

RECEIVED

By dehloptoxic at 1:24 pm, Mar 07, 2007

2307 Pacific Ave.
Alameda, CA 94552
Phone 510-865-9503
Fax: 510-865-1889
E-Mail: stroil@aeshglobal.net

.....
Xtra Oil Company

March 6, 2007

Mr. Steven Plunkett
Alameda County Environmental Health Department
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

SUBJECT: SUBSURFACE INVESTIGATION REPORT (B3 THROUGH B7)
 CERTIFICATION
 County Case # RO 191
 Xtra Oil Company
 1701 Park Street
 Alameda, CA

Dear Mr. Plunkett:

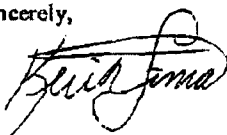
P&D Environmental, Inc. has prepared the following report:

- Subsurface Investigation Report (B3 Through B7) dated March 6, 2007 (document 0058.R2).

I declare under penalty of perjury that the contents and conclusions in the report are true and correct to the best of my knowledge.

Should you have any questions, please do not hesitate to contact me at (510) 865-9503.

Sincerely,



Keith Simas
Operations Supervisor

0058.L9

.....
Retail Fueling Convenience Stores

P&D ENVIRONMENTAL, INC.

55 Santa Clara Avenue, Suite 240

Oakland, CA 94610

(510) 658-6916

March 6, 2007
Report 0058.R2

Mr. Ted Simas
Mr. Keith Simas
Xtra Oil Company
2307 Pacific Ave.
Alameda, CA 94501

SUBJECT: SUBSURFACE INVESTIGATION REPORT (B3 THROUGH B7)
County Case # RO 191
Xtra Oil Company
1701 Park Street
Alameda, CA

Gentlemen:

P&D Environmental, Inc. (P&D) is pleased to present this report documenting the results of subsurface investigation of the horizontal and vertical extent of petroleum hydrocarbons in soil and groundwater at and in the vicinity of the subject site. The scope of the work included drilling of boreholes B3 through B7 and the collection and analysis of soil and groundwater samples. Field activities were performed on November 3 through 9, 2006. This work was performed in accordance with P&D's work plan (document 0058. W1) dated September 1, 2006. A Site Location Map (Figure 1) and Site Vicinity Map showing the drilling locations (Figure 2) are attached with this report. All work was performed under the direct supervision of an appropriately registered professional and California Code of Regulations Title 23 Sections 2720-2728.

BACKGROUND

The subject site is presently used as a retail gasoline station. In April 1994, the Xtra Oil Company site was expanded onto the adjacent property at 2329 Buena Vista Avenue. Three gasoline underground storage tanks (USTs) and one diesel UST were removed from the property. The UST volumes and construction details are unknown. The USTs were replaced with two 10,000 gallon and one 7,000 gallon double walled USTs. One UST, which had been used to store heating oil, was removed from 2329 Buena Vista Avenue. At the time of the UST removals in April and May 1994, Alisto Engineering Group (Alisto) personnel collected 12 soil samples from the former UST pit and dispenser island excavations. Petroleum hydrocarbons were detected in the soil at the time of tank removal. According to Alisto's Additional Investigation Report dated December 19, 2001 documentation of the UST removal and associated sample results are provided in Alisto's Tank Closure Report dated July 5, 1994.

Alisto performed a subsurface investigation in November 1994 to assess the nature and extent of petroleum hydrocarbons in soil and groundwater at the site. Soil borings B1, B2 and B3 were drilled onsite to a total depth of 20 feet, and later converted into monitoring wells MW-1, MW-2 and MW-3, respectively. Laboratory analytical results indicated the presence of petroleum hydrocarbons in the soil from between 7 and 8 feet below grade (fbg) at the locations of wells MW-1 and MW-2. Total Petroleum Hydrocarbons as Gasoline (TPH-G) were detected at concentrations

of up to 12,000 milligrams per kilogram (mg/kg), Total Petroleum Hydrocarbons as Diesel (TPH-D) were detected at concentrations of up to 6,700 mg/kg, and benzene was detected at concentrations of up to 70 mg/kg in the soil. According to Alisto's Additional Investigation Report dated December 19, 2001, documentation of the subsurface investigation and associated sample results are provided in Alisto's Preliminary Site Assessment Report dated January 13, 1995.

A quarterly groundwater monitoring and sampling program was initiated by Alisto in November of 1994. The groundwater flow direction has historically ranged from northeasterly to southeasterly. Free product was observed in well MW-2 from the initiation of quarterly monitoring until the July 2000 event with a maximum thickness of 0.21 feet detected in May 1997 and August 1999. From November 1994 to June 2004, the depth to water at the site ranged from 3.51 to 9.12 fbg. TPH-G has been detected in the wells at a maximum concentration of 100,000 micrograms per liter ($\mu\text{g/l}$) in MW-1 (September 1997), TPH-D at a maximum concentration of 6,700,000 $\mu\text{g/l}$ in MW-2 (free product in May 1997), benzene at a maximum concentration of 22,000 $\mu\text{g/l}$ in MW-1 (November 1995), and MTBE at a maximum concentration of 19,000 $\mu\text{g/l}$ in MW-1 (June 1996).

In June 1996, Alisto performed a review of utility records at the County of Alameda Public Works Agency. A 10-inch diameter sanitary sewer was determined to be located in the center of Park Street at approximately 11 fbg. Due to groundwater depths of less than 11 fbg at the site, Alisto determined that the sanitary sewer trench may act as a preferential pathway for petroleum hydrocarbons migrating from the site toward Park Street. The report did not address site vicinity stratigraphy with respect to utility depths. According to Alisto's Additional Investigation Report dated December 19, 2001, documentation of the utility record review is provided in Alisto's Additional Investigation Report dated June 27, 1997.

Alisto performed an additional subsurface investigation in April 1997. The investigation included the installation of monitoring well MW-4 and the drilling of soil boring SB-1. The soil collected at the location of well MW-4 contained 5,300 mg/kg of TPH-G, 1,100 mg/kg of TPH-D and 15 mg/kg of methyl tertiary-butyl ether (MTBE). Total Organic Carbon (TOC) was detected in the soil at the location of boring SB-1 at a concentration of 830 mg/kg. According to Alisto's Additional Investigation Report dated December 19, 2001, documentation of the utility record review is provided in Alisto's Additional Investigation Report dated June 27, 1997.

