--	--	--	--	--	--
	5/20/1992	NSVD	NG	NG	NG	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/31/1992	NSVD	NG	NG	NG	**8900**	**64000**	**13000**	**12000**	**2500**	**22000**	--	--	--	--	--	--	--	--
	11/30/1992	NSVD	NG	NG	NG	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/4/1993	NSVD	NG	NG	NG	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/4/1993	8.96	2.13	0.10	6.91	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	8/4/1993	8.96	2.92	0.03	6.06	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	11/3/1993	7.38	3.04	NP	4.34	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	2/7/1994	7.38	2.55	0.03	4.85	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	5/19/1994	7.38	2.23	0.01	5.16	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	6/25/1994	7.38	2.49	0.01	4.90	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	7/27/1994	7.38	3.10	NP	4.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/15/1994	7.38	2.85	0.11	4.61	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	11/14/1994	7.38	2.97	0.12	4.50	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	2/21/1995	7.38	1.53	0.02	5.87	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	5/18/1995	NSVD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD
MW-2	2/18/1992	NSVD	NG	NG	NG	**4300**	**29000**	**1000**	**5300**	**260**	**7900**	--	--	--	--	--	--	--	--
	5/20/1992	NSVD	NG	NG	NG	**4300**	**24000**	**2200**	**7600**	**630**	**11000**	--	--	--	--	--	--	--	--
	8/31/1992	NSVD	NG	NG	NG	**1600**	**9000**	**1800**	**640**	**140**	**2000**	--	--	--	--	--	--	--	--
	11/30/1992	NSVD	NG	NG	NG	**5700**	**29000**	**2000**	**3400**	**1200**	**6900**	--	--	--	--	--	--	--	--
	2/4/1993	NSVD	NG	NG	NG	**6100**	**18000**	**1600**	**3000**	ND	**6900**	--	--	--	--	--	--	--	--
	5/4/1993	8.96	2.48	NP	6.48	**7100**	**63000**	**3200**	**17000**	**470**	**17000**	--	--	--	--	--	--	--	--
	8/4/1993	8.96	3.20	NP	5.76	**1800**	**45000**	**2100**	**6600**	**1400**	**12000**	--	--	--	--	--	--	--	--
	11/3/1993	8.58	3.37	NP	5.21	**2600**	**72000**	**3700**	**16000**	**3700**	**20000**	--	--	--	--	--	--	--	--
	2/7/1994	8.58	2.40	NP	6.18	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	5/19/1994	8.58	2.13	NP	6.45	**3000**	**42000**	**2500**	**1300**	**2300**	**13000**	--	--	--	--	--	--	--	--
	6/25/1994	8.58	2.65	NP	5.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/27/1994	8.58	3.44	NP	5.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/15/1994	8.58	3.25	NP	5.33	**2800**	**35000**	**2400**	**850**	**1700**	**15000**	--	--	--	--	--	--	--	--
	11/14/1994	8.58	2.13	NP	6.45	**10000**	**43000**	**2200**	**6500**	**1800**	**14000**	--	--	--	--	--	--	--	--
	2/21/1995	8.58	1.65	NP	6.93	**2000**	**44000**	**2200**	**3200**	**1300**	**1500**	--	--	--	--	--	--	--	--
	5/18/1995	NSVD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD
MW-3	2/18/1992	NSVD	NG	NG	NG	ND	**230**	**4.8**	**22**	**1.8**	**33**	--	--	--	--	--	--	--	--
	5/20/1992	NSVD	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI
	8/31/1992	NSVD	NG	NG	NG	**92**	**210**	**1**	ND	ND	ND	--	--	--	--	--	--	--	--
	11/30/1992	NSVD	NG	NG	NG	**94**	**790**	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	2/4/1993	NSVD	NG	NG	NG	**550**	**3300**	**320**	ND	**96**	**6.1**	--	--	--	--	--	--	--	--
	5/4/1993	7.84	4.32	NP	3.52	**250**	**1800**	**95**	ND	ND	ND	--	--	--	--	--	--	--	--
	8/4/1993	7.84	4.94	NP	2.90	**100**	**210**	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	11/3/1993	7.42	4.53	NP	2.89	**160**	**640**	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	2/7/1994	7.42	2.40	NP	5.02	**620**	**2700**	**110**	ND	**17**	ND	--	--	--	--	--	--	--	--
	5/19/1994	7.42	3.60	NP	3.82	**480**	**1800**	**83**	ND	**6.2**	**9.1**	--	--	--	--	--	--	--	--
	6/25/1994	7.42	4.58	NP	2.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/27/1994	7.42	4.58	NP	2.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/15/1994	7.42	4.65	NP	2.77	**110**	**130**	**1.1**	**0.54**	ND	**0.97**	--	--	--	--	--	--	--	--
	11/14/1994	7.42	3.18	NP	4.24	**150**	**1600**	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	2/21/1995	7.42	1.81	NP	5.61	**850**	**3800**	**350**	ND	**130**	**22**	--	--	--	--	--	--	--	--
	5/18/1995	7.42	4.56	NP	2.86	**150**	**1300**	**42**	ND	ND	ND	--	--	--	--	--	--	--	--
	8/17/1995	7.42	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI
	7/26/1996	7.42	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI
	10/28/1996	7.42	WO	WO	WO	WO	WO	WO	WO	WO	WO	WO	WO	WO	WO	WO	WO	WO	WO
	1/29/1997	7.42	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI
	4/15/1997	7.42	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI
	5/27/1997	7.42	3.45	NP	3.97	--	**670**	**6.5**	ND	ND	ND	**250**	--	--	--	--	--	--	--
	6/1/1997	7.42	3.50	NP	3.92	**610**	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/15/1997	8.04	3.71	NP	4.33	**240**	**240**	ND	ND	ND	ND	**490**	--	--	--	--	--	--	--
	10/9/1997	8.04	3.70	NP	4.34	**500**	**270**	**1.1**	ND	**2.4**	**1.4**	**910**	--	--	--	--	--	--	--

TABLE 2
CURRENT AND HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 Station No. 5191/5043
449 HEGENBERGER RD
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)	DRO (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (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)
	1/14/1998	8.04	2.16	NP	5.88	**340**	**310**	ND	ND	**0.62**	**0.65**	**140**	--	--	--	--	--	--	--
	4/1/1998	8.04	2.20	NP	5.84	**320**	**370**	**5.7**	ND	ND	ND	**93**	--	--	--	--	--	--	--
	7/15/1998	8.04	3.38	NP	4.66	**510**	**460**	ND	ND	ND	ND	**230**	--	--	--	--	--	--	--
	10/16/1998	8.04	2.30	NP	5.74	**67**	**330**	**4.7**	ND	ND	ND	**60**	--	--	--	--	--	--	--
	1/25/1999	8.04	2.42	NP	5.62	**120**	**420**	**1.5**	ND	ND	ND	**180**	--	--	--	--	--	--	--
	4/15/1999	8.04	2.16	NP	5.88	**170**	**290**	**0.54**	ND	ND	ND	**160**	--	--	--	--	--	--	--
	7/14/1999	8.04	2.35	NP	5.69	**420**	**290**	**3.2**	ND	ND	ND	**160**	--	--	--	--	--	--	--
	10/21/1999	8.04	2.49	NP	5.55	**350**	**360**	**0.77**	ND	ND	ND	**82**	--	--	--	--	--	--	--
	1/20/2000	8.04	2.38	NP	5.66	**2060**	ND	**0.81**	ND	ND	ND	**54**	--	--	--	--	--	--	--
	4/13/2000	8.04	2.76	NP	5.28	**200**	**250**	**0.69**	ND	ND	ND	**150**	ND	ND	ND	ND	ND	ND	ND
	7/14/2000	8.04	3.26	NP	4.78	**423**	**345**	ND	ND	ND	ND	**94.7**	--	--	--	--	--	--	--
	10/26/2000	8.04	3.12	NP	4.92	**330**	**480**	**6.0**	ND	ND	ND	**120**	--	--	--	--	--	--	--
	1/3/2001	8.04	3.65	NP	4.39	**287**	**364**	**1.59**	ND	ND	ND	**118**	--	--	--	--	--	--	--
	4/4/2001	8.04	3.98	NP	4.06	**360**	**417**	**1.24**	ND	ND	**0.802**	**237**	--	--	--	--	--	--	--
	7/17/2001	8.04	3.12	NP	4.92	**270**	**480**	ND	ND	ND	ND	**150**	--	--	--	--	--	--	--
	10/1/2001	8.04	3.25	NP	4.79	**270**	**310**	**1.0**	<0.50	<0.50	<0.50	**53**	--	--	--	--	--	--	--
	1/31/2002	8.04	2.27	NP	5.77	**250**	**250**	**3.5**	<1.0	<1.0	<1.0	**110**	--	--	--	--	--	--	--
	4/18/2002	8.04	3.55	NP	4.49	**320**	**300**	<2.0	<2.0	<2.0	<2.0	**59**	--	--	--	--	--	--	--
	7/28/2002	8.04	2.55	NP	5.49	**310**	**500**	<0.50	<0.50	<0.50	<1.0	**130**	--	--	--	--	--	--	--
	10/9/2002	8.04	2.47	NP	5.57	**700**	**690**	<5	<5	<5	<10	**120**	--	--	--	--	--	--	--
	1/2/2003	8.04	1.70	NP	6.34	**210**	**310**	<0.50	<0.50	<0.50	<1.0	**110**	<2.0	<2.0	<2.0	<100	<500	<2.0	<2.0
	4/1/2003	8.04	3.48	NP	4.56	**200**	**250**	<1.0	<1.0	<1.0	<2.0	**210**	--	--	--	--	--	--	--
	7/1/2003	8.04	2.65	NP	5.39	**380**	**450**	<2.5	<2.5	<2.5	<5.0	**70**	--	--	--	--	<2500	--	--
	10/2/2003	8.04	3.12	NP	4.92	**300**	<250	<2.5	<2.5	<2.5	<5.0	**210**	--	--	--	--	<2500	--	--
	1/9/2004	8.04	2.39	NP	5.65	**200**	**300**	<0.50	**0.53**	**0.53**	**1.5**	**66**	--	--	--	--	<500	--	--
	4/26/2004	8.04	3.11	NP	4.93	**160**	**440**	**2.5**	**5.5**	**2.9**	**9.4**	**81**	--	--	--	--	<50	--	--
MW-3	7/22/2004	8.04	2.51	NP	5.53	**330**	**420**	<0.5	<0.5	<0.5	<1	**72**	--	--	--	--	<1000	--	--
	10/29/2004	8.04	2.00	NP	6.04	**200**	**460**	**5.6**	**15**	**10**	**46**	**48**	--	--	--	--	<50	--	--
	1/10/2005	8.04	1.52	NP	6.52	**250**	**280**	<0.50	**0.62**	<0.50	**2.4**	**64**	--	--	--	--	<50	--	--
	6/15/2005	8.04	2.00	NP	6.04	**360**	**460**	<0.50	**0.70**	**0.56**	**1.9**	**110**	--	--	--	--	<50	--	--
	9/27/2005	8.04	1.90	NP	6.14	<200	**210**	<0.50	**0.60**	<0.50	<1.0	**100**	<0.50	<0.50	<0.50	**79**	<250	--	--
	12/13/2005	8.04	2.35	NP	5.69	**230**	**230**	<0.50	<0.50	<0.50	<1.0	**92**	--	--	--	--	<250	--	--
	3/23/2006	8.04	1.84	NP	6.20	**260**	**290**	<0.50	<0.50	<0.50	<1.0	**88**	--	--	--	--	<250	--	--
	6/23/2006	8.04	2.26	NP	5.78	**330**	**500**	<0.50	<0.50	<0.50	<1.0	**75**	--	--	--	--	<250	--	--
	9/26/2006	8.04	2.08	NP	5.96	**260**	**270**	<0.50	<0.50	<0.50	<0.50	**73**	--	--	--	--	<250	--	--
	12/22/2006	8.04	1.88	NP	6.16	**250**	**260**	<0.50	<0.50	<0.50	**1.2**	**71**	--	--	--	--	<250	--	--
	3/30/2007	8.04	2.47	NP	5.57	**210**	**390**	<0.50	<0.50	<0.50	<0.50	**120**	--	--	--	--	<250	--	--
	6/28/2007	8.04	2.54	NP	5.50	**290**	**370**	<0.50	<0.50	<0.50	<0.50	**55**	--	--	--	--	<250	--	--
	9/25/2007	8.04	2.56	NP	5.48	**210**	**350**	<0.50	<0.50	<0.50	<0.50	**61**	--	--	--	--	<250	--	--
	12/28/2007	8.04	2.29	NP	5.75	**150**	**260**	<0.50	<0.50	<0.50	<1.0	**66**	--	--	--	--	<250	--	--
	3/22/2008	8.04	3.26	NP	4.78	**230**	**390**	<0.50	<0.50	<0.50	<1.0	**39**	--	--	--	--	<250	--	--
	6/23/2008	8.04	2.60	NP	5.44	**130**	**200**	<0.50	<0.50	<0.50	<1.0	**46**	--	--	--	--	<250	--	--
	9/19/2008	8.04	3.45	NP	4.59	**93**	**180**	<0.50	<0.50	<0.50	<1.0	**120**	--	--	--	--	<250	--	--
	12/31/2008	8.04	2.55	NP	5.49	**110**	**190**	<0.50	<0.50	<0.50	<1.0	38	--	--	--	--	<250	--	--
	3/27/2009	8.04	2.37	NP	5.67	**130**	**150**	<0.50	<0.50	<0.50	<1.0	50	--	--	--	--	<250	--	--
	5/28/2009	8.04	3.32	NP	4.72	**120**	**190**	<0.50	<0.50	<0.50	<1.0	60	--	--	--	--	<250	--	--
	9/17/2009	8.04	2.63	NP	5.41	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/17/2009	8.04	2.13	NP	5.91	**338**	**300**	<0.50	<0.50	**0.78**	<1.5	**43.1**	--	--	--	--	<250	--	--
	3/29/2010	8.04	2.22	NP	5.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/30/2010	10.81	2.91	NP	7.90	**89.7**	**261**	<0.50	<0.50	<0.50	<1.5	**89.0**	--	--	--	--	<250	--	--
	7/6/2010	10.81	2.66	NP	8.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/20/2010	10.81	3.12	NP	7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/8/2010	10.81	2.37	NP	8.44	**137**	**306**	<0.50	<0.50	<0.50	<1.5	**58.8**	--	--	--	--	<250	--	--

TABLE 2
CURRENT AND HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 Station No. 5191/5043
449 HEGENBERGER RD
OAKLAND, CALIFORNIA

anteagroup

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA													
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	DRO (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (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)
	3/14/2011	10.81	2.26	NP	8.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/2/2011	10.81	2.43	NP	8.38	**155 T4**	**283**	**0.58**	**1.3**	<0.50	**2.2**	**42.1**	--	--	--	**55.7**	<250	--	--
MW-3	9/7/2011	10.81	2.36	NP	8.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/5/2011	10.81	2.55	NP	8.26	**81.7 T4**	**381**	<0.50	<0.50	<0.50	<1.5	**41.8**	--	--	--	--	<250	--	--
	3/6/2012	10.81	2.63	NP	8.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/31/1992	NSVD	NG	NG	NG	**90**	**240**	ND	ND	ND	**0.54**	--	--	--	--	--	--	--	--
	11/30/1992	NSVD	NG	NG	NG	**61**	**420**	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	2/4/1993	NSVD	NG	NG	NG	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	5/4/1993	9.00	4.09	NP	4.91	ND	**110**	**0.95**	ND	ND	ND	--	--	--	--	--	--	--	--
	8/4/1993	9.00	5.01	NP	3.99	**81**	**250**	ND	**3.5**	ND	**4.1**	--	--	--	--	--	--	--	--
	11/3/1993	8.41	4.23	NP	4.18	**68**	**130**	ND	ND	ND	ND	--	--	--	--	--	--	--	--
MW-4	2/7/1994	8.41	3.35	NP	5.06	ND	**56**	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	5/19/1994	8.41	3.92	NP	4.49	**90**	**140**	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	6/25/1994	8.41	4.35	NP	4.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/27/1994	8.41	4.28	NP	4.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/15/1994	8.41	4.27	NP	4.14	**72**	**59**	ND	**0.6**	ND	ND	--	--	--	--	--	--	--	--
	11/14/1994	8.41	4.05	NP	4.36	ND	**130**	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	2/21/1995	NSVD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD
	8/31/1992	NSVD	NG	NG	NG	**690**	**78**	**0.89**	ND	ND	**13**	--	--	--	--	--	--	--	--
	11/30/1992	NSVD	NG	NG	NG	**470**	**930**	**70**	**290**	**0.79**	**14**	--	--	--	--	--	--	--	--
	2/4/1993	NSVD	NG	NG	NG	**5500**	**5700**	**38**	ND	**620**	**170**	--	--	--	--	--	--	--	--
	5/4/1993	8.95	4.37	NP	4.58	**4600**	**7400**	**41**	ND	**1000**	**35**	--	--	--	--	--	--	--	--
	8/4/1993	8.95	5.81	NP	3.14	**970**	**1500**	**130**	**1**	**460**	**11**	--	--	--	--	--	--	--	--
	11/3/1993	8.95	5.68	NP	3.27	**2100**	**13000**	**350**	ND	**3500**	**530**	--	--	--	--	--	--	--	--
MW-5	2/7/1994	8.95	5.11	NP	3.84	**830**	**2000**	**87**	ND	**370**	**110**	--	--	--	--	--	--	--	--
	5/19/1994	8.95	5.09	NP	3.86	**600**	**260**	**44**	ND	**32**	**4.1**	--	--	--	--	--	--	--	--
	6/25/1994	8.95	4.55	NP	4.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/27/1994	8.95	5.72	NP	3.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/15/1994	8.95	5.68	NP	3.27	**860**	**1600**	**110**	ND	**340**	**72**	--	--	--	--	--	--	--	--
	11/14/1994	8.95	5.63	NP	3.32	**290**	**250**	**40**	ND	ND	**5**	--	--	--	--	--	--	--	--
	2/21/1995	NSVD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD
	8/31/1992	NSVD	NG	NG	NG	**750**	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	11/30/1992	NSVD	NG	NG	NG	**1400**	**9200**	**550**	ND	**740**	**1600**	--	--	--	--	--	--	--	--
	2/4/1993	NSVD	NG	NG	NG	**890**	**3600**	**340**	ND	**290**	**550**	--	--	--	--	--	--	--	--
	5/4/1993	9.12	3.72	NP	5.40	**1800**	**4900**	**360**	**18**	**450**	**430**	--	--	--	--	--	--	--	--
	8/4/1993	9.12	5.15	NP	3.97	**1100**	**3400**	**390**	ND	**440**	**190**	--	--	--	--	--	--	--	--
	11/3/1993	8.87	5.25	NP	3.62	**390**	**1400**	**320**	ND	**200**	**7.7**	--	--	--	--	--	--	--	--
	2/7/1994	8.87	4.55	NP	4.32	**970**	**4900**	**650**	ND	**250**	**35**	--	--	--	--	--	--	--	--
	5/19/1994	8.87	4.62	NP	4.25	**1400**	**3600**	**300**	**1.7**	**210**	**41**	--	--	--	--	--	--	--	--
	8/15/1994	8.87	5.08	NP	3.79	**790**	**1300**	**130**	**6.7**	**54**	**57**	--	--	--	--	--	--	--	--
	11/14/1994	8.87	5.30	NP	3.57	**800**	**730**	**50**	ND	ND	**39**	--	--	--	--	--	--	--	--
	2/21/1995	8.87	5.37	NP	3.50	**730**	**2000**	**250**	**4.6**	**25**	**30**	--	--	--	--	--	--	--	--
	5/18/1995	8.87	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI
	8/17/1995	8.87	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI
MW-6	7/26/1996	8.87	6.40	3.33	4.97	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	10/28/1996	8.87	4.10	0.21	4.93	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	11/13/1996	8.87	4.02	0.25	5.04	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	11/25/1996	8.87	4.01	0.75	5.42	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	12/4/1996	8.87	3.65	0.50	5.60	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	12/19/1996	8.87	4.80	2.20	5.72	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	1/8/1997	8.87	4.84	1.75	5.34	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	1/14/1997	8.87	4.51	1.15	5.22	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	1/27/1997	8.87	4.00	1.75	6.18	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	1/29/1997	8.87	3.24	0.31	5.86	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	2/11/1997	8.87	4.65	1.20	5.12	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	2/24/1997	8.87	4.81	1.10	4.89	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	3/10/1997	8.87	4.60	0.95	4.98	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH

TABLE 2
CURRENT AND HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 Station No. 5191/5043
449 HEGENBERGER RD
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)	DRO (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (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)
MW-6	3/17/1997	8.87	4.50	0.89	5.04	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	3/31/1997	8.87	4.65	1.00	4.97	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	4/15/1997	8.87	4.90	1.03	4.74	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	4/28/1997	8.87	4.78	0.03	4.11	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	5/15/1997	8.87	4.60	0.25	4.46	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	5/27/1997	8.87	4.50	0.25	4.56	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	6/9/1997	8.87	4.60	0.20	4.42	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	6/24/1997	8.87	4.50	0.25	4.56	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	7/9/1997	8.87	4.80	0.60	4.52	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	7/15/1997	8.87	4.63	0.42	4.56	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	7/21/1997	8.87	4.75	0.25	4.31	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	8/6/1997	8.87	4.50	0.10	4.45	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	8/20/1997	8.87	4.55	0.10	4.40	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	9/2/1997	8.87	4.75	0.05	4.16	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	10/9/1997	8.87	4.84	0.04	4.06	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	1/14/1998	8.87	3.90	0.94	5.68	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	2/12/1998	8.87	3.35	0.64	6.00	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	3/3/1998	8.87	4.51	0.02	4.38	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	4/1/1998	8.87	3.67	1.60	6.40	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	5/26/1998	8.87	4.11	0.50	5.14	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	6/15/1998	8.87	5.03	0.30	4.07	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	7/15/1998	8.87	4.56	0.05	4.35	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	8/21/1998	8.87	4.77	0.02	4.12	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	9/30/1998	8.87	5.08	0.03	3.81	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	10/16/1998	8.87	4.31	2.40	6.36	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	11/6/1998	8.87	3.98	0.17	5.02	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	11/25/1998	8.87	3.92	0.10	5.03	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	12/28/1998	8.87	3.90	0.20	5.12	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	1/25/1999	8.87	4.18	0.60	5.14	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	2/22/1999	8.87	4.07	0.22	4.97	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	3/22/1999	8.87	4.32	0.15	4.66	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	4/15/1999	8.87	4.23	0.95	5.35	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	5/28/1999	8.87	4.38	0.39	4.78	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	6/29/1999	8.87	4.12	0.02	4.77	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	7/14/1999	8.87	4.20	0.03	4.69	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	8/23/1999	8.87	4.51	0.24	4.54	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	9/30/1999	8.87	4.17	0.17	4.83	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	10/21/1999	8.87	4.27	0.12	4.69	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	11/29/1999	8.87	4.18	NP	4.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/20/1999	8.87	4.26	0.01	4.62	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	1/20/2000	8.87	4.31	NP	4.56	**67600**	**130000**	**2900**	**8600**	**2000**	**16000**	ND	--	--	--	--	--	--	--
	2/26/2000	8.87	3.98	NP	4.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/31/2000	8.87	4.14	NP	4.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2000	8.87	4.04	NP	4.83	**8700**	**140000**	**5000**	**14000**	**3600**	**27000**	**7700**	--	--	--	--	--	--	--
	5/26/2000	8.87	4.41	NP	4.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/17/2000	8.87	4.35	NP	4.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/14/2000	8.87	4.47	NP	4.40	**133000**	**259000**	**7670**	**13700**	**6860**	**40700**	ND	--	--	--	--	--	--	--
	8/24/2000	8.87	3.71	NP	5.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/27/2000	8.87	4.33	NP	4.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/26/2000	8.87	4.32	NP	4.55	**61000**	**110000**	**7000**	**6200**	**3700**	**12000**	**670**	--	--	--	--	--	--	--
	1/3/2001	8.87	4.52	NP	4.35	**929**	**84700**	**3950**	**4130**	**3650**	**11800**	ND	--	--	--	--	--	--	--
	4/4/2001	8.87	4.29	NP	4.58	**18000**	**69800**	**2060**	**2840**	**3650**	**10900**	**47.8**	ND	ND	ND	ND	ND	ND	ND
	7/17/2001	8.87	4.37	NP	4.50	**20000**	**100000**	**3200**	**3300**	**3400**	**12000**	ND	--	--	--	--	--	--	--

TABLE 2
CURRENT AND HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 Station No. 5191/5043
449 HEGENBERGER RD
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)	DRO (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (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)
MW-6	10/1/2001	8.87	4.45	NP	4.42	24000	110000	3200	2400	4500	13000	<1000	--	--	--	--	--	--	--
	1/31/2002	8.87	4.03	NP	4.84	11000	230000	2400	1800	5400	16000	<2500	--	--	--	--	--	--	--
	4/18/2002	8.87	3.45	NP	5.42	3500	94000	6800	13000	3000	19000	<500	--	--	--	--	--	--	--
	7/28/2002	8.87	2.24	NP	6.63	27000	110000	530	170	3200	7300	<100	--	--	--	--	--	--	--
	10/9/2002	8.87	3.53	NP	5.34	170000	970000	10000	39000	13000	94000	<2000	--	--	--	--	--	--	--
	1/2/2003	8.87	2.34	NP	6.53	66000	270000	6100	15000	5400	37000	<200	--	--	--	--	--	--	--
	4/1/2003	8.87	3.17	NP	5.70	35000	3000000	8000	39000	37000	260000	<2000	--	--	--	--	--	--	--
	7/1/2003	8.87	3.55	NP	5.32	11000	38000	2100	990	2700	6500	<100	--	--	--	--	<25000	--	--
	10/2/2003	8.87	3.82	NP	5.05	<50	100000	5600	6900	4700	18000	<800	--	--	--	--	<200000	--	--
	1/9/2004	8.87	2.80	NP	6.07	20000	170000	2800	3300	4700	16000	<200	--	--	--	--	<50000	--	--
	4/26/2004	8.87	3.40	NP	5.47	13000	97000	5900	9000	5100	23000	<50	--	--	--	--	<5000	--	--
	7/22/2004	8.87	3.54	NP	5.33	33000	110000	4100	5100	4000	16000	<200	--	--	--	--	<300000	--	--
	10/29/2004	8.87	3.03	NP	5.84	78000	100000	5200	6100	4200	15000	<50	--	--	--	--	<5000	--	--
	1/10/2005	8.87	2.35	NP	6.52	12000	71000	1600	3700	2100	9900	<50	--	--	--	--	<5000	--	--
	6/15/2005	8.87	2.47	NP	6.40	16000	130000	800	1800	2200	9300	<50	--	--	--	--	<5000	--	--
	9/27/2005	8.87	2.55	NP	6.32	2500	13000	82	120	430	990	0.56	1.8	<0.50	<0.50	<10	<250	--	--
	12/13/2005	8.87	3.28	NP	5.59	18000	68000	1500	1100	2200	7700	<50	--	--	--	--	<25000	--	--
	3/23/2006	8.87	2.87	NP	6.00	73000	41000	290	140	1500	2700	<50	--	--	--	--	<25000	--	--
	6/23/2006	8.87	3.15	NP	5.72	35000	50000	2200	1400	1900	5700	<12	--	--	--	--	<6200	--	--
	9/26/2006	8.87	3.08	NP	5.79	22000	130000	2200	1000	2900	8800	<50	--	--	--	--	<25000	--	--
	12/22/2006	8.87	2.90	NP	5.97	62000	90000	940	610	1900	4700	<50	--	--	--	--	<25000	--	--
	3/30/2007	8.87	3.26	NP	5.61	62000	210000	1100	560	3400	12000	<10	--	--	--	--	<5000	--	--
	6/28/2007	8.87	3.46	NP	5.41	71000	67000	2200	1300	2700	10000	<25	--	--	--	--	<12000	--	--
	9/25/2007	8.87	3.52	NP	5.35	58000	56000	2900	720	2400	9000	<25	--	--	--	--	<12000	--	--
	12/28/2007	8.87	3.27	NP	5.60	18000	78000	28000	2700	4000	8100	16000	--	--	--	--	<12000	--	--
	3/22/2008	8.87	2.48	NP	6.39	68000	66000	380	150	1500	2400	<25	--	--	--	--	<12000	--	--
	6/23/2008	8.87	3.54	NP	5.33	68000	59000	1600	130	1800	4100	25	--	--	--	--	<12000	--	--
	9/19/2008	8.87	4.06	NP	4.81	180000	65000	2000	230	2000	4500	<12	--	--	--	--	<6200	--	--
	12/31/2008	8.87	3.45	NP	5.42	68000	91000	2000	320	5300	13000	<50	--	--	--	--	<25000	--	--
	3/27/2009	8.87	3.09	NP	5.78	170000	150000	1300	240	2800	7200	<50	--	--	--	--	<25000	--	--
	5/28/2009	8.87	3.49	NP	5.38	78000	53000	1700	200	2300	5400	<50	--	--	--	--	<25000	--	--
	9/17/2009	8.87	3.64	NP	5.23	250000 T4	77000	2100	1400	2600	8500	<12	--	--	--	--	<6200	--	--
	12/17/2009	8.87	3.14	NP	5.73	30300	59100	1730	199	2260	5460	20.3	--	--	--	--	<250	--	--
	3/29/2010	8.87	3.16	NP	5.71	106000	48400	1980	208	3070	8070	12.1	--	--	--	--	<250	--	--
	6/30/2010	11.55	3.50	NP	8.05	170000	78700	2130	281	2860	8400	5.8	--	--	--	--	<250	--	--
	7/6/2010	11.55	3.49	NP	8.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/20/2010	11.55	3.75	NP	7.80	18800	64500	2300	170	2770	6260	19.3	--	--	--	--	<250	--	--
	12/8/2010	11.55	8.42	NP	3.13	28700	78400	1300	1680	3490	20600	11.3	--	--	--	--	<250	--	--
	3/14/2011	11.55	3.40	NP	8.15	93000	44600	912	338	728	3670	16.3	--	--	--	134	<250	--	--
	6/2/2011	11.55	2.76	NP	8.79	33700 T4	56200	780	262	651	3890	6.7	--	--	--	81.0	<250	--	--
	9/7/2011	11.55	2.83	NP	8.72	6780 T4	16600	15.6	10.6	89.6	339	<0.50	--	--	--	--	<250	--	--
	12/5/2011	11.55	3.56	NP	7.99	20200 T4	64600	646	95.4	924	4050	14.9	--	--	--	--	<250	--	--
	3/6/2012	11.55	3.43	NP	8.12	14800 T4	55000	1020	131	1320	4730	18.5	--	--	--	316	<1250	--	--
MW-7	5/27/1997	8.83	4.50	NP	4.33	--	68	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	6/1/1997	8.83	4.54	NP	4.29	69	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/15/1997	8.83	4.70	NP	4.13	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	10/9/1997	8.83	4.30	NP	4.53	190	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	1/14/1998	8.83	2.88	NP	5.95	65	ND	ND	ND	ND	ND	36	--	--	--	--	--	--	--
	4/1/1998	8.83	3.13	NP	5.70	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	7/15/1998	8.83	4.45	NP	4.38	74	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	10/16/1998	8.83	3.45	NP	5.38	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	1/25/1999	8.83	3.22	NP	5.61	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	4/15/1999	8.83	3.11	NP	5.72	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	7/14/1999	8.83	3.34	NP	5.49	69	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--

TABLE 2
CURRENT AND HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 Station No. 5191/5043
449 HEGENBERGER RD
OAKLAND, CALIFORNIA

anteagroup

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA													
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	DRO (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (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)
MW-7	10/21/1999	8.83	3.43	NP	5.40	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
MW-7	1/20/2000	8.83	3.29	NP	5.54	ND	ND	ND	ND	ND	ND	**4.2**	--	--	--	--	--	--	--
MW-7	4/13/2000	8.83	3.39	NP	5.44	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
MW-7	7/14/2000	8.83	4.42	NP	4.41	**68.0**	ND	ND	ND	ND	ND	**7.83**	--	--	--	--	--	--	--
MW-7	7/17/2001	8.83	5.06	NP	3.77	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
MW-7	10/1/2001	8.83	4.98	NP	3.85	<51	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
MW-7	1/31/2002	8.83	3.88	NP	4.95	**90**	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
MW-7	4/18/2002	8.83	4.03	NP	4.80	**78**	<50	<0.50	<0.50	<0.50	<0.50	**5.7**	--	--	--	--	--	--	--
MW-7	7/28/2002	8.83	3.59	NP	5.24	<50	<50	<0.50	<0.50	<0.50	<1.0	**3.9**	--	--	--	--	--	--	--
MW-7	10/9/2002	8.83	4.53	NP	4.30	<96	<50	<0.50	<0.50	<0.50	<1.0	**3.9**	--	--	--	--	--	--	--
MW-7	1/3/2003	8.83	3.36	NP	5.47	**78**	<50	<0.50	<0.50	<0.50	<1.0	<2.0	--	--	--	--	--	--	--
MW-7	4/1/2003	8.83	3.94	NP	4.89	**67**	**71**	<0.50	<0.50	**0.71**	<1.0	**3.4**	--	--	--	--	--	--	--
MW-7	7/1/2003	8.83	4.60	NP	4.23	**68**	**64**	<0.50	<0.50	**0.77**	**2.0**	**35**	--	--	--	--	<500	--	--
MW-7	10/2/2003	8.83	5.46	NP	3.37	**82**	<50	<0.50	<0.50	<0.50	<1.0	**4.9**	--	--	--	--	<500	--	--
MW-7	1/9/2004	8.83	3.55	NP	5.28	**75**	**54**	<0.50	<0.50	<0.50	<1.0	**2.4**	--	--	--	--	<500	--	--
MW-7	4/26/2004	8.83	4.49	NP	4.34	<50	<50	<0.50	<0.50	<0.50	**1.5**	**2.3**	--	--	--	--	<50	--	--
MW-7	7/22/2004	8.83	4.93	NP	3.90	<200	**82**	**0.90**	**2.0**	**3.5**	**9.9**	**1.4**	--	--	--	--	<1000	--	--
MW-7	10/29/2004	8.83	3.71	NP	5.12	**54**	**210**	**0.67**	**1.6**	**1.7**	**5.8**	<0.50	--	--	--	--	<50	--	--
MW-7	1/10/2005	8.83	2.77	NP	6.06	<50	**74**	**0.51**	**2.2**	**1.7**	**7.0**	<0.50	--	--	--	--	<50	--	--
MW-7	6/15/2005	8.83	3.40	NP	5.43	<50	<50	<0.50	<0.50	<0.50	<1.0	**0.88**	--	--	--	--	<50	--	--
MW-7	9/27/2005	8.83	3.44	NP	5.39	<200	<50	**0.59**	**1.2**	<0.50	<1.0	**0.96**	<0.50	<0.50	<0.50	<10	<250	--	--
MW-7	12/13/2005	8.83	3.98	NP	4.85	<200	<50	<0.50	<0.50	<0.50	<1.0	**0.65**	--	--	--	--	<250	--	--
MW-7	3/23/2006	8.83	3.37	NP	5.46	<200	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
MW-7	6/23/2006	8.83	5.25	NP	3.58	<200	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
MW-7	9/26/2006	8.83	4.13	NP	4.70	<50	<50	<0.50	<0.50	<0.50	<0.50	**0.77**	--	--	--	--	<250	--	--
MW-7	12/22/2006	8.83	3.63	NP	5.20	**630**	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	<250	--	--
MW-7	3/30/2007	8.83	4.31	NP	4.52	**94**	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	<250	--	--
MW-7	6/28/2007	8.83	4.62	NP	4.21	<50	<50	<0.50	<0.50	<0.50	<0.50	**0.54**	--	--	--	--	<250	--	--
MW-7	9/25/2007	8.83	4.65	NP	4.18	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	<250	--	--
MW-7	12/28/2007	8.83	3.99	NP	4.84	**75**	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
MW-7	3/22/2008	8.83	4.08	NP	4.75	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
MW-7	6/23/2008	8.83	4.10	NP	4.73	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
MW-7	9/19/2008	8.83	4.86	NP	3.97	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
MW-7	12/31/2008	8.83	4.17	NP	4.66	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
MW-7	3/27/2009	8.83	4.00	NP	4.83	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
MW-7	5/28/2009	8.83	4.71	NP	4.12	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
MW-7	9/17/2009	8.83	4.87	NP	3.96	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-7	3/29/2010	8.83	WI	WI	WI	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	6/30/2010	11.64	4.45	NP	7.19	**66.0**	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	<250	--	--
MW-7	7/6/2010	11.64	4.63	NP	7.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	9/20/2010	11.64	4.85	NP	6.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	12/8/2010	11.64	3.99	NP	7.65	**57.7**	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	<250	--	--
MW-7	3/14/2011	11.64	3.81	NP	7.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	6/2/2011	11.64	3.90	NP	7.74	**63.0 T4**	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	<5.0	<250	--	--
MW-7	9/7/2011	11.64	3.72	NP	7.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	12/5/2011	11.64	4.60	NP	7.04	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	<250	--	--
MW-7	3/6/2012	11.64	4.54	NP	7.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	5/27/1997	8.52	3.42	NP	5.10	--	**310**	**0.88**	**0.67**	**15**	**70**	ND	--	--	--	--	--	--	--
MW-8	6/1/1997	8.52	3.46	NP	5.06	**320**	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	7/15/1997	8.52	3.49	NP	5.03	ND	ND	ND	ND	**2.7**	**3.8**	ND	--	--	--	--	--	--	--
MW-8	10/9/1997	8.52	3.73	NP	4.79	**390**	**590**	**1.4**	ND	**32**	**4.1**	ND	--	--	--	--	--	--	--
MW-8	1/14/1998	8.52	1.92	NP	6.60	**230**	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
MW-8	4/1/1998	8.52	2.38	NP	6.14	**510**	ND	ND	ND	ND	ND	**4.7**	--	--	--	--	--	--	--
MW-8	7/15/1998	8.52	3.53	NP	4.99	**140**	ND	ND	ND	**0.56**	**1.1**	ND	--	--	--	--	--	--	--