In October 1999, Alisto prepared a Corrective Action Plan (CAP) to evaluate alternatives for site remediation and to develop a plan to address impacted soil and groundwater at the site. The CAP included a description of the soil types encountered during previous investigations at the site. Silty to gravelly clays predominate from the ground surface to approximately 8 fbg and are underlain by sandy silt and sandy clay to the total explored depth of 20 fbg. Alisto recommended a remediation plan that included air sparging and vapor extraction followed by thermal treatment of the extracted soil gas. Alisto also recommended performing vapor extraction and air sparging pilot tests to confirm the feasibility of the recommended remedial methods. Details of the plan are presented in Alisto's October 14, 1999 Corrective Action Plan.

On April 5, 2000, Alisto installed air sparging wells ASP-1 through ASP-7 to depths of between 26 and 30 fbg. The air sparging well locations are shown on Figure 2. A soil vapor extraction test was performed on October 12, 2000 using a slotted horizontal vapor extraction pipe located at a depth of four feet in a trench at the site. Figure 2 shows that the trench surrounds the UST pit and

dispenser islands on the northeast, southeast and southwest. The trench was installed at the time of site reconstruction in 1994. Vacuum pressure changes in monitoring wells MW-1, MW-2, and MW-4 were observed to determine the zone of influence during the test. An air sparging pilot test was performed on October 13, 2000 using wells MW-1 and MW-4 to monitor the influence of air injected air sparging wells on groundwater elevations and hydrocarbon concentrations in soil vapor and groundwater. Alisto concluded from the results of the tests that a combination of air sparging and vapor extraction can be effective in removing petroleum hydrocarbons from the subsurface materials. Documentation of the field activities and sample results are presented in Alisto's Remedial Investigation Report, dated February 8, 2001.

In November 2001, Alisto hand augered offsite borings TW-1, TW-2, and TW-3 to further assess the horizontal extent of petroleum hydrocarbon impact to soil and groundwater in the vicinity of the site. The locations of the borings are shown in Figure 2. Soil samples were collected at a depth of 7 fbg in each boring. The borings were subsequently converted into temporary groundwater monitoring wells and sampled. No TPH-G, TPH-D, benzene, toluene, ethylbenzene, xylenes, or MTBE were detected in any of the soil samples collected. Only MTBE at a concentration of 7.8 µg/l in TW-2 was detected in the groundwater samples. Based on the results of the soil and groundwater sampling, Alisto concluded that the extent of petroleum hydrocarbon impact is limited to within 80 feet of the property. Documentation of the field activities and sample results are presented in Alisto's Additional Investigation Report, dated December 19, 2001.

Petroleum hydrocarbon subsurface investigation and remediation have historically been performed at the former Exxon station (presently operated as a Valero station) at 1725 Park Street, located approximately 100 feet northeast of the subject site. Environmental Resolutions, Inc. (ERI) provided the results of their sensitive receptor and well survey in their Sensitive Receptor Survey Update Report for the Exxon/Valero site at 1725 Park Street, dated August 2, 2002. Eight utility vaults and two catch basins were identified adjacent to the site. For surface water bodies, a tidal canal was identified 1,000 feet away. Within 1,000 feet, three basements were identified upgradient from the site. No wells were located within 2,000 feet and no tunnels or subways were located within 1,000 feet.

In a letter dated September 22, 2006 titled, "Change In Consultant of Record" Xtra Oil Company identified P&D as the new consultant of record. On November 6, 2006, P&D performed quarterly monitoring and sampling of the wells at the subject site. Documentation of the monitoring and sampling is provided in P&D's Quarterly Groundwater Monitoring and Sampling Report (October Through December 2006) dated January 22, 2007.

FIELD ACTIVITIES

Prior to drilling, a boring permit was obtained from the Alameda County Public Works Agency, encroachment permits were obtained from the City of Alameda Planning and Building Department, the drilling locations were marked with white paint, Underground Service Alert was notified for underground utility location, a health and safety plan and a traffic plan were prepared, and notification of the scheduled drilling date was provided to ACDEH personnel.

All boreholes were hand augered to 5 fbg. Membrane Interface Probe (MIP) drilling technology was used at boreholes B3, B4, B6, and B7; only soil conductivity data was collected at borehole

B5. The maximum depth explored at each location was approximately 50 fbg, with the exception of boring B6 where refusal was encountered at 40 fbg.. Geoprobe continuous soil coring was performed at borehole B6 to a depth of 50 fbg for visual correlation of subsurface materials with the soil conductivity logs. Geoprobe continuous soil coring was performed at boreholes B3, B4, B5, and B7 to a maximum depth of 15.0 feet for collection of shallow groundwater grab samples. In addition, depth-discrete water samples were collected at a depth of 41 or 42 fbg using a Geoprobe Hydropunch for these boreholes. All drilling was performed between November 3 and November 9, 2006. MIP and Geoprobe drilling were performed by Vironex, Inc. of Pacheco, California. The soil conductivity and MIP logs are provided in the attached Vironex, Inc. MIP Report. Copies of the Vironex, Inc. Standard Operating Procedures for use of the soil conductivity probe and MIP are also attached. A copy of the boring log for the continuously cored borehole at location B6 is attached with this report. A description of the MIP data for each borehole and a description of the drilling and sample collection procedures for each borehole are provided below.

Separate boreholes were drilled in close proximity to one another for collection of MIP and/or soil conductivity data, continuously cored boreholes for shallow groundwater grab sample collection and/or lithologic logging for visual comparison of subsurface materials with the soil conductivity logs, and for Hydropunch groundwater grab sample collection.

Soil Conductivity and MIP Drilling and Data Descriptions (B3, B4, B5, B6, and B7)

In addition to soil conductivity, ECD, PID and FID values, the MIP logs include probe tip temperature and drilling speed. Soil conductivity and contaminant concentration information are obtained by advancing a probe equipped with a conductivity probe and a membrane. The probe is advanced in approximately six-inch increments. Soil conductivity is continuously measured and provides resolution of individual earth material layers to approximately two inches in thickness.

Soil conductivity and detector values are recorded and printed as a log. Soil conductivity values are provided on the soil conductivity logs. Correlation of the soil conductivity values with actual earth materials is performed by physical collection and comparison of materials corresponding to different probe responses. The probe manufacturer has suggested the following correlation between soil type and soil conductivity.

Coarse Sand = 75 ms/m (Milli-Siemens per meter)

Silty Sand = 76-150 ms/m (Milli-Siemens per meter)

Silty Clay = 151-200 ms/m (Milli-Siemens per meter)

Clay = 200 and greater ms/m (Milli-Siemens per meter)

A heating block on the probe exterior results in heating of the probe exterior and also of Volatile Organic Compounds (VOCs) located in subsurface materials immediately adjacent to the probe. In principle, the heated VOCs volatilize, pass through the MIP membrane, and are delivered to the detectors at the ground surface through the probe interior by a nitrogen carrier gas. The probe manufacturer has suggested that the bottom of the peaks of the ECD, PID and FID logs provides the

most consistent correlation of field conditions with the log information. The probe manufacturer has also suggested that in general the ECD provides the highest sensitivity for halogenated volatile organic compounds (HVOCs), the PID provides the highest sensitivity for the more volatile components of petroleum hydrocarbons, and the FID provides the highest sensitivity for the less volatile components of petroleum hydrocarbons. Correlation of detector log values with actual concentrations in the ground is determined by collection and laboratory analysis of depth-discrete samples and comparison of the laboratory results with the log values.

The probe manufacturer has suggested that erratic temperature changes in the temperature log are observed in the unsaturated zone, and that non-erratic temperature changes are observed in the temperature log as a result of the consistent cooling of the probe provided by pore water in the saturated zone.

B3 MIP Data

Review of the temperature probe log proved inconclusive in determining where saturated conditions were first encountered.

Review of the conductivity probe log suggests that sand was predominantly encountered, with silty sand encountered between the depths of approximately 22 and 23 fbg and between approximately 46 and 50 fbg.

Review of the ECD log shows low level response from the ground surface to approximately 3 fbg. The borehole was hand augered to 5 fbg and the ECD was reported by the probe operator to be responding to the oxygen in the ambient air. The ECD response declines at approximately 5 fbg due to the reduced amount of oxygen in the native soil and then remains below the instrument detection limit to the total depth of the borehole.

Review of the PID log shows a significant response beginning at approximately 10 fbg and continuing to approximately 25 fbg. Lower level response is indicated to approximately 45 fbg, the depth at which finer-grained material is encountered. Review of the FID log shows a similar response pattern to that of the PID with a significant response beginning at approximately 9 fbg and continuing to approximately 20 fbg. Lower level response is indicated to approximately 45 fbg, the depth at which finer-grained material is encountered with more significant responses indicated at approximately 27 fbg and between approximately 39 and 43 fbg.

B4 MIP Data

Review of the temperature probe log proved inconclusive in determining where saturated conditions were first encountered.

Review of the conductivity probe log suggests that sand was predominantly encountered, with silty sand encountered between the depths of approximately 21 and 24 fbg and between approximately 45 and 50 fbg.

Review of the ECD log shows a similar response to that of borehole B3, with low level response from the ground surface to approximately 1 fbg due to the amount of oxygen in the ambient air followed by a response below the instrument detection limit to the total depth of the borehole.

Review of the PID log shows a low level response beginning at approximately 7 fbg and continuing to approximately 18 fbg, just above the first encountered finer grained interval. A more significant response occurred between approximately 24 and 26 fbg, in the sand just beneath the first encountered finer-grained interval. Lower level response is intermittent between approximately 27 and 50 fbg. Review of the FID log shows a similar response pattern to that of the PID with a significant response beginning in the very coarse grained material encountered between approximately 7 fbg and 19 fbg, ending at the depth of the first encountered finer grained interval. Additional significant responses occurred between approximately 24 and 26 fbg, in the sand just beneath the first encountered finer-grained interval, and between approximately 38 and 44 fbg, ending just above the depth at which finer grained material is again encountered. Low level response occurred between approximately 44 and 50 fbg.

B5 Soil Conductivity Data

Review of the conductivity probe log suggests that sand was predominantly encountered, with silty sand encountered between approximately 20 and 22 fbg, silty clay encountered between approximately 43 to 46 fbg, and silty sand again encountered between approximately 46 and 50 fbg

B6 MIP Data

Review of the temperature probe log suggests that saturated conditions were first encountered at a depth of approximately 6 fbg.

Soil conductivity logging began at approximately 4 fbg in borehole B6. Review of the conductivity probe log suggests that sand was predominantly encountered, with silty sand encountered between the depths of approximately 4 and 5 fbg and between approximately 21 and 22 fbg.

Review of the ECD log shows a response below the instrument detection limit from the ground surface to a depth of approximately 26 fbg. ECD responses suggest the presence of HVOCs between the depths of approximately 26 and 40 fbg. The concentration encountered between approximately 28 and 29 fbg is off the scale. The concentration decreases and increases intermittently between approximately 30 fbg and the end of the boring at 40 fbg.

Review of the PID log shows that a substantial response between the depths of approximately 6 and 11 fbg which does not correlate with the ECD log. Similarly, the FID log shows a significant response between approximately 6 and 11 fbg. The PID and FID responses occurred in the shallowest coarse grained material, beginning at the depth of saturation. The absence of activity on the ECD log for these intervals suggests that a petroleum hydrocarbon plume was detected between the depths of approximately 6 and 11 fbg.

B7 MIP Data

Review of the temperature probe log suggests that saturated conditions were first encountered at a depth of approximately 6 fbg.

Review of the conductivity probe log suggests that sand was predominantly encountered, with silty sand encountered between the depths of approximately 1 and 2 fbg, silty clay encountered between approximately 44 and 46 fbg, and silty sand again encountered between approximately 46 fbg and the end of the borehole at 50 fbg.

Review of the ECD log shows a similar response to that of borehole B6, with low level response from the ground surface to approximately 5 fbg due to the amount of oxygen in the ambient air followed by a response below the instrument detection limit to the total depth of the borehole

Review of the PID log shows a similar response pattern to that observed at borehole B6, with a substantial response between the depths of 8 and 14 fbg and a spike in concentration at approximately 18 fbg . There is substantial attenuation of the response by 20 fbg. Similarly, the FID log shows a significant response between approximately 8 and 12 fbg and a spike in concentration at approximately 18 fbg. The absence of activity on the ECD log for these intervals suggests that a petroleum hydrocarbon plume was detected between the depths of approximately 8 and 18 fbg.