TABLE 2
CURRENT AND HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 Station No. 5191/5043
449 HEGENBERGER RD
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)	DRO (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (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)
MW-8	10/16/1998	8.52	3.04	NP	5.48	**170**	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	1/25/1999	8.52	2.92	NP	5.60	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	4/15/1999	8.52	2.40	NP	6.12	**91**	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	7/14/1999	8.52	3.03	NP	5.49	**120**	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	10/21/1999	8.52	3.11	NP	5.41	**110**	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	1/20/2000	8.52	3.06	NP	5.46	**583**	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	4/13/2000	8.52	2.84	NP	5.68	**80**	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	7/14/2000	8.52	3.39	NP	5.13	**113**	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	7/17/2001	8.52	3.46	NP	5.06	**ND**	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	10/1/2001	8.52	3.51	NP	5.01	**<50**	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
	1/31/2002	8.52	2.75	NP	5.77	**260**	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	4/18/2002	8.52	2.98	NP	5.54	**160**	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	7/28/2002	8.52	2.41	NP	6.11	**140**	<50	<0.50	<0.50	<0.50	<1.0	<2.0	--	--	--	--	--	--	--
	10/9/2002	8.52	2.09	NP	6.43	**120**	<50	<0.50	<0.50	<0.50	<1.0	<2.0	--	--	--	--	--	--	--
	1/2/2003	8.52	1.98	NP	6.54	**210**	<50	<0.50	<0.50	<0.50	<1.0	<2.0	--	--	--	--	--	--	--
	4/1/2003	8.52	2.66	NP	5.86	**220**	<50	<0.50	<0.50	<0.50	<1.0	<2.0	--	--	--	--	--	--	--
	7/1/2003	8.52	3.08	NP	5.44	**170**	<50	<0.50	<0.50	<0.50	<1.0	<2.0	--	--	--	--	<500	--	--
	10/2/2003	8.52	3.89	NP	4.63	**350**	**540**	**3.9**	**15**	**29**	**80**	<2.0	--	--	--	--	<500	--	--
	1/9/2004	8.52	2.38	NP	6.14	**180**	<50	<0.50	<0.50	<0.50	<1.0	<2.0	--	--	--	--	<500	--	--
	4/26/2004	8.52	2.89	NP	5.63	**100**	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<50	--	--
	7/22/2004	8.52	3.25	NP	5.27	**250**	<50	<0.5	<0.5	<0.5	<1	<0.5	--	--	--	--	<1000	--	--
	10/29/2004	8.52	3.06	NP	5.46	**120**	<50	<0.50	<0.50	**0.82**	**2.5**	<0.50	--	--	--	--	<50	--	--
	1/10/2005	8.52	1.92	NP	6.60	**140**	**58**	<0.50	**0.61**	**1.2**	**4.0**	<0.50	--	--	--	--	<50	--	--
	6/15/2005	8.52	2.22	NP	6.30	**140**	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<50	--	--
	9/27/2005	8.52	2.43	NP	6.09	<200	<50	<0.50	<0.50	**1.2**	<1.0	<0.50	<0.50	<0.50	<0.50	<10	<250	--	--
	12/13/2005	8.52	2.89	NP	5.63	<200	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
	3/23/2006	8.52	2.12	NP	6.40	<200	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
	6/23/2006	8.52	2.65	NP	5.87	<230	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
	9/26/2006	8.52	2.75	NP	5.77	**110**	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	<250	--	--
	12/22/2006	8.52	2.58	NP	5.94	**100**	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	<250	--	--
	3/30/2007	8.52	2.74	NP	5.78	**120**	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	<250	--	--
	6/28/2007	8.52	2.90	NP	5.62	**140**	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	<250	--	--
	9/25/2007	8.52	3.26	NP	5.26	**110**	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	<250	--	--
	12/28/2007	8.52	2.64	NP	5.88	**110**	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
	3/22/2008	8.52	2.31	NP	6.21	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
	6/23/2008	8.52	3.13	NP	5.39	<58	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
	9/19/2008	8.52	3.72	NP	4.80	**79**	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
	12/31/2008	8.52	2.98	NP	5.54	**110**	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
	3/27/2009	8.52	2.49	NP	6.03	**89**	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
	5/28/2009	8.52	3.12	NP	5.40	**91**	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
	9/17/2009	8.52	3.63	NP	4.89	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/29/2010	8.52	WI	WI	WI	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/30/2010	11.32	2.60	NP	8.72	**182**	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	<250	--	--
	7/6/2010	11.32	3.03	NP	8.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/20/2010	11.32	3.33	NP	7.99	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/8/2010	11.32	2.82	NP	8.50	**116**	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	<250	--	--
	3/14/2011	11.32	3.84	NP	7.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/2/2011	11.32	2.77	NP	8.55	**168 T4**	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	<5.0	<250	--	--
	9/7/2011	11.32	2.84	NP	8.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/5/2011	11.32	2.68	NP	8.64	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	<250	--	--
	3/6/2012	11.32	3.07	NP	8.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	2/21/1995	8.29	1.98	NP	6.31	**71**	**70**	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	5/18/1995	8.29	3.47	NP	4.82	ND	**52**	ND	**1.1**	ND	**1.9**	--	--	--	--	--	--	--	--
	8/17/1995	8.29	1.49	NP	6.80	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--

TABLE 2
CURRENT AND HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 Station No. 5191/5043
449 HEGENBERGER RD
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)	DRO (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (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)
MW-9	7/26/1996	8.29	0.28	NP	8.01	**98**	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	10/28/1996	8.29	1.15	NP	7.14	**99**	ND	ND	ND	ND	ND	**7.6**	--	--	--	--	--	--	--
	1/29/1997	8.29	1.05	NP	7.24	**54**	ND	ND	ND	ND	ND	**5.4**	--	--	--	--	--	--	--
	4/15/1997	8.29	1.88	NP	6.41	**94**	ND	ND	ND	ND	ND	**5.4**	--	--	--	--	--	--	--
	5/27/1997	8.29	1.05	NP	7.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/15/1997	8.29	1.90	NP	6.39	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	10/9/1997	8.29	1.76	NP	6.53	**160**	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	1/14/1998	8.29	1.26	NP	7.03	**110**	ND	ND	ND	ND	ND	**3.0**	--	--	--	--	--	--	--
	4/1/1998	8.29	0.85	NP	7.44	**110**	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	7/15/1998	8.29	1.52	NP	6.77	**200**	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	10/16/1998	8.29	0.81	NP	7.48	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	1/25/1999	8.29	0.92	NP	7.37	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	4/15/1999	8.29	0.90	NP	7.39	ND	**75**	**21**	ND	ND	**1.1**	**680**	--	--	--	--	--	--	--
	7/14/1999	8.29	1.04	NP	7.25	**140**	ND	**1.9**	ND	ND	ND	**260**	--	--	--	--	--	--	--
	10/21/1999	8.29	1.23	NP	7.06	**210**	ND	ND	ND	ND	ND	**170**	--	--	--	--	--	--	--
	1/20/2000	8.29	1.18	NP	7.11	**519**	ND	**1.1**	ND	ND	ND	**35**	--	--	--	--	--	--	--
	4/13/2000	8.29	1.08	NP	7.21	**81**	**160**	**0.64**	ND	ND	ND	**53**	--	--	--	--	--	--	--
	7/14/2000	8.29	1.43	NP	6.86	**107**	ND	ND	ND	ND	ND	**20.2**	--	--	--	--	--	--	--
	10/26/2000	8.29	1.38	NP	6.91	**240**	**240**	**2.9**	ND	ND	ND	**56**	--	--	--	--	--	--	--
	1/3/2001	8.29	1.66	NP	6.63	**164**	**166**	**0.763**	**0.776**	ND	**1.28**	**50.2**	--	--	--	--	--	--	--
	4/4/2001	8.29	1.27	NP	7.02	**240**	**296**	**0.738**	ND	ND	**0.907**	**135**	--	--	--	--	--	--	--
	7/17/2001	8.29	1.38	NP	6.91	ND	ND	ND	ND	ND	ND	**13**	--	--	--	--	--	--	--
	10/1/2001	8.29	1.93	NP	6.36	<52	**51**	<0.50	<0.50	<0.50	<0.50	**5.0**	--	--	--	--	--	--	--
	1/31/2002	8.29	2.08	NP	6.21	**200**	<50	<0.50	<0.50	<0.50	<0.50	**5.8**	--	--	--	--	--	--	--
	4/18/2002	8.29	1.76	NP	6.53	<50	<50	<0.50	<0.50	<0.50	<0.50	**5.1**	--	--	--	--	--	--	--
	7/28/2002	8.29	1.57	NP	6.72	<50	<50	<0.50	<0.50	<0.50	<1.0	**3.5**	--	--	--	--	--	--	--
	10/9/2002	8.29	1.45	NP	6.84	**100**	<50	<0.50	<0.50	<0.50	<1.0	**17**	--	--	--	--	--	--	--
	1/2/2003	8.29	1.18	NP	7.11	<50	<50	<0.50	<0.50	<0.50	<1.0	**8.6**	--	--	--	--	--	--	--
	4/1/2003	8.29	2.04	NP	6.25	**56**	<50	<0.50	<0.50	<0.50	<1.0	**9.4**	--	--	--	--	--	--	--
	7/1/2003	8.29	2.80	NP	5.49	<50	<50	<0.50	<0.50	<0.50	<1.0	**3.2**	--	--	--	--	<500	--	--
	10/2/2003	8.29	2.70	NP	5.59	<50	<50	<0.50	<0.50	<0.50	<1.0	<2.0	--	--	--	--	<500	--	--
	1/9/2004	8.29	1.90	NP	6.39	**91**	**74**	<0.50	**0.98**	**2.3**	**6.2**	<2.0	--	--	--	--	<500	--	--
	4/26/2004	8.29	1.62	NP	6.67	<50	**51**	<0.50	<0.50	<0.50	<1.0	**0.51**	--	--	--	--	<50	--	--
	7/22/2004	8.29	1.88	NP	6.41	<200	<50	<0.5	<0.5	<0.5	<1	**0.78**	--	--	--	--	<1000	--	--
	10/29/2004	8.29	1.28	NP	7.01	**76**	<50	<0.50	<0.50	<0.50	1.0	<0.50	--	--	--	--	<50	--	--
	1/10/2005	8.29	0.07	NP	8.22	**77**	**93**	**0.60**	**2.3**	**2.4**	**9.0**	<0.50	--	--	--	--	<50	--	--
	6/15/2005	8.29	1.70	NP	6.59	**67**	<50	<0.50	<0.50	<0.50	<1.0	**6.6**	--	--	--	--	<50	--	--
	9/27/2005	8.29	1.98	NP	6.31	<200	<50	<0.50	**0.73**	<0.50	<1.0	**2.3**	<0.50	<0.50	<0.50	<10	<250	--	--
	12/13/2005	8.29	2.26	NP	6.03	<200	<50	<0.50	<0.50	<0.50	<1.0	**2.9**	--	--	--	--	<250	--	--
	3/23/2006	8.29	1.32	NP	6.97	<200	<50	<0.50	<0.50	<0.50	<1.0	**2.7**	--	--	--	--	<250	--	--
	6/23/2006	8.29	1.98	NP	6.31	<200	<50	<0.50	<0.50	<0.50	<1.0	**1.9**	--	--	--	--	<250	--	--
	9/26/2006	8.29	2.52	NP	5.77	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	<250	--	--
	12/22/2006	8.29	1.98	NP	6.31	**150**	<50	<0.50	**0.57**	**1.8**	**4.6**	**1.6**	--	--	--	--	<250	--	--
	3/30/2007	8.29	2.01	NP	6.28	**72**	<50	<0.50	<0.50	<0.50	<0.50	**3.4**	--	--	--	--	<250	--	--
	6/28/2007	8.29	1.90	NP	6.39	**1000**	<50	<0.50	<0.50	<0.50	<0.50	**4.9**	--	--	--	--	<250	--	--
	9/25/2007	8.29	1.57	NP	6.72	**100**	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	<250	--	--
	12/28/2007	8.29	1.98	NP	6.31	**56**	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
	3/22/2008	8.29	0.80	NP	7.49	<50	<50	<0.50	<0.50	<0.50	<1.0	**0.61**	--	--	--	--	<250	--	--
	6/23/2008	8.29	1.80	NP	6.49	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
	9/19/2008	8.29	2.43	NP	5.86	**56**	<50	<0.50	<0.50	<0.50	<1.0	**3.9**	--	--	--	--	<250	--	--
	12/31/2008	8.29	2.66	NP	5.63	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
	3/27/2009	8.29	2.01	NP	6.28	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
	5/28/2009	8.29	2.20	NP	6.09	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
	9/17/2009	8.29	1.83	NP	6.46	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

TABLE 2
CURRENT AND HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 Station No. 5191/5043
449 HEGENBERGER RD
OAKLAND, CALIFORNIA

anteagroup

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA													
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	DRO (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (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)
MW-9	12/17/2009	8.29	1.52	NP	6.77	**105**	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	<250	--	--
	3/29/2010	8.29	2.21	NP	6.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/30/2010	10.94	2.32	NP	8.62	**95.0**	<50.0	<0.50	<0.50	<0.50	<1.5	**0.85**	--	--	--	--	<250	--	--
	7/6/2010	10.94	2.02	NP	8.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/20/2010	10.94	2.03	NP	8.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/8/2010	10.94	1.77	NP	9.17	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	<250	--	--
	3/14/2011	10.94	2.24	NP	8.70	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	<5.0	<250	--	--
	6/2/2011	10.94	2.24	NP	8.70	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	<5.0	<250	--	--
	9/7/2011	10.94	2.46	NP	8.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/5/2011	10.94	2.43	NP	8.51	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	**4.0**	--	--	--	--	<250	--	--
	3/6/2012	10.94	3.03	NP	7.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-10	2/21/1995	8.62	4.69	NP	3.93	**270**	**1500**	**250**	**26**	**9.1**	**160**	--	--	--	--	--	--	--	--
	5/18/1995	8.62	4.92	NP	3.70	**75**	**810**	**520**	ND	**18**	**23**	--	--	--	--	--	--	--	--
	8/17/1995	8.62	4.05	NP	4.57	ND	**67**	**25**	ND	**2.4**	ND	--	--	--	--	--	--	--	--
	7/26/1996	8.62	4.08	NP	4.54	ND	ND	**3.7**	ND	ND	ND	ND	--	--	--	--	--	--	--
	10/28/1996	8.62	4.09	NP	4.53	ND	ND	**1.1**	ND	ND	ND	ND	--	--	--	--	--	--	--
	1/29/1997	8.62	2.94	NP	5.68	ND	**210**	**41**	**0.67**	**7.2**	**4.8**	**11**	--	--	--	--	--	--	--
	4/15/1997	8.62	4.07	NP	4.55	ND	**110**	**12**	ND	**0.77**	ND	**9.7**	--	--	--	--	--	--	--
	5/27/1997	8.62	4.40	NP	4.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/15/1997	8.62	4.19	NP	4.43	ND	ND	**2.1**	ND	**0.67**	**0.73**	ND	--	--	--	--	--	--	--
	10/9/1997	8.62	4.75	NP	3.87	ND	**190**	**38**	**0.92**	**6.6**	**7.6**	ND	--	--	--	--	--	--	--
	1/14/1998	8.62	2.66	NP	5.96	--	**59**	**9.5**	**0.85**	**1.2**	**1.7**	**4.5**	--	--	--	--	--	--	--
	4/1/1998	8.62	3.45	NP	5.17	**62**	**230**	**66**	**1.7**	**12**	**17**	**6.4**	--	--	--	--	--	--	--
	7/15/1998	8.62	4.21	NP	4.41	**78**	**290**	**98**	**45**	**21**	**38**	**21**	--	--	--	--	--	--	--
	10/16/1998	8.62	4.11	NP	4.51	ND	**160**	**44**	**0.96**	**2.5**	**10**	**17**	--	--	--	--	--	--	--
	1/25/1999	8.62	3.26	NP	5.36	ND	**140**	**27**	ND	**2.8**	**6.8**	**23**	--	--	--	--	--	--	--
	4/15/1999	8.62	3.63	NP	4.99	ND	**120**	**18**	ND	**1.8**	**5.1**	**14**	--	--	--	--	--	--	--
	7/14/1999	8.62	3.89	NP	4.73	**180**	**280**	**55**	**3.2**	**11**	**31**	**6.1**	--	--	--	--	--	--	--
	10/21/1999	8.62	4.09	NP	4.53	**96**	**140**	**22**	**0.59**	**1.7**	**7.7**	**5.3**	--	--	--	--	--	--	--
	1/20/2000	8.62	3.92	NP	4.70	**252**	ND	**0.73**	**0.86**	ND	ND	**5.2**	--	--	--	--	--	--	--
	4/13/2000	8.62	3.85	NP	4.77	**69**	**67**	**54**	ND	**2.6**	ND	**3.8**	--	--	--	--	--	--	--
	7/14/2000	8.62	4.18	NP	4.44	**149**	ND	**0.547**	ND	ND	ND	ND	--	--	--	--	--	--	--
	10/26/2000	8.62	3.96	NP	4.66	**83**	ND	**3.3**	ND	**0.83**	**1.5**	ND	--	--	--	--	--	--	--
	1/3/2001	8.62	4.14	NP	4.48	**126**	**52.7**	**5.15**	ND	**0.823**	**1.57**	ND	--	--	--	--	--	--	--
	4/4/2001	8.62	3.88	NP	4.74	**75**	**129**	**28.1**	**1.67**	**4.97**	**10.1**	ND	--	--	--	--	--	--	--
	7/17/2001	8.62	4.08	NP	4.54	ND	ND	**4.1**	ND	**1.0**	**1.8**	ND	--	--	--	--	--	--	--
	10/1/2001	8.62	4.22	NP	4.40	**100**	**140**	**30**	**0.51**	**4.0**	**12**	<5.0	--	--	--	--	--	--	--
	1/31/2002	8.62	3.68	NP	4.94	**170**	**110**	**16**	<0.50	**2.3**	**5.6**	<2.5	--	--	--	--	--	--	--
	4/18/2002	8.62	4.01	NP	4.61	**130**	<50	**11**	<0.50	**1.4**	**4.5**	<2.5	--	--	--	--	--	--	--
	7/28/2002	8.62	4.11	NP	4.51	**58**	**67**	**15**	<0.50	**0.94**	**7.3**	<2.0	--	--	--	--	--	--	--
	10/9/2002	8.62	3.97	NP	4.65	<94	<50	**0.67**	<0.50	<0.50	<1.0	<2.0	--	--	--	--	--	--	--
	1/2/2003	8.62	3.03	NP	5.59	**64**	<50	<0.50	<0.50	<0.50	<1.0	<2.0	--	--	--	--	--	--	--
	4/1/2003	8.62	3.83	NP	4.79	**76**	<50	**11**	<0.50	<0.50	<1.0	<2.0	--	--	--	--	--	--	--
	7/1/2003	8.62	4.13	NP	4.49	**87**	<50	<0.50	<0.50	<0.50	<1.0	<2.0	--	--	--	--	<500	--	--
	10/2/2003	8.62	4.05	NP	4.57	**160**	**77**	**9.9**	**0.78**	**2.3**	**4.9**	<2.0	--	--	--	--	<500	--	--
	1/9/2004	8.62	3.40	NP	5.22	**74**	**53**	**1.2**	<0.50	**0.70**	**1.6**	<2.0	--	--	--	--	<500	--	--
	4/26/2004	8.62	3.89	NP	4.73	<50	<50	**2.8**	**1.3**	**1.0**	**2.9**	<0.50	--	--	--	--	<50	--	--
	7/22/2004	8.62	3.73	NP	4.89	<200	<50	<0.5	<0.5	<0.5	<1	<0.5	--	--	--	--	<1000	--	--
	10/29/2004	8.62	3.41	NP	5.21	<50	**100**	**2.0**	**1.2**	**1.1**	**3.6**	<0.50	--	--	--	--	<50	--	--
	1/10/2005	8.62	2.68	NP	5.94	**94**	**84**	**7.8**	**2.7**	**2.2**	**8.9**	<0.50	--	--	--	--	<50	--	--
	6/15/2005	8.62	4.63	NP	3.99	**62**	<50	<0.50	<0.50	**<0.50**	<1.0	<0.50	--	--	--	--	<50	--	--
	9/27/2005	8.62	3.96	NP	4.66	<200	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<10	<250	--	--
	12/13/2005	8.62	3.75	NP	4.87	<200	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
	3/23/2006	8.62	3.13	NP	5.49	<200	**50**	**13**	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
	6/23/2006	8.62	3.90	NP	4.72	<200	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
	9/26/2006	8.62	3.66	NP	4.96	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	<250	--	--

TABLE 2
CURRENT AND HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 Station No. 5191/5043
449 HEGENBERGER RD
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)	DRO (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (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)
MW-10	12/22/2006	8.62	3.56	NP	5.06	81	<50	<0.50	<0.50	<0.50	1.8	<0.50	--	--	--	--	<250	--	--
	3/30/2007	8.62	3.93	NP	4.69	82	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	<250	--	--
	6/28/2007	8.62	4.03	NP	4.59	57	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	<250	--	--
	9/25/2007	8.62	3.91	NP	4.71	82	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	<250	--	--
	12/28/2007	8.62	3.64	NP	4.98	62	<50	2.1	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
	3/22/2008	8.62	4.00	NP	4.62	<50	64	13	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
	6/23/2008	8.62	3.90	NP	4.72	<50	94	30	0.53	3.4	3.5	<0.50	--	--	--	--	<250	--	--
	9/19/2008	8.62	3.85	NP	4.77	<50	130	15	1.7	5.7	11	<0.50	--	--	--	--	<250	--	--
	12/31/2008	8.62	3.69	NP	4.93	<50	82	11	<0.50	0.81	1.7	<0.50	--	--	--	--	<250	--	--
	3/27/2009	8.62	3.75	NP	4.87	730	210	28	1.4	1.2	3.9	<0.50	--	--	--	--	<250	--	--
	5/28/2009	8.62	3.66	NP	4.96	<50	<50	0.91	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
	9/17/2009	8.62	3.85	NP	4.77	65	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	<250	--	--
	12/17/2009	8.62	3.00	NP	5.62	57.7	<50.0	1.2	<0.50	<0.50	<1.5	<0.50	--	--	--	--	<250	--	--
	3/29/2010	8.62	3.81	NP	4.81	82.2	<50.0	0.77	<0.50	<0.50	3.4	<0.50	--	--	--	--	<250	--	--
	6/30/2010	10.97	3.90	NP	7.07	53.4	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	<250	--	--
	7/6/2010	10.97	3.73	NP	7.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/20/2010	10.97	3.85	NP	7.12	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	<250	--	--
	12/8/2010	10.97	3.63	NP	7.34	<50.0	<50.0	1.8	<0.50	<0.50	<1.5	<0.50	--	--	--	--	<250	--	--
	3/14/2011	10.97	3.46	NP	7.51	63.3	<50.0	1.1	<0.50	<0.50	<1.5	<0.50	--	--	--	<5.0	<250	--	--
	6/2/2011	10.97	3.92	NP	7.05	<50.0	58.7	4.8	4.2	0.96	5.1	<0.50	--	--	--	<5.0	<250	--	--
	9/7/2011	10.97	4.06	NP	6.91	<50.0	<50.0	4.1	<0.50	0.66	2.4	<0.50	--	--	--	--	<250	--	--
	12/5/2011	10.97	3.82	NP	7.15	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	<250	--	--
	3/6/2012	10.97	3.74	NP	7.23	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	58.7	<250	--	--
MW-11	7/6/2010	10.53	2.44	NP	8.09	226	99.2 1n	<0.50	<0.50	<0.50	<1.5	165	<0.50	<0.50	<0.50	174	<250	<1.0	<1.0
	9/20/2010	10.53	2.80	NP	7.73	<50.0	76.4 1n	<0.50	<0.50	<0.50	<1.5	82.7	--	--	--	--	<250	--	--
	12/8/2010	10.53	1.90	NP	8.63	52.7	<50.0	<0.50	<0.50	<0.50	<1.5	59.1	--	--	--	--	<250	--	--
	3/14/2011	10.53	1.89	NP	8.64	67.8	<50.0	<0.50	<0.50	<0.50	<1.5	44.0	--	--	--	<5.0	<250	--	--
	6/2/2011	10.53	1.75	NP	8.78	69.0 T4	<50.0	<0.50	0.61	<0.50	<1.5	24.9	--	--	--	7.1	<250	--	--
	9/7/2011	10.53	1.56	NP	8.97	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	3.8	--	--	--	--	<250	--	--
	12/5/2011	10.53	2.05	NP	8.48	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	26.4	--	--	--	--	<250	--	--
	3/6/2012	10.53	2.31	NP	8.22	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	35.3	--	--	--	5.7	<250	--	--
MW-12	7/6/2010	11.01	4.00	NP	7.01	990	20300	1030	955	311	2450	1650	<0.50	<0.50	1.0	1430	<250	<1.0	<1.0
	9/20/2010	11.01	4.18	NP	6.83	5220	73700	6020	6390	2970	18300	894	--	--	--	--	<250	--	--
	12/8/2010	11.01	3.92	NP	7.09	428	3350	249	117	89.8	558	1470	--	--	--	--	<2500	--	--
	3/14/2011	11.01	3.70	NP	7.31	283	2420	287	80.9	49.1	243	1020	--	--	--	69.6	<250	--	--
	6/2/2011	11.01	4.40	NP	6.61	1330 T4	12200	688	70.5	225	619	824	--	--	--	110	<250	--	--
	9/7/2011	11.01	4.37	NP	6.64	1270 T4	7900	920	25.4	187	267	896	--	--	--	--	<2500	--	--
	12/5/2011	11.01	4.32	NP	6.69	286 T4	2240	296	38.3	38.0	122	1040	--	--	--	--	<250	--	--
	3/6/2012	11.01	4.01	NP	7.00	272 T4	1260	193	22.6	28.8	80.5	835	--	--	--	78.4	<250	--	--
MW-12A	7/6/2010	11.29	4.22	NP	7.07	89.3	664	18.3	0.78	2.3	50.2	14.3	<0.50	<0.50	<0.50	11.9	<250	<1.0	<1.0
	9/20/2010	11.29	4.39	NP	6.90	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	8.5	--	--	--	--	<250	--	--
	12/8/2010	11.29	4.00	NP	7.29	76.4	<50.0	<0.50	<0.50	<0.50	<1.5	9.4	--	--	--	--	<250	--	--
	3/14/2011	11.29	3.81	NP	7.48	61.5	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	<5.0	<250	--	--
	6/2/2011	11.29	4.20	NP	7.09	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	<5.0	<250	--	--
	9/7/2011	11.29	4.42	NP	6.87	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	0.74	--	--	--	--	<250	--	--
	12/5/2011	11.29	4.30	NP	6.99	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	<250	--	--
	3/6/2012	11.29	4.32	NP	6.97	52 T4	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	<5.0	<250	--	--
MW-13	7/6/2010	11.08	4.26	NP	6.82	469	122 1n	<0.50	<0.50	<0.50	<1.5	217	<0.50	<0.50	<0.50	199	<250	<1.0	<1.0
	9/20/2010	11.08	4.81	NP	6.27	<50.0	250 1n	<0.50	<0.50	<0.50	<1.5	272	--	--	--	--	<250	--	--
	12/8/2010	11.08	5.02	NP	6.06	97.0	177 1n	<0.50	<0.50	<0.50	<1.5	390	--	--	--	--	<250	--	--
	3/14/2011	11.08	4.32	NP	6.76	162	127 1n	<0.50	<0.50	<0.50	<1.5	241	--	--	--	125	<250	--	--
	6/2/2011	11.08	3.98	NP	7.10	89.9 T4	260 1n	<0.50	<0.50	<0.50	<1.5	228	--	--	--	44.7	<250	--	--
	9/7/2011	11.08	5.74	NP	5.34	<50.0	167	<0.50	<0.50	<0.50	<1.5	207	--	--	--	--	<250	--	--
	12/5/2011	11.08	5.00	NP	6.08	<50.0	166 1n	<0.50	<0.50	<0.50	<1.5	215	--	--	--	--	<250	--	--
	3/6/2012	11.08	5.37	NP	5.71	<50.0	63.9 1n	<0.50	<0.50	<0.50	<1.5	110	--	--	--	38.5	<250	--	--

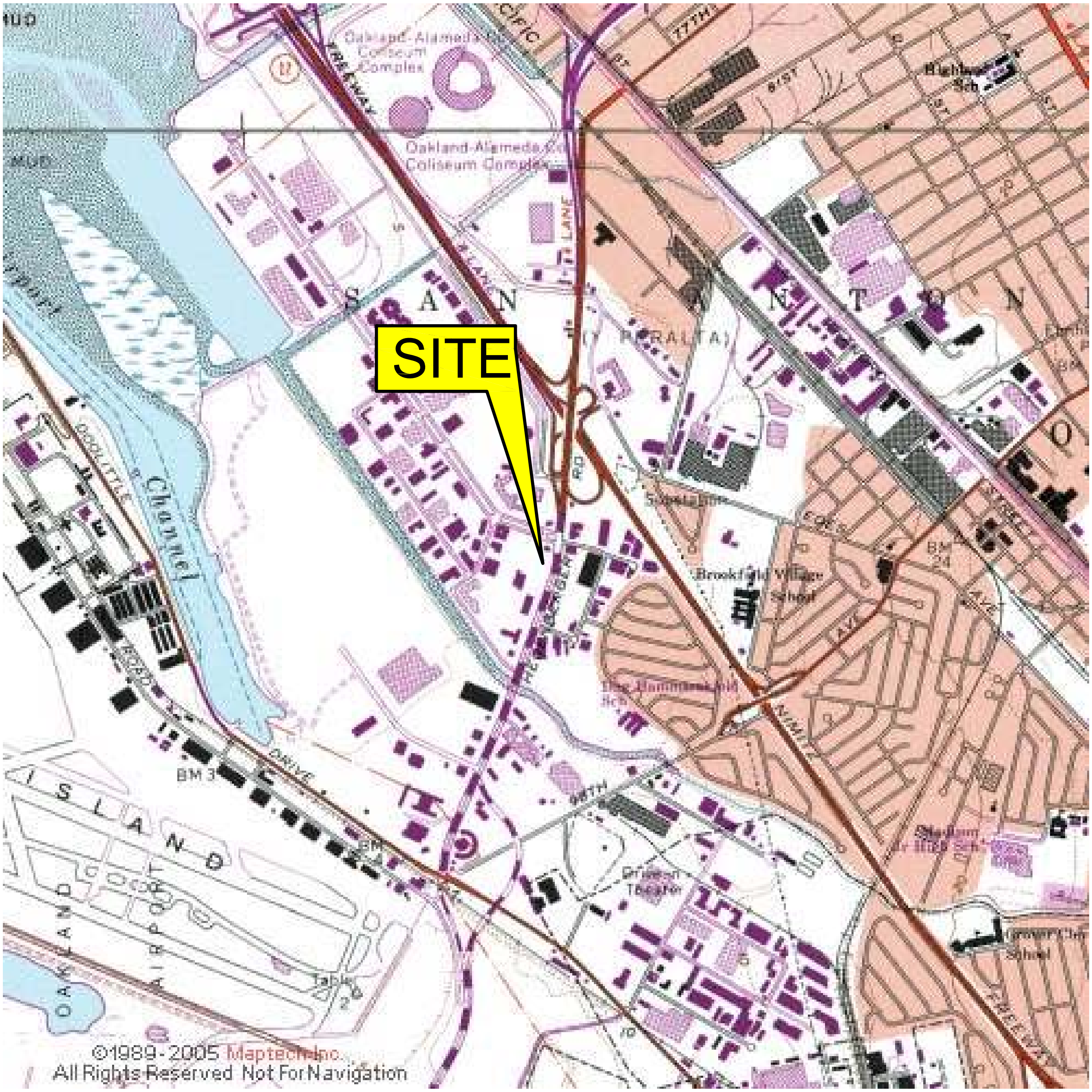
TABLE 2
CURRENT AND HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 Station No. 5191/5043
449 HEGENBERGER RD
OAKLAND, CALIFORNIA

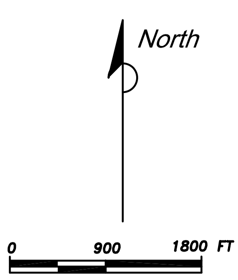
Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA													
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	DRO (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
MW-14	6/2/2011	12.00	3.58	NP	8.42	**4180 T4**	**51600**	**2750**	**67.9**	**1790**	**13400**	**1.9**	--	--	--	**27.2**	<250	--	--
	9/7/2011	12.00	3.02	NP	8.98	**2970 T4**	**42600**	**1050**	**28.1**	**2990**	**7300**	<25.0	--	--	--	--	<12500	--	--
	12/5/2011	12.00	4.05	NP	7.95	**3980 T4**	**14000**	**709**	**9.1**	**1420**	**2530**	**0.97**	--	--	--	--	<250	--	--
	3/6/2012	12.00	3.94	NP	8.06	**3640 T4**	**16600**	**959**	**15.0**	**2330**	**3830**	<2.5	--	--	--	**28.1**	<1250	--	--
MW-15	6/2/2011	11.11	2.50	NP	8.61	**124 T4**	**357**	<0.50	<0.50	<0.50	<1.5	**15.2**	--	--	--	**6.4**	<250	--	--
	9/7/2011	11.11	2.54	NP	8.57	<50.0	**412**	**6.2**	<0.50	**42.8**	<1.5	**128**	--	--	--	--	<250	--	--
	12/5/2011	11.11	2.70	NP	8.41	**50.5 T4**	**201**	**6.6**	<0.50	**0.93**	<1.5	**142**	--	--	--	--	<250	--	--
	3/6/2012	11.11	2.69	NP	8.42	**56.2 T4**	<50.0	<0.50	<0.50	<0.50	<1.5	**106**	--	--	--	**101**	<250	--	--
MW-16	6/2/2011	10.98	3.00	NP	7.98	**509 T4**	**1420 1n**	**79.4**	<0.50	**4.2**	<1.5	**1200**	--	--	--	**257**	<250	--	--
	9/7/2011	10.98	2.65	NP	8.33	**90 T4**	**934**	<0.50	<0.50	<0.50	<1.5	**1240**	--	--	--	--	<250	--	--
	12/5/2011	10.98	3.18	NP	7.80	**196 T4**	**948 1n**	<0.50	<0.50	<0.50	<1.5	**1320**	--	--	--	--	<250	--	--
	3/6/2012	10.98	2.91	NP	8.07	**204 T4**	**392 1n**	<0.50	<0.50	<0.50	<1.5	**1090**	--	--	--	**134**	<250	--	--
MW-17	6/2/2011	11.52	5.78	NP	5.74	**687 T4**	**9130**	**2530**	**960**	**35.1**	**907**	**0.74**	--	--	--	**366**	<250	--	--
	9/7/2011	11.52	4.56	NP	6.96	**1900 T4**	**47200**	**9620**	**5510**	**1210**	**4510**	<25.0	--	--	--	--	<12500	--	--
	12/5/2011	11.52	4.70	NP	6.82	**1790 T4**	**17300**	**4720**	**511**	**238**	**747**	<2.5	--	--	--	--	<1250	--	--
	3/6/2012	11.52	4.64	NP	6.88	**1530 T4**	**1580**	**2090**	**23.8**	**39.3**	**166**	**1.1**	--	--	--	**481**	<250	--	--

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
WD - Well Destroyed
WI - Well Inaccessable
WO - Well Obstruction
NSVD - Not surveyed
-- - No information available

Analytical Notes:
-- - No information available
Bold - Above the laboratory's indicated reporting limit
< - Below the laboratory's indicated reporting limit
LPH - Liquid Phase Hydrocarbons
M0 - 209.
ND - Not detected, and detection limit is not known
NS - Well not sampled.
UG/L - micrograms/liter
WD - Well Destroyed
WI - Well Inaccessable
WO - Well Obstruction
DRO- diesel range organics
TPHg- total petroleum hydrocarbons as gasoline
MTBE- Methyl tertiary-butyl ether
TBA- Tertiary-butyl alcohol
DIPE- Di-isopropyl ether
ETBE- Ethyl tertiary-butyl ether
TAME- Tertiary-amyl methyl ether
1n- The TPHg results for this sample did not match the pattern of the laboratory standard for gasoline. This is likely due to the presence of MTBE in the sample.
T4- Result reported for the hydrocarbons within the method-specific range that do not match pattern of laboratory standard.