Geoprobe Soil Coring and Hydropunch Drilling and Sampling Description (B3 Through B7)

Following soil conductivity and MIP identification of permeable intervals associated with detectable concentrations of petroleum hydrocarbons, depth-discrete groundwater sample collection intervals were identified. Lithology identified in the soil conductivity logs was correlated with site conditions by continuous coring using Geoprobe push technology at location B6. The push technology consisted of a 5-foot long, 3.5-inch outside diameter core barrel lined with cellulose acetate sleeves hydraulically pushed into the ground. The soil from the continuously cored boring at location B6 was logged in the field in accordance with standard geologic field techniques and the Unified Soil Classification System (USCS). The soil cores were evaluated with a 10.3 eV Photoionization Detector (PID) calibrated using a 100-ppm isobutylene standard. Observed soil conditions and PID readings were recorded on the boring log. A copy of the boring log is included with this report.

Soil samples were collected from borehole B6 for laboratory analysis at 6.0 and 9.0 fbg, the approximate depths at which the highest MIP values were observed. Soil samples were retained for laboratory analysis by cutting the desired section from the cellulose acetate core tube and covering the ends of the tube sequentially with aluminum foil and plastic endcaps. The section of tube was then labeled and placed in a cooler with ice pending delivery to a State-accredited hazardous waste testing laboratory. Chain of custody procedures were observed for all sample handling.

Depth-discrete groundwater samples were collected by continuous coring with a GeoProbe 2.5-inch outside diameter Macrocore barrel sampler to first encountered groundwater and placing new, temporary 1-inch diameter slotted PVC pipe in each borehole (boreholes B3, B5, and B7 were cored to a depth of 15.0 fbg, borehole B4 was cored to a depth of 14.0 fbg, and borehole B6 was cored to a depth of 10.0 fbg) or by using a Hydropunch (borehole B3 at 41.0 to 45.0 fbg and

boreholes B4 through B7 at 42.0 to 46.0 fbg). The water samples were collected from the PVC pipe or from the Hydropunch using polyethylene tubing and a stainless steel foot valve. All water samples were transferred to 1-liter amber bottles (as appropriate) and 40-milliliter glass Volatile Organic Analysis (VOA) vials containing hydrochloric acid preservative, which were sealed with Teflon-lined screw caps. The VOAs were overturned and tapped to ensure that air bubbles were not present. The samples were labeled and then placed into a cooler with ice pending delivery to the laboratory. Hydrocarbon sheen was observed on the shallow sample from borehole B6 at the time of collection. Chain of custody procedures were observed for all sample handling.

New PVC pipe and polyethylene tubing were used for groundwater grab sample collection in each borehole. All other drilling and sample collection equipment was cleaned with an Alconox solution followed by a clean water rinse prior to use at each location. Soil from the boreholes that was not retained for laboratory analysis was stored onsite pending disposal. Following completion of sample collection activities, the boreholes were filled with neat cement grout using the Hydropunch rods or drill rods as a tremie pipe.

GEOLOGY AND HYDROGEOLOGY

Based on review of the Geologic map and map database of the Oakland metropolitan area, Alameda, Contra Costa, and San Francisco Counties, California, by R.W. Graymer (2000) of the U. S. Geological Survey, the subject site is underlain Holocene and Pleistocene age dune sand (Qds) which consists of fine grained, very well sorted and well drained eolian deposits. Buried paleosols encountered in the dunes are considered indicative of periods of nondeposition.

The subsurface materials encountered in continuously cored borehole B6 consisted predominantly of sand and silty sand to the total depth explored of 45.0 fbg (the boring was completed to 50.0 fbg but no sample was recovered from 45.0 to 50.0 fbg). A sandy clay interval was encountered between 24.0 and 25.0 fbg. Groundwater was encountered during drilling at approximately 17 fbg. Comparison of the conductivity logs with the corresponding visually logged borehole shows a very good correlation of the conductivity logs with observed subsurface materials. The soil conductivity logs showed finer-grained materials encountered at a depth of 46.0 fbg in boreholes B3 and B4, and at a depth of 44.0 fbg in boreholes B5 and B7. Fine-grained materials were not encountered in borehole B6 at similar depths because soil conductivity probe refusal was encountered at a depth of 40.0 fbg and no sample recovery from 45.0 to 50.0 in the continuously cored borehole.

On November 6, 2006, P&D monitored wells MW1, MW2, MW3, and MW4 for depth to water to the nearest 0.01 foot using an electric water level indicator, and sampled wells MW1, MW2, MW3, and MW4. Since the previous monitoring and sampling episode by Alisto on September 8, 2006, groundwater elevations have decreased in all of the wells by amounts ranging from 0.03 to 0.28 feet. Based on the measured depth to water in groundwater monitoring wells MW1, MW2, and MW3, the apparent groundwater flow direction at the site on November 6, 2006 was calculated to be to the northeast with a gradient of 0.005. The groundwater flow direction has remained relatively unchanged and the gradient has increased from 0.004 since the previous monitoring event on September 8, 2006.

LABORATORY ANALYSIS

All of the soil and groundwater samples were analyzed for Total Petroleum Hydrocarbons as Diesel (TPH-D) and Total Petroleum Hydrocarbons as Motor Oil using EPA Method 3510C in conjunction with EPA Method 8015C, TPH-G using EPA Method 5030B in conjunction with modified EPA Method 8015C, and for methyl tertiary-butyl ether (MTBE), benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 8021B.

A review of the results of the analysis of soil samples collected from borehole B6 shows that TPH-G and TPH-MO were detected in sample B6-9.0 at concentrations of 3,800 and 1,300 mg/kg, respectively. In addition, benzene, toluene, ethylbenzene, and xylenes were detected at concentrations of 8.6, 17, 59, and 270 mg/kg, respectively. MTBE was not detected above the laboratory reporting limit in this sample but the reporting limit was raised to 40 mg/kg due to the high concentrations of petroleum hydrocarbons in the sample. None of the analytes were detected at concentrations above their respective reporting limit in sample B6-20.0, with the exception of MTBE which was detected at a concentration of 0.093 mg/kg.