Figures





SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, OAKLAND EAST QUADRANGLE (1973)

FIGURE 1

SITE LOCATION MAP

76 Station No. 5191/5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

PROJECT NO. I42611270	DRAWN BY JH 06/02/09
FILE NO. 11270-SiteLocator	PREPARED BY DD
REVISION NO.	REVIEWED BY

DELTA ®

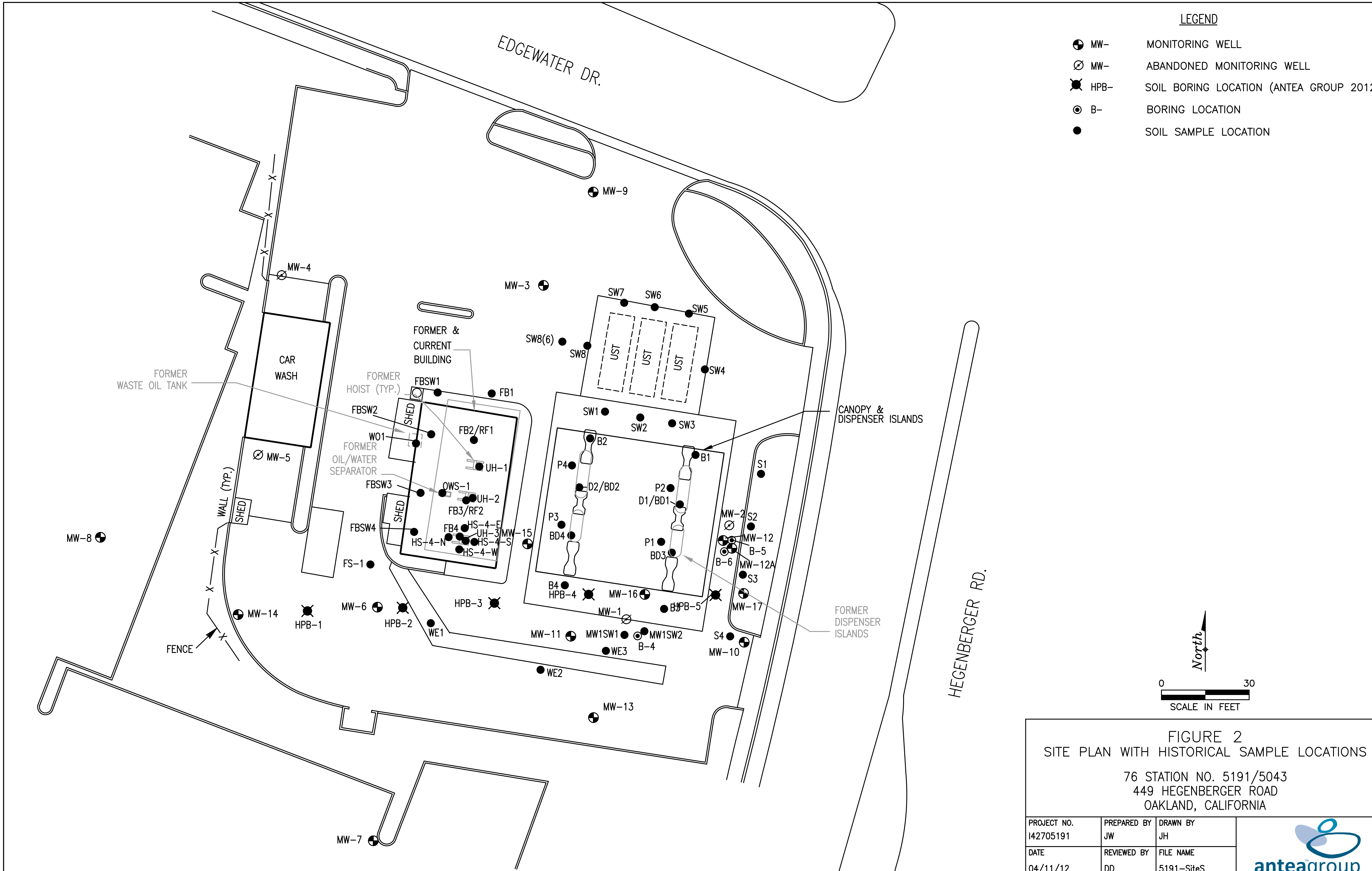
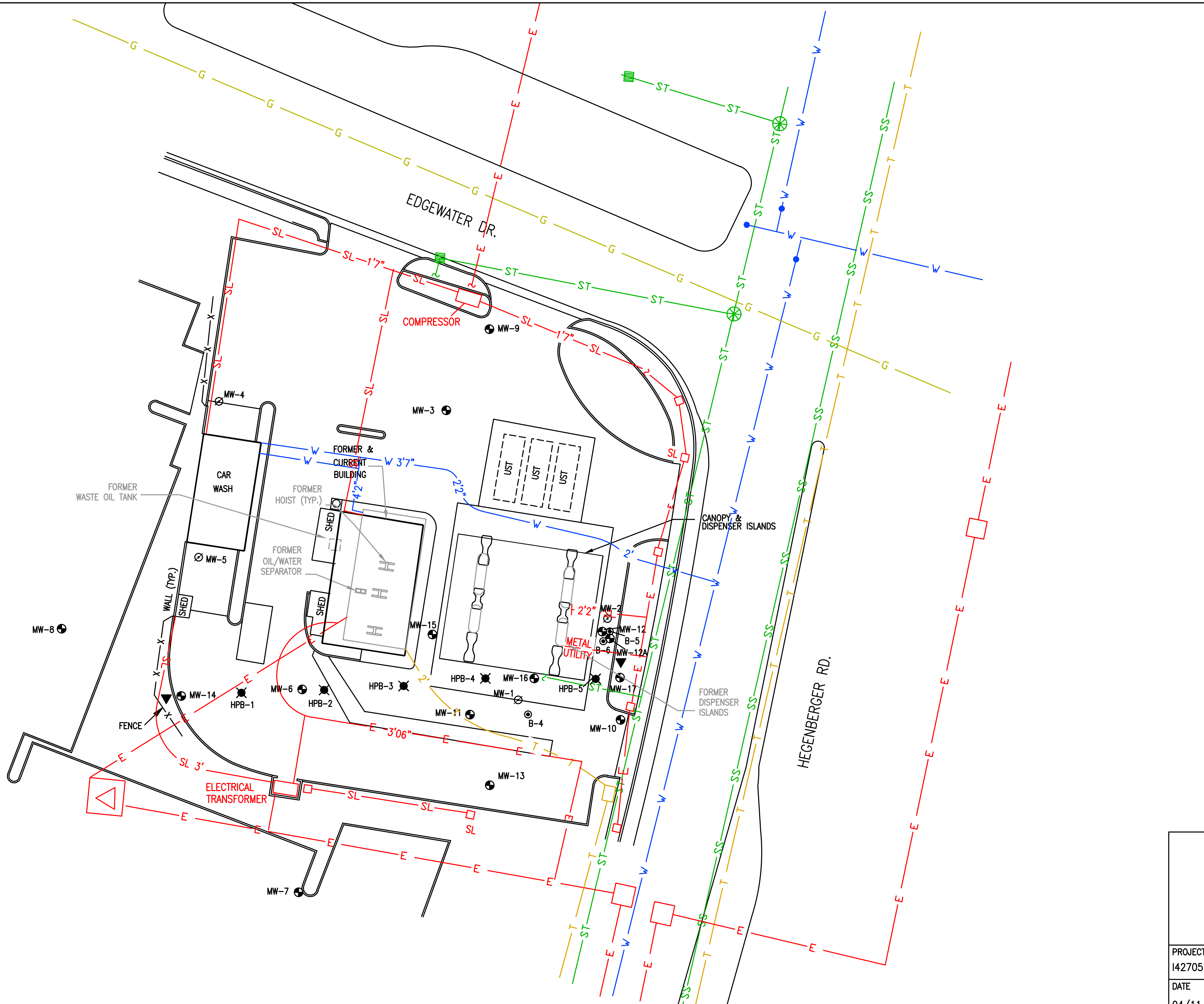


FIGURE 2
SITE PLAN WITH HISTORICAL SAMPLE LOCATIONS

76 STATION NO. 5191/5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
I42705191	JW	JH
DATE	REVIEWED BY	FILE NAME
04/11/12	DD	5191–SiteS

anteagroup



LEGEND

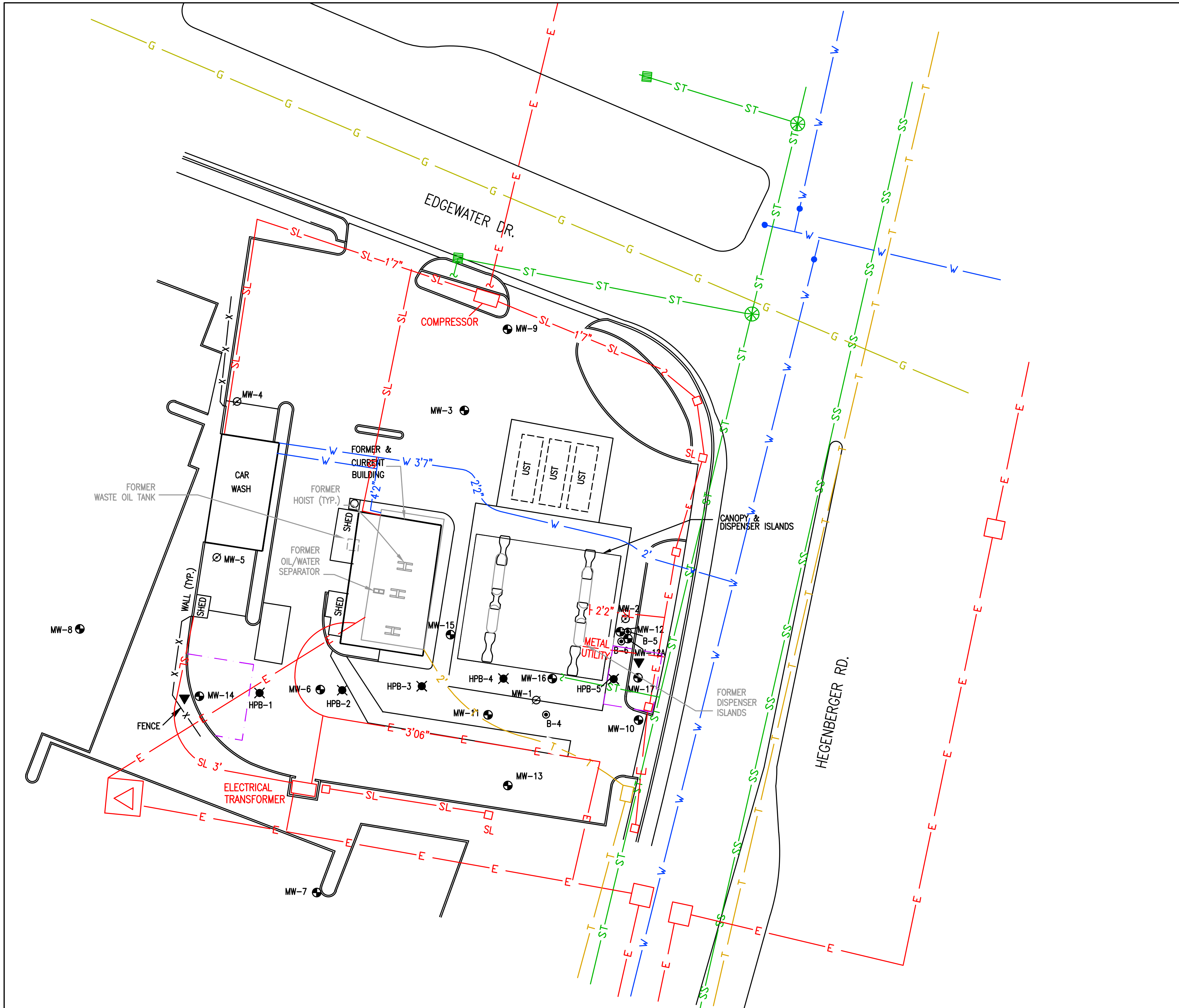
- MW- MONITORING WELL
- MW- ABANDONED MONITORING WELL
- HPB- SOIL BORING LOCATION (ANTEA GROUP 2012)
- B- BORING LOCATION
- T TELEPHONE
- SS SEWER
- W WATER
- ST STORM DRAIN
- E ELECTRIC
- G GAS
- SL STREET LIGHT
- SOIL BUFFERING TEST LOCATION

FIGURE 3
HYDRAULIC PROFILING TEST LOCATIONS

76 STATION NO. 5191/5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
I42705191	JW	JH
DATE	REVIEWED BY	FILE NAME
04/11/12	DD	5191-SiteS

anteagroup



LEGEND

MW-	MONITORING WELL
MW-	ABANDONED MONITORING WELL
HPB-	SOIL BORING LOCATION (ANTEA GROUP 2012)
B-	BORING LOCATION
T	TELEPHONE
SS	SEWER
W	WATER
ST	STORM DRAIN
E	ELECTRIC
G	GAS
SL	STREET LIGHT
▼	SOIL BUFFERING TEST LOCATION
	PILOT TEST INJECTION AREA

FIGURE 4
ISCO INJECTION LOCATIONS

76 STATION NO. 5191/5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
I42705191	JW	JH
DATE	REVIEWED BY	FILE NAME
04/11/12	DD	5191-SiteS

anteagroup

Appendix A

Previous Investigation and Site History Summary

PREVIOUS INVESTIGATION AND SITE HISTORY SUMMARY

October 1991 - Four soil samples were collected from the product pipe trenches at depths of approximately 3 feet below ground surface (bgs) during a dispenser island modification. The product pipe trenches were subsequently excavated to the groundwater depth at 4 to 4.5 feet bgs.

February 1992 - Three monitoring wells, MW-1 through MW-3, were installed at the site to depths ranging from 13.5 to 15 feet bgs.

August 1992 - Three additional monitoring wells, MW-4 through MW-6, were installed at the site to a depth of 13.5 feet bgs.

September 1994 - One 280-gallon waste-oil UST was removed from the site. The UST was made of steel, and no apparent holes or cracks were observed in the UST. One soil sample was collected from beneath the former UST at a depth of approximately 9 feet bgs. No petroleum hydrocarbons were reported.

January 1995 - Two additional monitoring wells, MW-9 and MW-10, were installed to depths of 13 and 15 feet bgs. In addition, monitoring wells MW-4 and MW-5 were destroyed by over-drilling the wells and backfilling with neat cement.

March 1995 - Two 10,000-gallon gasoline USTs and one 10,000-gallon diesel UST were removed from the site. Groundwater was encountered in the tank cavity at a depth of approximately 8.5 feet bgs. Soil samples contained total petroleum hydrocarbons as diesel (TPHd) and benzene, and TPH as gasoline (TPHg). Approximately 125,000 gallons of groundwater were pumped from the site for remediation and properly disposed off-site. Four fuel dispenser islands and associated product piping were also removed. Based on the results of the confirmation samples, the product dispenser islands were over excavated to approximately 6 feet bgs.

March-April 1995 - During demolition activities of the former station building, soil samples were collected from two excavations, which were subsequently over excavated. Confirmation samples contained petroleum hydrocarbons. An additional area on the south side of the former station building was excavated based on photo-ionization detector (PID) readings. Two monitoring wells, MW-1 and MW-2, were destroyed in order to allow for over excavation activities to extend to an area adjacent to the dispenser islands in the southeastern quadrant of the site. The excavated areas were subsequently backfilled with clean-engineered fill.

April 1997 - Two additional monitoring wells, MW-7 and MW-8, were installed off-site to the south and east on the neighboring property to a depth of 13 feet bgs. In addition, monitoring well MW-3, which was damaged during site renovation activities, was fully drilled out and reconstructed in the same borehole.