Review of the results of the analysis of shallow groundwater samples collected from boreholes B3 through B7 shows that TPH-G was detected in samples B5-12W, B6-10W, and B7-12W at concentrations of 67, 87,000, and 2,900 µg/l, respectively. TPH-D was detected in samples B6-10W and B7-12W at concentrations of 75,000 and 7,600 µg/l, respectively. TPH-MO was detected in samples B3-12W, B6-10W, and B7-12W at concentrations of 400, 3,100, and 19,000 µg/l, respectively. Benzene was detected in samples B5-12W, B6-10W, and B7-12W at concentrations of 0.51, 6,000 and 450 µg/l, respectively. Toluene was detected in samples B3-12W, B4-14W, B6-10W, and B7-12W at concentrations of 0.71, 1.3, 630, and 15 µg/l, respectively. Ethylbenzene was detected in samples B5-12W, B6-10W, and B7-12W at concentrations of 0.96, 4,600, and 44 µg/l, respectively. Xylenes were detected in samples B3-12W, B4-14W, B5-12W, B6-10W, and B7-12W at concentrations of 0.92, 1.3, 3.4, 16,000, and 120 µg/l, respectively. MTBE was only detected above the laboratory reporting limit in sample B7-12W at a concentration of 300 µg/l. However, the reporting limit was raised to 1,500 µg/l for sample B6-10W due to the presence of high concentrations of petroleum hydrocarbons.

Review of the results of the analysis of the deeper groundwater samples collected from boreholes B3 through B7 shows that TPH-G was detected in samples B6-42W, and B7-42W at concentrations of 260 and 63 µg/l, respectively. TPH-D was detected in samples B3-41W, B4-42W, B5-42W, B6-42W, and B7-42W at concentrations of 190, 82, 280, 220, and 300 µg/l, respectively. TPH-MO was detected in samples B3-41W, B4-42W, B5-42W, and B7-42W at concentrations of 1,700, 850, 930, and 350 µg/l, respectively. Benzene was detected in sample B6-42W at a concentrations of 2.2 µg/l. Toluene was detected in samples B3-41W, B4-42W, B5-42W, B6-42W, and B7-42W at concentrations of 1.6, 0.84, 0.55, 1.8, and 0.58 µg/l, respectively. Ethylbenzene was detected in samples B6-42W and B7-42W at concentrations of 5.1, and 0.77 µg/l, respectively. Xylenes were detected in samples B3-41W, B4-42W, B5-42W, B6-42W, and B7-42W at concentrations of 1.9, 1.1, 1.1, 20, and 2.7 µg/l, respectively. MTBE was not detected above the laboratory reporting limit in any of the deeper groundwater samples.

Soil sample results from historic and current investigations are summarized in Table 1. Groundwater sample results from historic and current investigations are summarized in Table 2.

In addition, the results of water samples collected from the four onsite groundwater monitoring wells on November 6, 2006 are summarized in Table 3. Copies of the laboratory analytical reports and chain of custody documentation associated with samples collected during the current investigation are attached with this report. Copies of the laboratory analytical reports for the water samples collected from the four onsite groundwater monitoring wells on November 6, 2006 are presented in P&D's Quarterly Groundwater Monitoring And Sampling Report (October Through December 2006) dated January 22, 2007 (document 0058.R1).

DISCUSSION AND RECOMMENDATIONS

Soil conductivity and MIP data were collected to evaluate the subsurface horizontal and vertical extent of petroleum hydrocarbons to the southwest (B3) and southeast (B4 and B5) of the site, at the area of suspected highest petroleum concentrations (B6), and downgradient of the area of suspected highest petroleum concentrations (B7). Groundwater grab samples were collected to quantify the MIP data and borehole B6 was continuously cored and visually logged to verify the soil conductivity data.

Groundwater was generally encountered at depths ranging from 10.0 to 15.0 fbg. The subsurface materials consisted predominantly of sand and sandy silt to the total depths explored. Although the soil conductivity results suggest that fine-grained materials were encountered in four of the boreholes at depths of 44.0 or 46.0 fbg, visual confirmation of the suspected fine-grained material at these depths did not occur because of no sample recovery in borehole B6 below a depth of 45.0 fbg.

Groundwater TPH-G, TPH-D and benzene concentrations at a depth of 12 fbg are shown in Figures 3, 4 and 5 and at a depth of 42 fbg in Figures 6, 7, and 8. Review of the figures shows that the horizontal extent of petroleum has been defined horizontally in groundwater to the southwest and southeast of the site. Similarly, comparison of the water sample results at a depth of 42 fbg with the water quality results for first encountered groundwater at a depth of approximately 12 fbg in the boreholes and onsite groundwater monitoring wells shows a reduction in petroleum hydrocarbon concentrations of 2 orders of magnitude, suggesting that the vertical extent of petroleum hydrocarbons in groundwater appears to be defined.

Review of the footnotes in Table 2 shows that all of the results for the water samples collected at a depth of 42 fbg with the exception of B6 are identified as consisting of one to a few isolated peaks. Review of Figure 7 shows that the distribution of TPH-D at a depth of 42 fbg is not consistent with the distribution of TPH-G and benzene at a depth of 42 fbg. Results of the MIP investigation indicate the presence of HVOC impacted groundwater in the intermediate to deep groundwater at location B6. Based on historical usage, it is not likely that the subject site is the source of the HVOC impacted groundwater.

Based on the results of the current investigation, the results of Alisto's October 2000 air sparging pilot test, and comments contained in ACDEH's August 17, 2001 letter, P&D recommends commencing remedial activities utilizing the site's existing air sparging and vapor extraction system.

DISTRIBUTION

A copy of this report will be uploaded to the ACDEH website, in accordance with ACDEH requirements. In addition, a copy of this report will be uploaded to the GeoTracker database.