October 2003 - Site environmental consulting responsibilities were transferred to TRC.

April 8-9, 2005 - TRC conducted a 24-hour dual phase extraction (DPE) test at the site using monitoring well MW-6. The 24-hour DPE test was only moderately successful at removing vapor-phase petroleum hydrocarbons from the subsurface; therefore, TRC recommended DPE no longer be considered a viable remedial alternative for the site.

October 2007 - Site environmental consulting responsibilities were transferred to Delta Consultants.

December 2009 - Delta advanced two borings, B-4 and B-5, to depths of 20 feet bgs and 32 feet bgs, respectively. Analytical results from the soil and groundwater samples collected from these two borings indicated that the soil and the groundwater were impacted by petroleum hydrocarbons at these locations.

June 2010 – Delta installed two 4-inch diameter monitoring/extraction wells, MW-11 and MW-12, and two 2-inch diameter monitoring wells, MW-12A and MW-13, at the site. Analytical results from the soil and groundwater samples collected from the MW-12 and MW-12A boring locations indicated that the soil and the groundwater were impacted by petroleum hydrocarbons at these locations.

May 2011 – Antea Group (formally Delta Consultants) installed four 2-inch diameter monitoring wells, MW-14 through MW-17, and advanced one soil boring, B-6, at the site. All four monitoring wells were installed with ten feet of screen from 3 feet bgs to 13 feet bgs. Analytical results of soil samples collected during the monitoring well installation reported TPHg concentrations ranging from 1.0 milligrams per kilogram (mg/kg) (MW-14d13) to 2,490 mg/kg (B-6d9), benzene concentrations ranging from 0.67 mg/kg (B-6d21) to 26.4 mg/kg (B-6d9), toluene concentrations ranging from 0.2 mg/kg (MW-14d10) to 73.9 mg/kg (B-6d9), ethylbenzene concentrations ranging from 0.037 mg/kg (MW-14d13) to 58.1 mg/kg (B-6d9), total xylenes concentrations ranging from 0.066 mg/kg (MW-14d13) to 230 mg/kg (B-6d9), methyl tertiary-butyl ether (MTBE) concentrations ranging from 0.015 mg/kg (MW-15d13) to 0.19 mg/kg (MW-15d8), tertiary-butyl alcohol (TBA) concentrations ranging from 0.014 mg/kg (MW-16d8 and B-6d21) to 0.16 mg/kg (MW-15d8), and lead concentrations ranging from 5.5 mg/kg (MW-16d13) to 16.3 mg/kg (MW-17d9). Diesel range organics (DRO) and DRO with silica gel concentrations were reported; however, all of the results did not match the laboratory standard for diesel. Concentrations of DRO ranged from 2.9 mg/kg (MW-17d13) to 258 mg/kg (B-6d14) and DRO with silica gel concentrations ranged from 2.5 mg/kg (MW-17d13) to 250 mg/kg (B-6d14).

March 2012 – Antea Group advanced five soil borings (HPB-1 through HPB-5) at the site. The borings were advanced using direct push technology. The borings were used to obtain a hydraulic profile of the substrate beneath the site. The data obtained during the investigation will be used to determine the best path forward in terms of remediation.

SENSITIVE RECEPTORS

April 24, 2006, TRC completed a sensitive receptor survey for the site. According to the Department of Water Resources (DWR) records, three water supply wells are located within one-half mile of the site. The closest well is an irrigation well, reported to be, approximately 1,080 feet southeast of the site. In addition, two surface water bodies were observed within a one-half mile radius of the site. San Leandro Creek is located approximately 1,400 feet southwest of the site and flows into the San Leandro Bay. Elmhurst Creek is located approximately 2,220 feet north of the site and also flows into the San Leandro Bay.

Current Consultant: **Antea Group**

Appendix B

Hydraulic Profiling Test Logs

VIRONEX

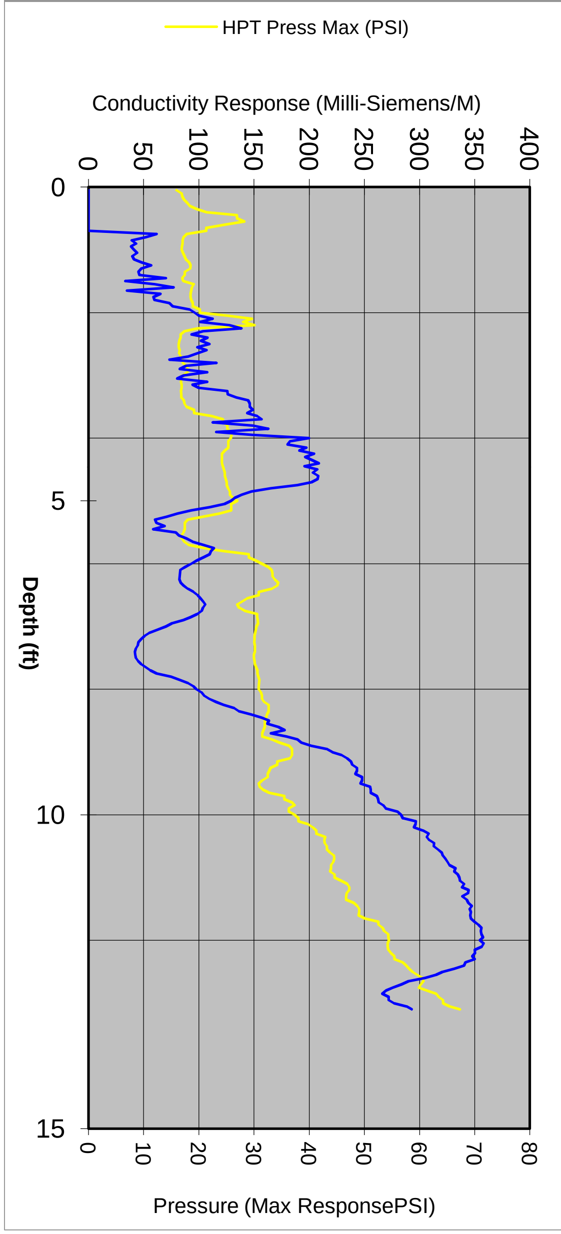
1641 Challenge DR
Concord, CA 94520
P:(925) 849-6970
F:(925) 849-6973
www.vironex.com

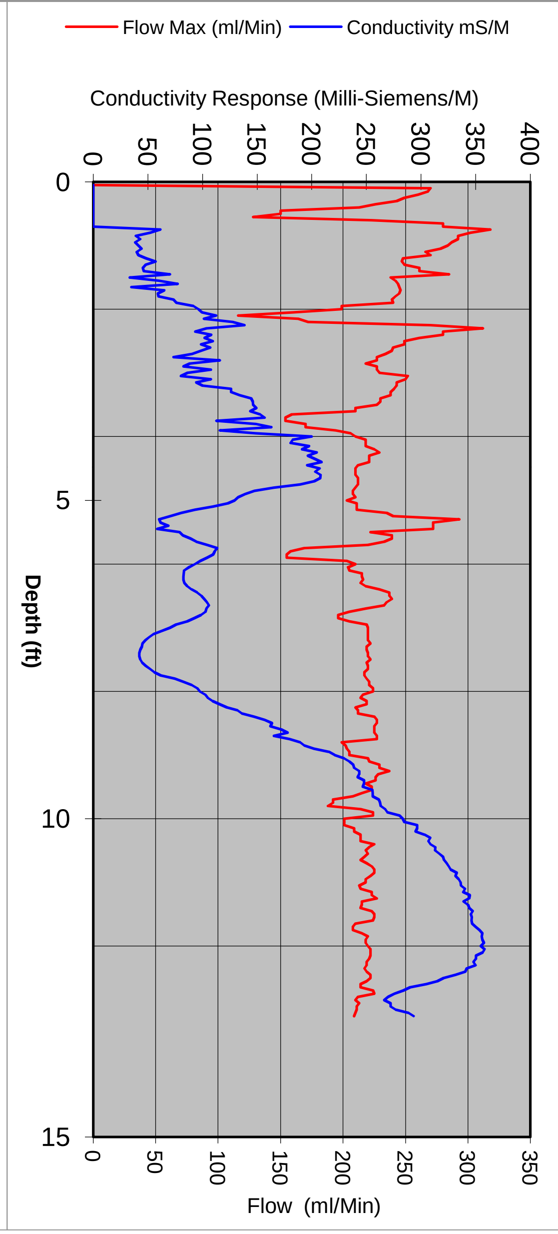
Boring Name: HPB-1 **Total Depth (ft): 13.1**

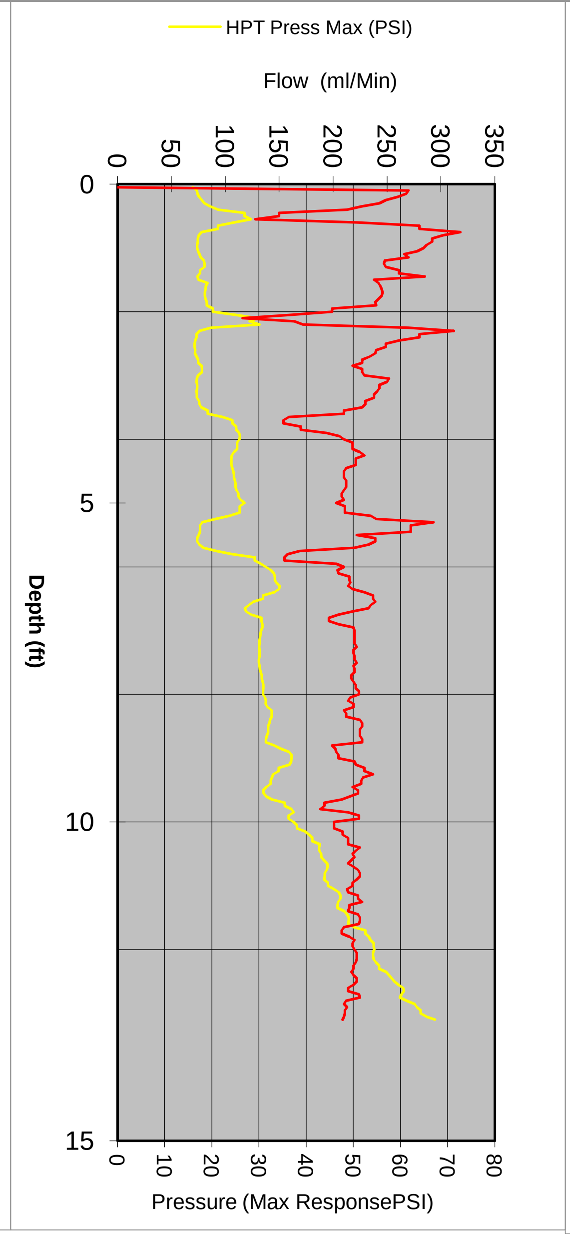
Notes: Air knife to 5 feet bgs.

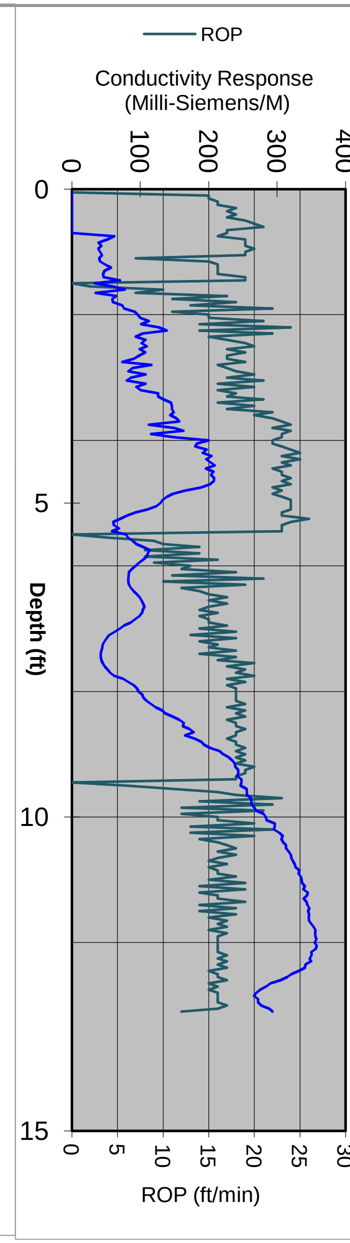
GW Depth (ft):
Depth of GW Provided by Client

Job Information		MIP Sampling Information			
Client Company:	ANTEA	Trunkline Length:	150	Start Boring Time:	Tue Mar 06 2012 11:33
Project Name:	76 Station No. 5191	Probe Type:	Wenner - HPT	End Boring Time:	Tue Mar 06 2012 11:51
Site Address:	449 Hegenberger RD, Oakland, CA	Rig Type:	GREGG DP 13	HPT Specialist:	Jeff Paul









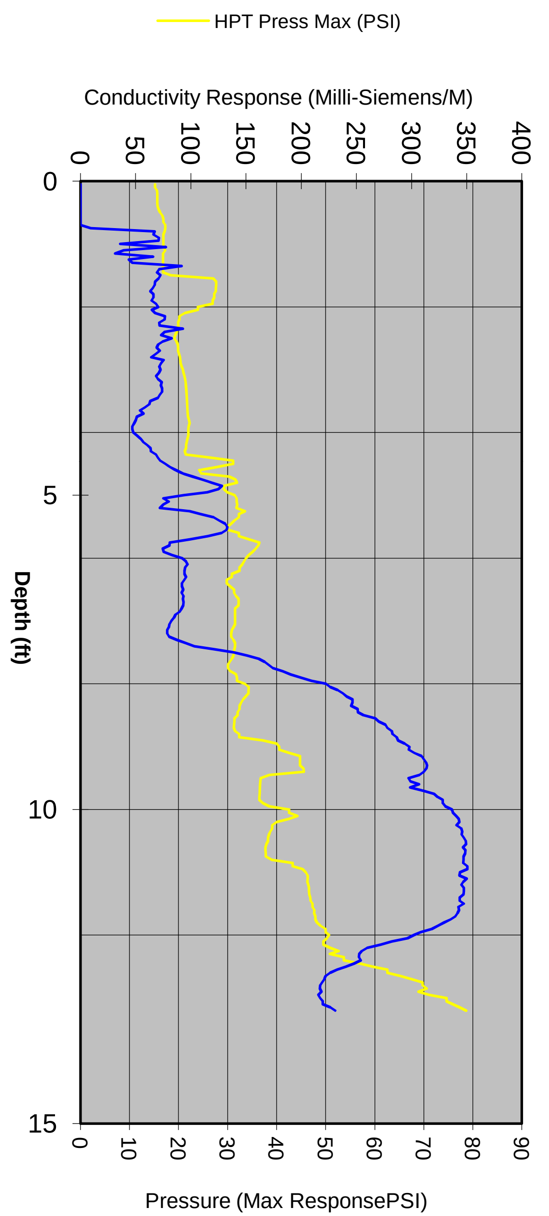
VIRONEX
1641 Challenge DR
Concord, CA 94520
P:(925) 849-6970
F:(925) 849-6973
www.vironex.com

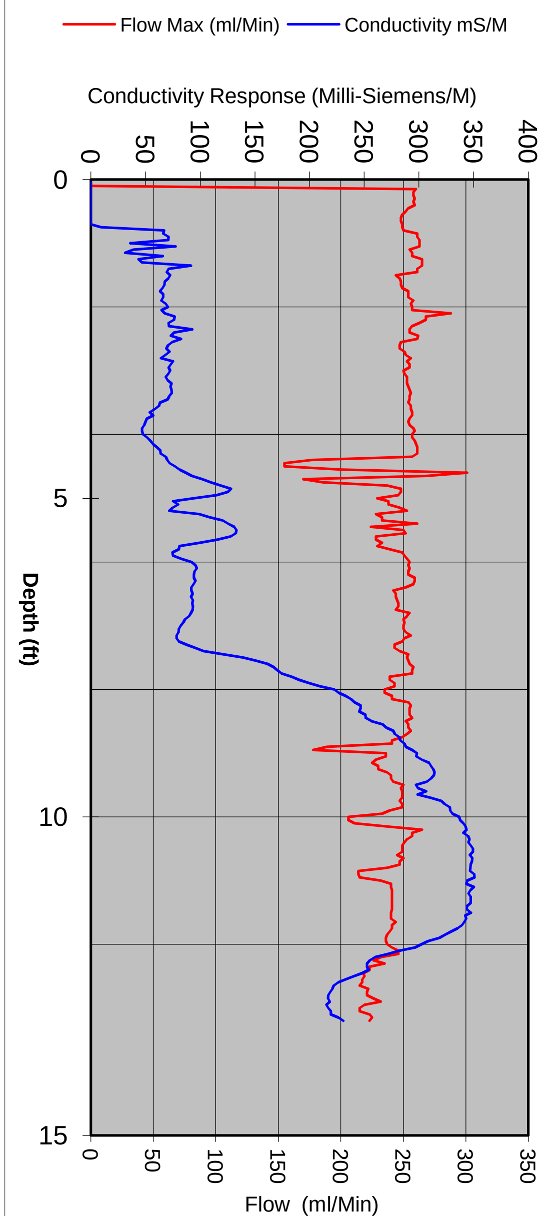
Boring Name: HPB-2 | **Total Depth (ft): 13.2**

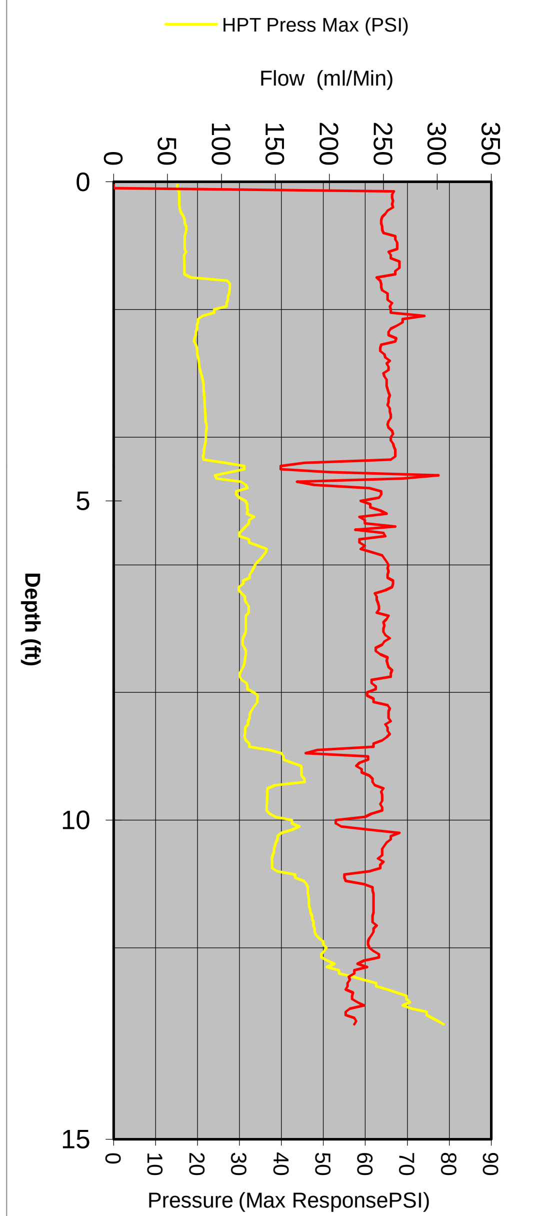
Notes: Air knife to 5 feet bgs.