LIMITATIONS

This report was prepared solely for the use of Xtra Oil Company. The content and conclusions provided by P&D in this assessment are based on information collected during our investigation, which may include, but not be limited to, visual site inspections; interviews with the site owner, regulatory agencies and other pertinent individuals; review of available public documents; subsurface exploration and our professional judgment based on said information at the time of preparation of this document. Any subsurface sample results and observations presented herein are considered to be representative of the area of investigation; however, geological conditions may vary between borings and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which vary from these findings, the newly revealed conditions must be evaluated and may invalidate the findings of this report.

This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the owner to properly dispose of any hazardous materials or hazardous wastes left onsite, in accordance with existing laws and regulations.

This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature. P&D is not responsible for the accuracy or completeness of information provided by other individuals or entities, which are used in this report. This report presents our professional judgment based upon data and findings identified in this report and interpretation of such data based upon our experience and background, and no warranty, either express or implied, is made. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.

March 6, 2007
Report 0058.R2

Should you have any questions or comments, please do not hesitate to contact us at (510) 658-6916.

Sincerely,

P&D Environmental, Inc.



David M. Gibbs
Geosciences Department Manager
Professional Geologist #7804
Expires: 2/28/09



Attachments: Table 1: Historic Soil Analytical Results
Table 2: Historic Grab Groundwater Analytical Results
Table 3: Onsite Groundwater Monitoring Well Analytical Results
Figure 1: Site Location Map
Figure 2: Site Vicinity Map
Figure 3: Site Vicinity Map – TPH-G in Groundwater at 12 Feet Below Surface
Figure 4: Site Vicinity Map – TPH-D in Groundwater at 12 Feet Below Surface
Figure 5: Site Vicinity Map – Benzene in Groundwater at 12 Feet Below Surface
Figure 6: Site Vicinity Map – TPH-G in Groundwater at 42 Feet Below Surface
Figure 7: Site Vicinity Map – TPH-D in Groundwater at 42 Feet Below Surface
Figure 8: Site Vicinity Map – Benzene in Groundwater at 42 Feet Below Surface
Vironex, Inc. MIP Report
Boring Log
Laboratory Analytical Reports and Chain of Custody Documentation

DMG/jts/sjc/
0058.R2

TABLES

TABLE 1
HISTORIC SOIL ANALYTICAL RESULTS

Sample ID	Type	Date	Depth (feet)	TPH-G	TPH-D	TPH-MO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TOC	MTBE
SW-N-9	UE	4/8/94	9	5.4	NA	NA	0.63	0.045	0.15	0.16	NA	NA
SW-E-N-9	UE	4/8/94	9	4,600	540	NA	59	230	79	370	NA	NA
SW-E-C-9	UE	4/8/94	9	5,300	1,300	NA	54	220	93	430	NA	NA
SW-E-S-9	UE	4/8/94	9	12,000	2,200	NA	130	640	210	940	NA	NA
SW-S-9	UE	4/8/94	9	1,900	730	NA	ND<0.5	1.7	25	41	NA	NA
SW-W-S-9	UE	4/8/94	9	2.5	ND<10	NA	0.03	0.033	0.069	0.23	NA	NA
SW-W-C-9	UE	4/8/94	9	28	22	NA	0.24	0.93	0.53	2.4	NA	NA
SW-W-N-9	UE	4/8/94	9	7.1	ND<10	NA	0.63	0.11	0.27	0.64	NA	NA
FO-1	FO	4/27/94	6	NA	ND<10	NA	ND<0.005	ND<0.005	ND<0.005	ND<0.005	NA	NA
SP-1	DE	5/6/94	1	380	210	NA	0.17	1.2	3.1	13	NA	NA
SP-2	DE	5/6/94	1	6.5	ND<10	NA	0.082	0.059	0.12	0.5	NA	NA
SP-3	DE	5/6/94	1	2.3	ND<10	NA	0.025	0.034	0.018	0.16	NA	NA
MW-1 B1		11/20/94	7.5-8	4,800	2,800	NA	63	330	120	580	NA	NA
MW-2 B2		11/20/94	7-7.5	12,000	6,700	NA	70	59	220	870	NA	NA
MW-3 B3		11/20/94	8-8.5	ND<1.0	ND<10	NA	ND<0.005	ND<0.005	ND<0.005	ND<0.005	NA	NA
MW-4		4/28/97	6-6.5	3.8	2.2	NA	0.018	0.012	0.053	0.12	NA	0.070
MW-4		4/28/97	11.5-12	5,300	1,100	NA	ND<0.25	23	98	390	NA	15
SB-1		4/28/97	6-6.5	NA	NA	NA	NA	NA	NA	NA	830	NA
TW-1		11/9/01	7-7.5	ND<1.0	ND<1.0	NA	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	NA
TW-2		11/9/01	7-7.5	ND<1.0	ND<1.0	NA	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	NA
TW-3		11/9/01	7-7.5	ND<1.0	ND<1.0	NA	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	NA
B6-9.0		11/09/06	9	3,800	1,300,a	ND<100	8.6	17	59	270	NA	ND<40
B6-20.0		11/09/06	20	ND<1.0	ND<1.0	ND<5.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	0.093
ESL ₁				100	100	500	0.044	2.9	3.3	2.3	NA	0.023

TABLE 1 (CONTINUED)
HISTORIC SOIL ANALYTICAL RESULTS

NOTES:

TPH-D = Total Petroleum Hydrocarbons as Diesel.

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-MO = Total Petroleum Hydrocarbons as Motor Oil.

TOC = Total Organic Carbon

MTBE = Methyl Tertiary-Butyl Ether

UE =UST Excavation

FO = Fuel Oil Tank Excavation

DE = Dispenser Excavation

NA = Not Analyzed.