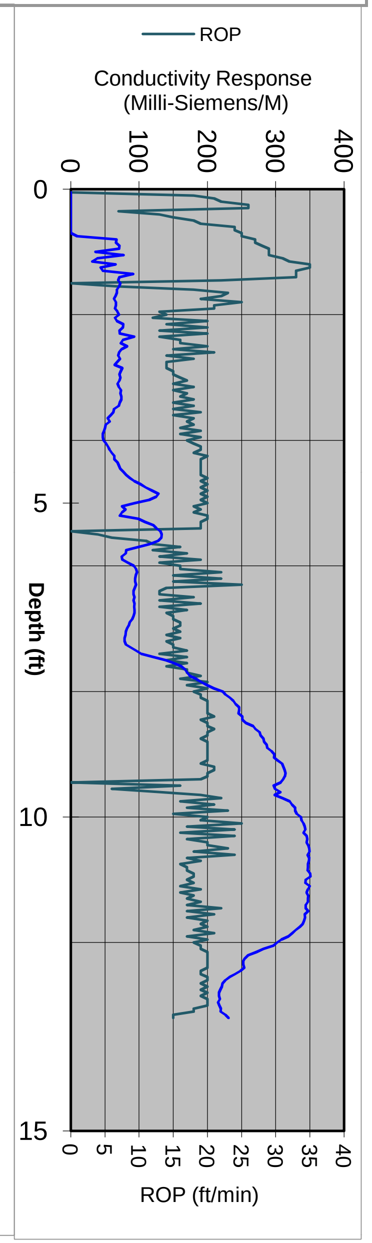
GW Depth (ft):
Depth of GW Provided by Client

Job Information		MIP Sampling Information			
Client Company:	ANTEA	Trunkline Length:	150	Start Boring Time:	Tue Mar 06 2012 14:52
Project Name:	76 Station No. 5191	Probe Type:	Wenner - HPT	End Boring Time:	Tue Mar 06 2012 15:05
Site Address:	449 Hegenberger RD, Oakland, CA	Rig Type:	GREGG DP 13	HPT Specialist:	Jeff Paul









VIRONEX

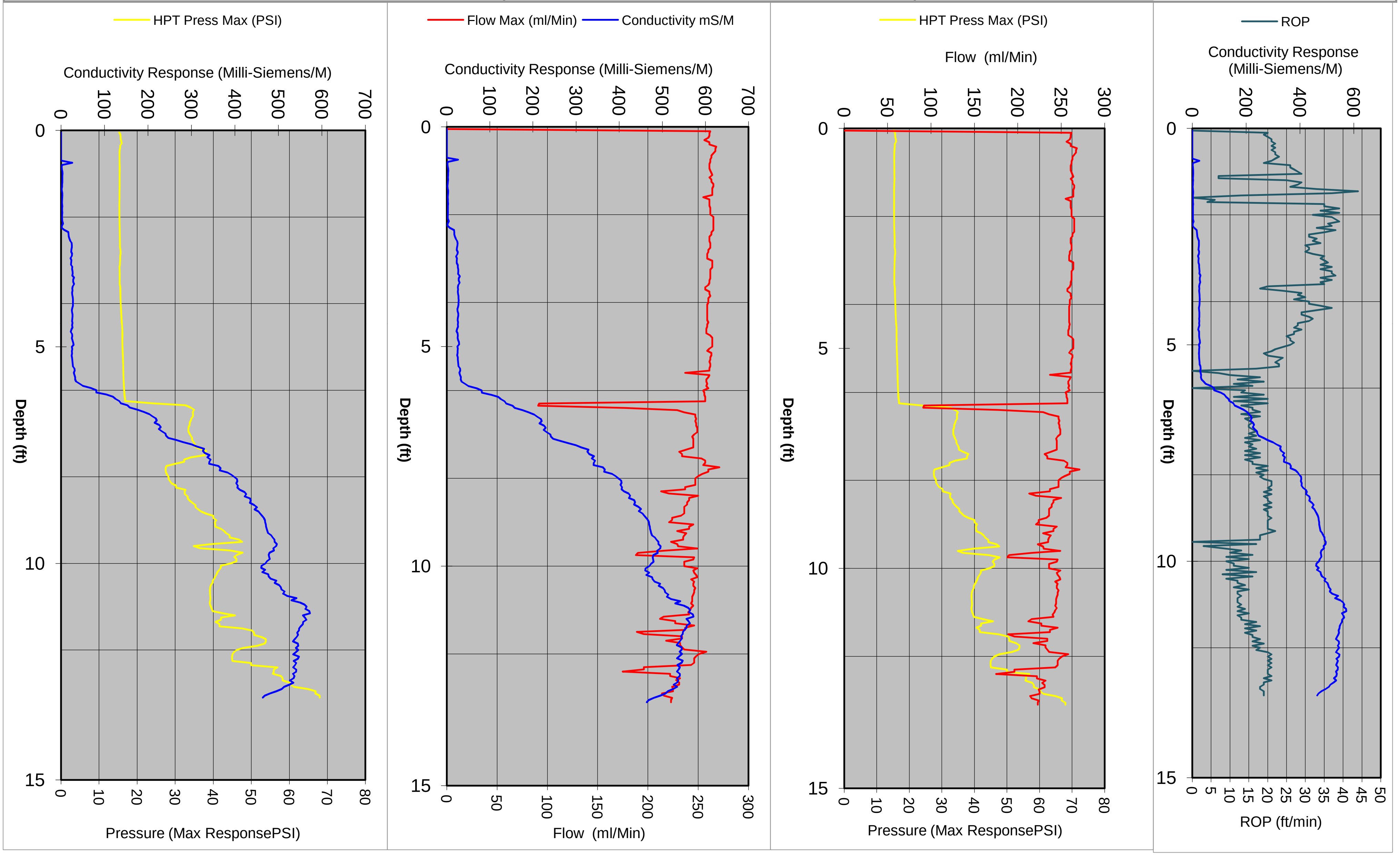
1641 Challenge DR
Concord, CA 94520
P:(925) 849-6970
F:(925) 849-6973
www.vironex.com

Boring Name: HPB-3 | **Total Depth (ft): 13.1**

Notes: Air knife to 5 feet bgs.

GW Depth (ft): Depth of GW Provided by Client

Job Information		MIP Sampling Information			
Client Company:	ANTEA	Trunkline Length:	150	Start Boring Time:	Tue Mar 06 2012 14:03
Project Name:	76 Station No. 5191	Probe Type:	Wenner - HPT	End Boring Time:	Tue Mar 06 2012 14:17
Site Address:	449 Hegenberger RD, Oakland, CA	Rig Type:	GREGG DP 13	HPT Specialist:	Jeff Paul



VIRONEX

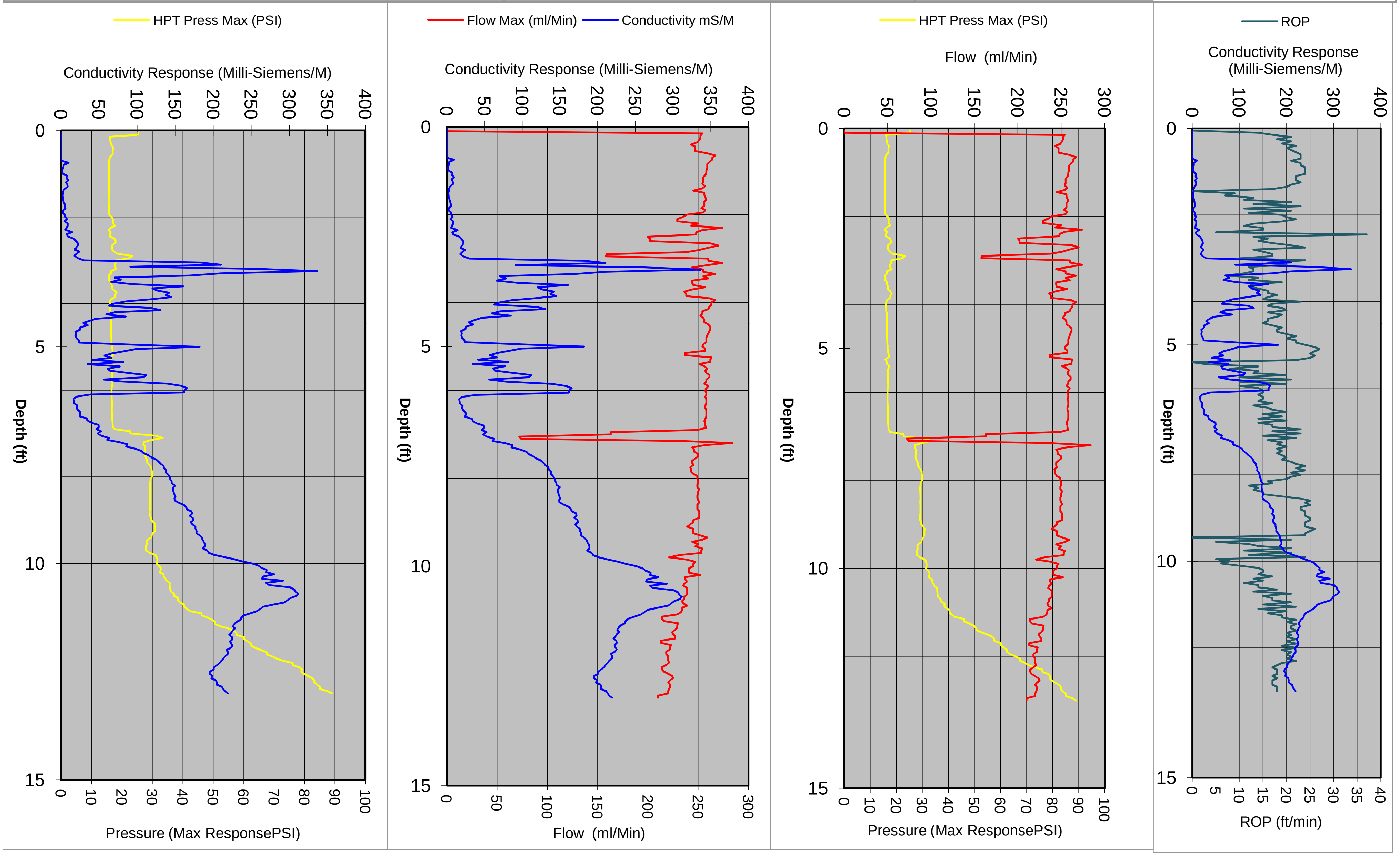
1641 Challenge DR
Concord, CA 94520
P:(925) 849-6970
F:(925) 849-6973
www.vironex.com

Boring Name: HPB-4 **Total Depth (ft): 13**

Notes: Air knife to 5 feet bgs.

GW Depth (ft):
Depth of GW Provided by Client

Job Information		MIP Sampling Information			
Client Company:	ANTEA	Trunkline Length:	150	Start Boring Time:	Tue Mar 06 2012 13:19
Project Name:	76 Station No. 5191	Probe Type:	Wenner - HPT	End Boring Time:	Tue Mar 06 2012 13:37
Site Address:	449 Hegenberger RD, Oakland, CA	Rig Type:	GREGG DP 13	HPT Specialist:	Jeff Paul



VIRONEX

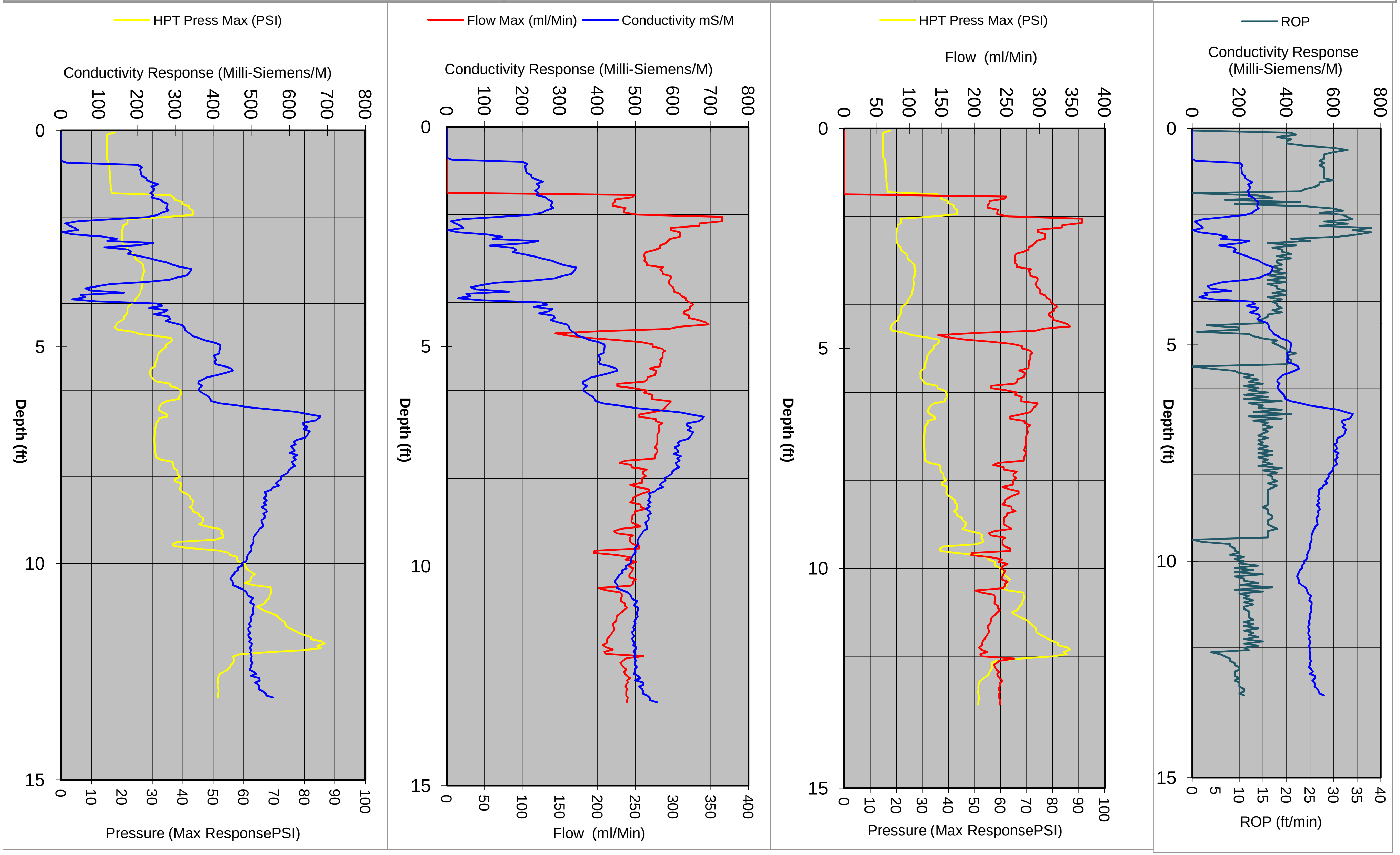
1641 Challenge DR
Concord, CA 94520
P:(925) 849-6970
F:(925) 849-6973
www.vironex.com

Boring Name: HPB-5 **Total Depth (ft): 13.1**

Notes: Air knife to 5 feet bgs.

GW Depth (ft):
Depth of GW Provided by Client

Job Information		MIP Sampling Information			
Client Company:	ANTEA	Trunkline Length:	150	Start Boring Time:	Mon Mar 06 2012 09:51
Project Name:	76 Station No. 5191	Probe Type:	Wenner - HPT	End Boring Time:	Mon Mar 06 2012 10:29
Site Address:	449 Hegenberger RD, Oakland, CA	Rig Type:	GREGG DP 13	HPT Specialist:	Jeff Paul



Appendix C

Antea Group Standard Operating Procedures

STANDARD OPERATING PROCEDURES

Utility Locating

Prior to drilling, boring and excavation locations and an approximate 15-foot by 15-foot box are marked with white paint or other distinct marking and cleared for underground utilities through Underground Service Alert (USA). In addition, Antea Group will contract an independent locator services to clear boring or excavation locations of subsurface assets. The first five feet (or more in instances where utilities are suspected in close proximity) of each borehole are air-knifed, or carefully advanced with a hand auger if shallow soil samples are necessary, to help evaluate the borehole location for underground structures or utilities in accordance with Antea Group's subsurface hazard avoidance policy.

Subsurface Investigation Methods – GeoProbe®, Sonic, Hollow Stem Auger Drilling, Sampling, and Borehole Completion

Borehole Advancement using Single-Wall GeoProbe®

Pre-cleaned push rods (typically one to two inches in diameter) are advanced using a hydraulic direct push-type rig for the purpose of collecting samples and evaluating subsurface conditions. The sample barrel located at the leading end of the drill rod serves as a soil sampler, and an acetate liner is inserted into the sample barrel rod prior to advancement of the push rod. Once the sample is collected, the rods and sampler are retracted and the acetate sample tubes are removed from the sampler. The sample barrel is then cleaned, filled with clean sample tubes, inserted into the borehole and advanced to the next sampling point where the sample collection process is repeated.

Undisturbed soil samples selected for laboratory analysis are cut away from the acetate sample liner using a hacksaw, or equivalent tool, in sections approximately 6 inches in length. The 6 inch samples are lined at each end with Teflon® sheets and capped with plastic caps. Labels documenting project number, borehole identification, collection date, and depth are affixed to each sample. The samples are then placed into an ice-filled cooler for delivery under chain-of-custody to a laboratory certified by the State of California for analysis. The remaining collected soil that has not been selected for laboratory analysis is logged using the United Soil Classification System (USCS) under the direction of a State Registered Professional Geologist, and is field screened for organic vapors using a photo ionization detector (PID), or an equivalent tool.

Borehole Advancement using Sonic Drilling

Pre-cleaned heavy-walled down-hole casings (typically 6 to 8 inches in diameter) are advanced using a sonic head. A smaller diameter core barrel (typically 4 to 6 inches in diameter) is advanced through the inside of the down-hole casings to remove the soil cuttings from the borehole for sample collection and evaluation of subsurface conditions.

During drilling, soil samples are collected continuously using the sonic core barrel. A physical description of soil characteristics (i.e. moisture content, consistency or density, odor, color, and plasticity), drilling difficulty, and soil type as a function of depth are described on boring logs. The soil cuttings are classified in accordance with the USCS and field screened for organic vapors using a PID.

Borehole Advancement using Hollow Stem Auger

Pre-cleaned hollow stem augers (typically 8 to 10 inches in diameter) are advanced using a drill rig for the purpose of collecting samples and evaluating subsurface conditions. A pre-cleaned split spoon sampler is lined with three 6-inch long brass or stainless steel tubes and attached to the drill rods. The sampler is then driven 18 inches into the underlying soils at the target sample interval by repeatedly dropping a 140-pound hammer over a 30-inch free fall distance. The number of blow counts to drive the sampler each 6-inch interval of sampler advancement are recorded on the field logs. The sampler is driven 18 inches or until the sampler has met refusal (typically 50 blows per six inches), then the sampler is retrieved. Alternatively, soil samples are retrieved by driving the sampler using a pneumatic hammer, when using a limited access rig.

Generally the bottom sample tube is selected for laboratory analysis. The middle tube is extruded for logging and PID screening, and the top tube is considered slough caved off from the sides of the boring prior to sampling.

The retained sample is carefully packaged for chemical analysis by capping each end of the sample with a Teflon sheet followed by a tight-fitting plastic cap and stored in a zip-type plastic bag. A label is affixed to the sample indicating the sample identification number, borehole number, sampling depth, sample collection date, and job number. The sample is then annotated on a chain-of-custody form and placed in an ice-filled cooler for transport to the laboratory.

During the drilling process, a physical description of the encountered soil characteristics (i.e. moisture content, consistency or density, odor, color, and plasticity), drilling difficulty, and soil type as a function of depth are described on boring logs. The soil cuttings are classified in accordance with the USCS.

Grab Groundwater Sample Collection

Once the target groundwater sampling depth has been reached, a Hydropunch™ tip is placed on leading end of the sampling rods. The Hydropunch™ tip is advanced approximately 2 feet to place the sample port within the target groundwater sampling zone (effort is made to position the center of the Hydropunch™ screen across the water table surface, if appropriate), and retracted to expose the Hydropunch™ screen. Grab groundwater samples are collected by lowering a pre-cleaned, single-sample polypropylene, disposable bailer or pre-cleaned stainless steel bailer down the inside of the sampler rod. The groundwater sample is decanted from the bailer to the sample container through a bottom emptying flow control valve to minimize volatilization. Alternatively, groundwater samples are collected by lowering a disposable bailer through the sampler rod or into the borehole.

Collected water samples are decanted directly into laboratory provided, pre-cleaned, vials or containers and sealed with Teflon-lined septum, screw-on lids. Labels documenting sample number, well identification, collection date, and type of preservative (if applicable, i.e. HCl for GRO, BTEX, and fuel oxygenates) are affixed to each sample. The samples are then placed into an ice-filled cooler for delivery under chain-of-custody to a laboratory certified by the State of California to perform the specified tests.

Borehole Completion

Upon completion of drilling and sampling, the inner casing rods are retracted. Neat cement grout, mixed at a ratio of 6 gallons of water per 94 pounds of Portland cement, is introduced via a tremie pipe to displace standing water in the borehole, through the annulus of the outer casing rods. The outer rods are retracted as the grout is introduced to bottom of the boring to prevent the cross contamination of encountered water bearing zones. Displaced groundwater is collected at the surface and placed into DOT approved 55-gallon steel drums, or an equivalent storage container. In areas where the borehole penetrates asphalt or concrete, the borehole is capped with an equivalent thickness of asphalt or concrete patch to match finished grade.

Well Construction (typical)

Selected borings will be converted to groundwater monitoring wells by the installation of 2-inch or 4-inch diameter Schedule 40 polyvinyl chloride well casing with 0.020-inch factory slotted well screen as stated in the body of the work plan. A filter pack of Monterey #3 grade sand (or equivalent) will be placed in the annular space of the monitoring well borings, extending from the bottom of each well casing to approximately 2-feet above the top of the screened casing. A sanitary seal consisting of a 2-foot bentonite will be placed on above the filter sand and charged with water to create a seal. Neat cement grout, mixed at a ratio of 6 gallons of water per 94 pounds of Portland cement, is introduced via a tremie pipe to displace standing water in the well annulus bentonite to within two feet of the ground surface. Antea Group will install a minimum of a 5-foot annual seal. A traffic-rated well box will be installed on each well to protect and finish the well to surface grade.

The groundwater monitoring wells will be allowed to stabilize for a minimum of 72 hours after installation prior to development. Following development, the wells will be allowed stabilize for a minimum of 48 hours prior to the collection of any groundwater samples.

Organic Vapor Procedures

Soil samples are collected for analysis in the field for ionizable organic compounds using a PID with a 10.2 eV lamp. The test procedure involves measuring approximately 30 grams from an undisturbed soil sample, placing this sub-sample in a Zip-type bag. The container is warmed for approximately 20 minutes in the sun; then the head-space within the container is tested for total organic vapor, measured in parts per million as benzene (ppm; volume/volume). The instrument is calibrated prior to drilling. The results of the field-testing are noted on the boring logs. PID readings are useful as a qualitative indication of relative levels of contamination, but cannot be used to quantify petroleum hydrocarbon concentrations with the confidence of laboratory analyses.

Equipment Decontamination

Equipment that could potentially come in contact subsurface media and compromise the integrity of the samples is carefully decontaminated prior to drilling and sampling. Drilling auger and other large pieces of equipment are decontaminated using high pressure hot water spray. Soil and groundwater sampling apparatus, groundwater pumps, liners and other equipment are decontaminated in an Alconox scrub solution and double rinsed in clean tap water rinse followed by a final distilled water rinse.

The rinsate and other wastewater are contained in 55-gallon DOT-approved drums, labeled (to identify the contents, generation date and project) and stored on-site pending waste profiling and disposal.

Waste Handling and Disposal *(Soil Cuttings and Rinsate/Purge Water)*
Soil cuttings and rinsate/purge water generated during drilling and sampling are stored on-site in DOT-approved 55-gallon steel drums pending characterization. A label is affixed to the drums indicating the contents of the drum, suspected contaminants, date of generation, and the boring number from which the waste is generated. The drums are removed from the site by a licensed waste disposal contractor to an appropriate facility for treatment/recycling.

SOIL VAPOR WELLS STANDARD FIELD AND SAMPLING PROCEDURES

Utility Locating
Prior to drilling, boring and excavation locations and an approximate 15-foot by 15-foot box are marked with white paint or other distinct marking and cleared for underground utilities through Underground Service Alert (USA). In addition, Antea Group will contract an independent locator services to clear boring or excavation locations of subsurface assets. Soil vapor wells are not air-knifed, and are instead carefully advanced using hand auger drilling techniques.

Borehole Advancement using Hand Auger
A pre-cleaned hand auger (typically three inches in diameter) is advanced by hand for the purpose of collecting samples and evaluating subsurface conditions. If required, soil samples are collected into one 6-inch brass or stainless steel tube inserted into the hand auger during advancement. Soil samples may also be collected into pre-cleaned certified laboratory-provided glass jars.

The retained sample is carefully packaged for chemical analysis by capping each end of the sample with a Teflon sheet followed by a tight-fitting plastic cap and stored in a zip-type plastic bag. A label is affixed to the sample indicating the sample identification number, borehole number, sampling depth, sample collection date, and job number. The sample is then annotated on a chain-of-custody form and placed in an ice-filled cooler for transport to the laboratory.

During the drilling process, a physical description of the encountered soil characteristics (i.e. moisture content, consistency or density, odor, color, and plasticity), drilling difficulty, and soil type as a function of depth are described on boring logs. The soil cuttings are classified in accordance with the USCS.

Soil Vapor Well Completion (Typical)
Shallow soil vapor well borings are typically advanced to 5.5 feet below ground surface (bgs), but may be completed deeper if necessary or shallower if groundwater is present. The borings will be completed into soil vapor wells by placing one foot of Monterey #3 or #30 sand into the borehole. A soil vapor probe connected to seven feet of 0.25-inch outside

diameter Teflon® tubing and installed in center of the sand pack at a depth of five feet bgs. A one foot interval of dry granular bentonite transition seal is placed on top of the sand pack. A neat cement sanitary seal is placed on top of the transition seal to approximately one foot bgs. Concrete is placed from 1.0 feet bgs to approximately 4 inches below the surface and a traffic-rated well box is installed at the surface. The well is completed by installing a Swagelok® valve on the terminating end of the Teflon® tubing.

Organic Vapor Procedures

Soil samples are collected for analysis in the field for ionizable organic compounds using a PID with a 10.2 eV lamp. The test procedure involves measuring approximately 30 grams from an undisturbed soil sample, placing this sub-sample in a Zip-type bag. The container is warmed for approximately 20 minutes in the sun; then the head-space within the container is tested for total organic vapor, measured in parts per million as benzene (ppm; volume/volume). The instrument is calibrated prior to drilling. The results of the field-testing are noted on the boring logs. PID readings are useful as a qualitative indication of relative levels of contamination, but cannot be used to quantify petroleum hydrocarbon concentrations with the confidence of laboratory analyses.

Equipment Decontamination

Equipment that could potentially come in contact subsurface media and compromise the integrity of the samples is carefully decontaminated prior to drilling and sampling. Drilling auger and other large pieces of equipment are decontaminated using high pressure hot water spray. Soil and groundwater sampling apparatus, groundwater pumps, liners and other equipment are decontaminated in an Alconox scrub solution and double rinsed in clean tap water rinse followed by a final distilled water rinse.

The rinsate and other wastewater are contained in 55-gallon DOT-approved drums, labeled (to identify the contents, generation date and project) and stored on-site pending waste profiling and disposal.

Waste Handling and Disposal (Soil Cuttings and Rinsate/Purge Water)

Soil cuttings and rinsate/purge water generated during drilling and sampling are stored on-site in DOT-approved 55-gallon steel drums pending characterization. A label is affixed to the drums indicating the contents of the drum, suspected contaminants, date of generation, and the boring number from which the waste is generated. The drums are removed from the site by a licensed waste disposal contractor to an appropriate facility for treatment/recycling.

Soil Vapor Well Sampling

Following installation, the soil vapor wells will be allowed to equilibrate for a minimum of three days and then sampled using the standard operating procedure described below:

1. One-foot sections of 0.25-inch outside diameter Teflon® tubing will be used to connect the Swagelok® wellhead valve to a Swagelok® T-union fitting, one 6-liter Summa canister (purge), and one 1-liter or 6-liter Summa canister (sample). Each Summa canister will be outfitted with its own particulate filter, vacuum gauge, and flow regulator calibrated to a

flow rate of between 100 and 200 milliliters per minute (ml/min). With the exception of the 6-liter purge Summa canister, dedicated equipment and materials will be used at each well to avoid cross-contamination.

2. Once the sampling train is assembled, a vacuum test will be performed to ensure the integrity of the sampling train. With the Swagelok® wellhead valve closed, the 6-liter purge Summa canister will be opened for a minimum of 10 minutes. If a vacuum is not maintained for at least 10 minutes, the fittings will be tightened and the vacuum test repeated.
3. Once the integrity of the sampling train has been verified by the vacuum test, the well will be purged. The purge amount will be based on Department of Toxic Substances Control (DTSC) guidelines, which involves purging three dead space volumes (tubing volume + void space of the sand pack). Assuming a total well and sampling train tubing length of 10 feet and 35% porosity of the well's sand pack, the well will be purged approximately 1.4 liters (1,400 ml). Assuming a sustained flow rate of 150ml/min, a purging time of 9 minutes and 20 seconds should be anticipated. Total purge times may be adjusted based on actual flow rates observed in the field.
4. After purging activities are complete, Antea Group will construct a sampling shroud and place it over the well and wellhead valve. A paper towel with isopropyl alcohol applied to it will be placed underneath the shroud to be used as a leak check compound. The shroud will then be sealed to the ground surface with hydrated granular bentonite to ensure an air-tight connection. If 1,1-difluoroethane (1,1-DFA) is used as a leak check compound in lieu of isopropyl alcohol, it will be introduced underneath the sampling shroud prior to sealing with bentonite.
5. Upon completion of shroud construction, the sample Summa canister will be opened and sample collected. If isopropyl alcohol is used as a leak check compound, a PID will be used to monitor the concentration under the shroud at approximately 30-second intervals. Once the sample Summa canister is filled to -5 inches mercury (in Hg), the canister will be closed. All general sampling information, purge times, sample times, and PID readings will be recorded on field sampling forms.
6. After sampling, the Swagelok wellhead valve will be returned to the closed position. Collected samples will be given unique sample names and transported under chain of custody protocol to a California-certified analytical laboratory. Analyzed compounds will include the constituents of concern and the leak check compound used during sampling.

Appendix D

Oxygen BioChem (OBC)TM Documentation

Oxygen BioChem (OBC)™

Recent applications of in situ chemical oxidation (ISCO) have shown that ISCO can be a cost-effective remedial strategy for organic contaminants in groundwater and soil. The application of ISCO to contaminated source areas usually results in an immediate benefit to groundwater in the area. In addition, further contaminant flux can be reduced or eliminated mitigating further contaminant plume issues. Redox Tech has recently formulated a mixture of sodium persulfate and calcium peroxide that can be employed for ISCO applications using FMC's patent-pending Klozur™ activation chemistry.

The mixture in OBC supports a two-fold mechanism for treating contaminants of concern. OBC delivers one of the strongest chemical oxidants for short term ISCO, and also provides electron acceptors (oxygen and sulfate) for longer-term biological oxidation.

Sodium persulfate has emerged recently as an important oxidant for in situ remediation of volatile and semi-volatile organic compounds. Persulfate is the strongest oxidant within the peroxygen family, with an electromotive force of 2.12 volts. As illustrated below, the direct oxidation half-cell reaction for persulfate involves a two-electron transfer:

$$2\ S_2O_8^{2-} + 2\ H^+ + 2e^- \rightarrow 2HSO_4^-$$

However in most cases, rapid destruction of the contaminant of concern requires that the persulfate be activated in order to generate sulfate radicals. Sulfate radicals are powerful oxidizing agents, with an oxidation potential of 2.6 volts. Klozur activated persulfate is catalyzed with the peroxide and base provide by the calcium peroxide

$$S_2O_8^{2-} + \text{calcium peroxide activator} \rightarrow 2SO4^{\bullet}$$

Activated persulfate can remain available in the subsurface for months providing an unrivaled combination of power and stability.

The calcium peroxide provides several benefits. First, it imparts the alkalinity and peroxide needed to activate the persulfate using FMC's Klozur™ activation chemistry. Second, when mixed with water it provides a long-term slow release source of hydrogen peroxide and calcium hydroxide.

$$CaO_2 + 2\ H_2O \rightarrow Ca(OH)_2 + H_2O_2$$

The hydrogen peroxide that is slowly formed decomposes to oxygen and water, providing an extended oxygen source for subsequent bioremediation of petroleum hydrocarbons.

The resultant calcium hydroxide (hydrated lime) that is produced serves several purposes. First of all, it increases the total dissolved ion concentration, which makes the solution less likely to leach metals from the soil into the groundwater. Secondly, the calcium from the hydrated lime will precipitate the sulfate that is produced during the consumption of the

200 QUADE DRIVE, CARY NC 27513 TEL 919.678.0140 FAX 919.678.0150
WWW.REDOX-TECH.COM E-MAIL: JHASELOW@REDOX-TECH.COM

persulfate. The calcium sulfate (gypsum) precipitation helps to reduce sulfate groundwater concentrations, which may impact the secondary drinking water standard of 250 ppm.

The mixture in OBC® provides chemical oxidation as well as electron acceptors (oxygen and sulfate) for longer term biological oxidation. The predominant short-term reaction is chemical oxidation, while the longer-term remediation process is biological oxidation. OBC® has the advantages over more traditional oxygen compounds used for bioremediation in that is works on a broader range of contaminants.

Table 1. Contaminants Treated by Oxygen BioChem (OBC)®

CONTAMINANTS TREATED	
BTEX	1,4-dioxane
MTBE	PCBs
PAHs	Pentachlorophenol
Chlorinated Alkenes	Chlorinated Alkanes

Table 2 summarizes the advantages of OBC® over other oxygenating compounds. OBC® works on a wider range of contaminants than other oxygenates because provides chemical oxidation and electron acceptors for bioremediation. The amount of oxygen in OBC® assumes that all of the oxygen in the sulfate is consumed through sulfate reduction processes.

Table 2. Advantages of Oxygen BioChem (OBC)®

Oxygen BioChem (OBC)®	COMPETITORS
Greater oxygen – as much as 46 wt %	Typically 10 to 20 wt %
Both chemical oxidation and bioremediation	Predominantly bioremediation
Greater solubility – typically 40 wt % for the persulfate portion	Typically less than 5% soluble
Better value - $3.25 per pound	Typically $4 to $10 per pound

CONTACT:

John Haselow, PhD, PE
Redox Tech, LLC
200 Quade Drive
Cary, NC 27513
Phone: 919-678-0140
www.redox-tech.com