ND<X = Not detected above the laboratory reporting limit X

ESL = Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB) updated February 2005, from Table
A – Shallow Soils, Groundwater is a current or potential source of drinking water (residential land use).

a = Laboratory Note: gasoline range compounds are significant

Results in milligrams per kilogram (mg/kg)

TABLE 2
HISTORIC GRAB GROUNDWATER ANALYTICAL RESULTS

Sample ID	Date	TPH-G	TPH-D	TPH-MO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	MTBE (8260)
TW-1	11/9/01	ND<50	ND<50	NA	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	3.3
TW-2	11/9/01	ND<50	ND<50	NA	ND<0.5	ND<0.5	ND<0.5	ND<0.5	7.8	6.5
TW-3	11/9/01	ND<50	ND<50	NA	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	<1.0
B3-12W	11/9/06	ND<50	ND<50	400	ND<0.5	0.71	ND<0.5	0.92	ND<5.0	NA
B3-41W	11/9/06	ND<50	190,e,c	1,700	ND<0.5	1.6	ND<0.5	1.9	ND<5.0	NA
B4-14W	11/9/06	ND<50	ND<50	ND<250	ND<0.5	1.3	ND<0.5	1.3	ND<5.0	NA
B4-42W	11/9/06	ND<50	82,c	850	ND<0.5	0.84	ND<0.5	1.1	ND<5.0	NA
B5-12W	11/3/06	67	ND<50	ND<250	0.51	ND<0.5	0.96	3.4	ND<5.0	NA
B5-42W	11/3/06	ND<50	280,e,c	930	ND<0.5	0.55	ND<0.5	1.1	ND<5.0	NA
B6-10W	11/3/06	87,000,d	75,000,e,b	3,100	6,000	630	4,600	16,000	ND<1,500	NA
B6-42W	11/3/06	260	220,b	ND<250	2.2	1.8	5.1	20	ND<5.0	NA
B7-12W	11/3/06	2,900	7,600,b,c	19,000	450	15	44	120	300	NA
B7-42W	11/3/06	63	300,e,b,c	350	ND<0.5	0.58	0.77	2.7	ND<5.0	NA
ESL ₁		100	100	100	1.0	40	30	20	5.0	5.0

NOTES:

TPH-D = Total Petroleum Hydrocarbons as Diesel.

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-MO = Total Petroleum Hydrocarbons as Motor Oil.

MTBE = Methyl Tertiary-Butyl Ether

NA=Not Analyzed

ND<X = Not detected above the laboratory reporting limit X

b =Gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?

c =One to a few isolated non target peaks present

d = lighter than water immiscible sheen/ product is present.

e =Heavier gasoline range compounds are significant (aged gasoline?)

ESL₁ = Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB) updated February 2005, from Table

A – Shallow Soils, Groundwater is a current or potential source of drinking water.

Results in micrograms per liter (µg/l)

TABLE 3
 ONSITE GROUNDWATER MONITORING WELL ANALYTICAL RESULTS

Well Number	Sample Date	TPH-MO	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW1	11/6/2006	360	3400,f,a	44,000,d	3,900	5,600	2,300	920	3,000
MW2	11/6/2006	11,000	14,000	45,000,d,f,a	ND<120	1,400	27	200	37
MW3	11/6/2006	ND<250	ND<50	ND<50	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
MW4	11/6/2006	850	4,300,f	23,000	ND<900	680	250	930	3,100
ESL ₁		100	100	100	5	1	40	30	20

NOTES:

TPH-MO = Total Petroleum Hydrocarbons as Motor Oil

TPH-D = Total Petroleum Hydrocarbons as Diesel

TPH-G = Total Petroleum Hydrocarbons as Gasoline

MTBE = Methyl tertiary-butyl ether

ND<X = Not detected at a concentration above the laboratory reporting limit

a = Laboratory Note: gasoline range compounds are significant

d = Laboratory Note: lighter than water immiscible sheen/ product is present

f = Laboratory Note: diesel range compounds are significant; no recognizable pattern

ESL₁ = Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB) updated February 2005, from Table A – Shallow Soils, Groundwater is a current or potential source of drinking water. Results with underline indicate value exceeding ESL.

Results in µg/L

FIGURES

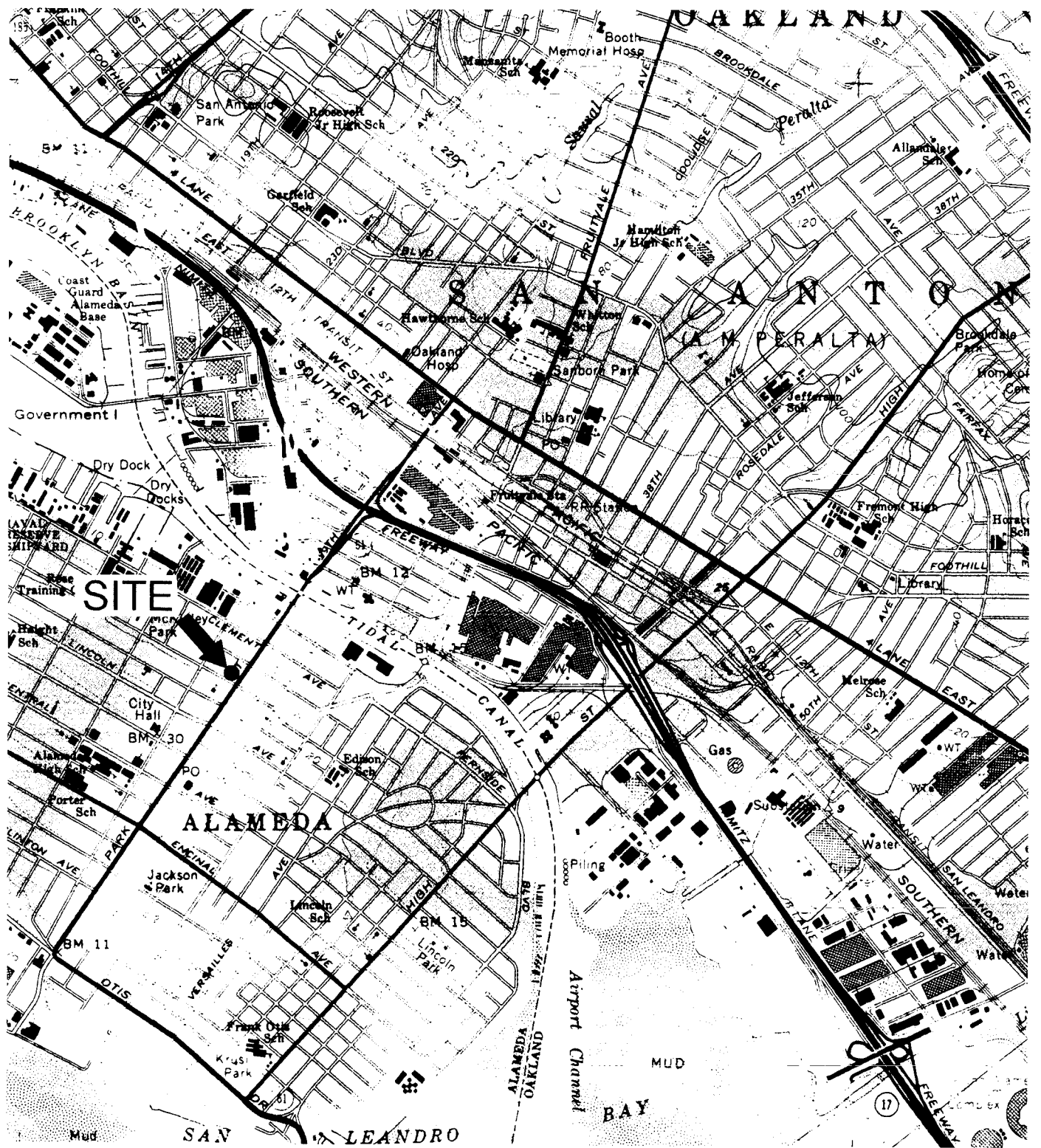
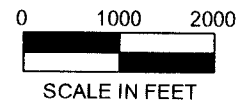


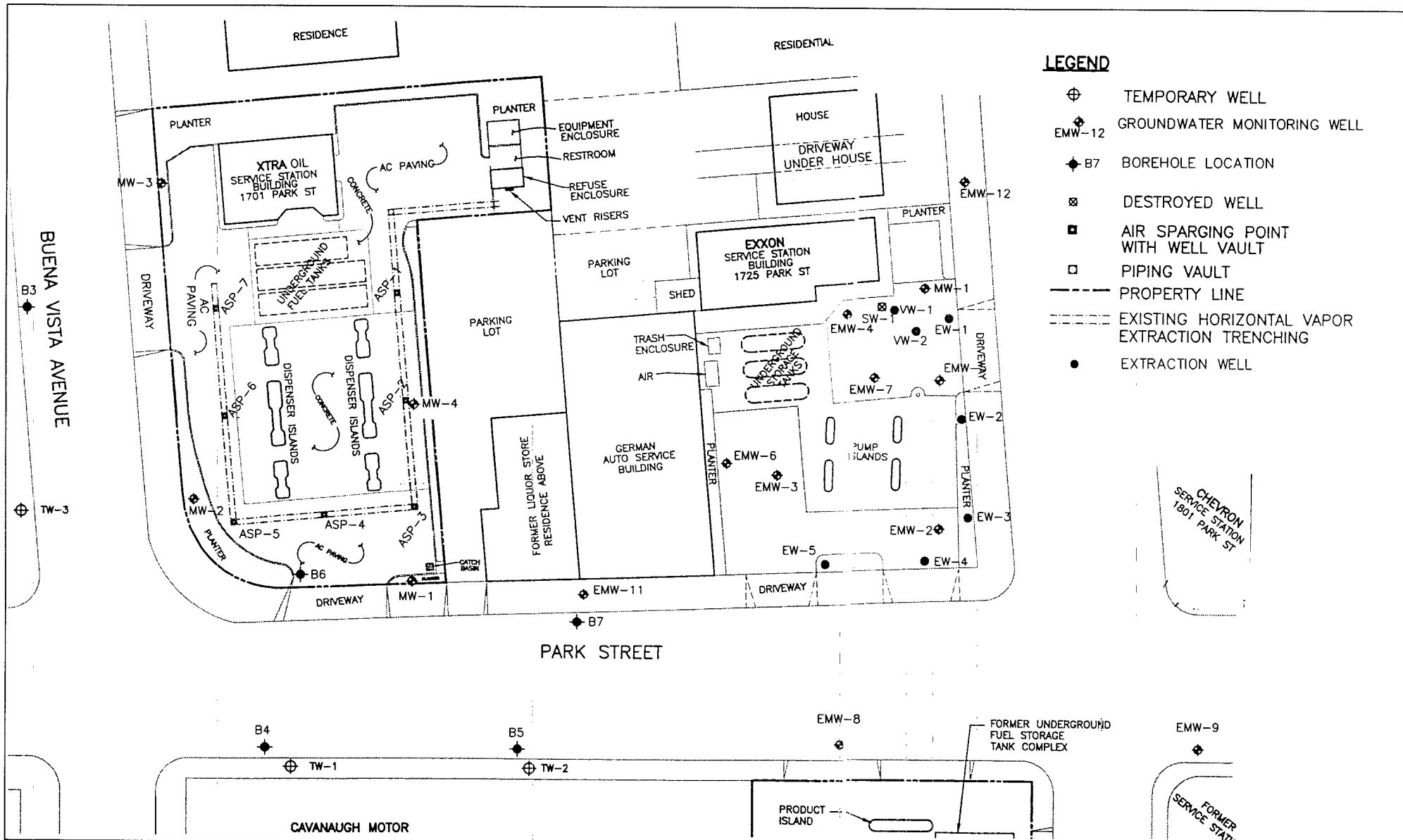
FIGURE 1
 Site Location Map
 1701 Park Street
 Alameda, CA



Base Map From:
 USGS Topographic Map, 7.5 minute series,
 Oakland East, Calif. quadrangle, 1980

P&D Environmental, Inc.
 55 Santa Clara Ave, Ste. 240
 Oakland, CA 94610





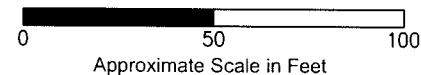
- LEGEND**
- ⊕ TEMPORARY WELL
 - ◆ EMW-12 GROUNDWATER MONITORING WELL
 - ◆ B7 BOREHOLE LOCATION
 - ⊗ DESTROYED WELL
 - AIR SPARGING POINT WITH WELL VAULT
 - PIPING VAULT
 - PROPERTY LINE
 - - - - - EXISTING HORIZONTAL VAPOR EXTRACTION TRENCHING
 - EXTRACTION WELL

Figure 2
 Site Vicinity Map Showing Borehole Locations
 1701 Park Street
 Alameda, CA



Base Map From:
 Alisto Engineering Group, 9/23/2005 and
 Environmental Resources, Inc.,
 6/15/2004

P&D Environmental, Inc.
 55 Santa Clara Ave, Ste. 240
 Oakland, CA 94610



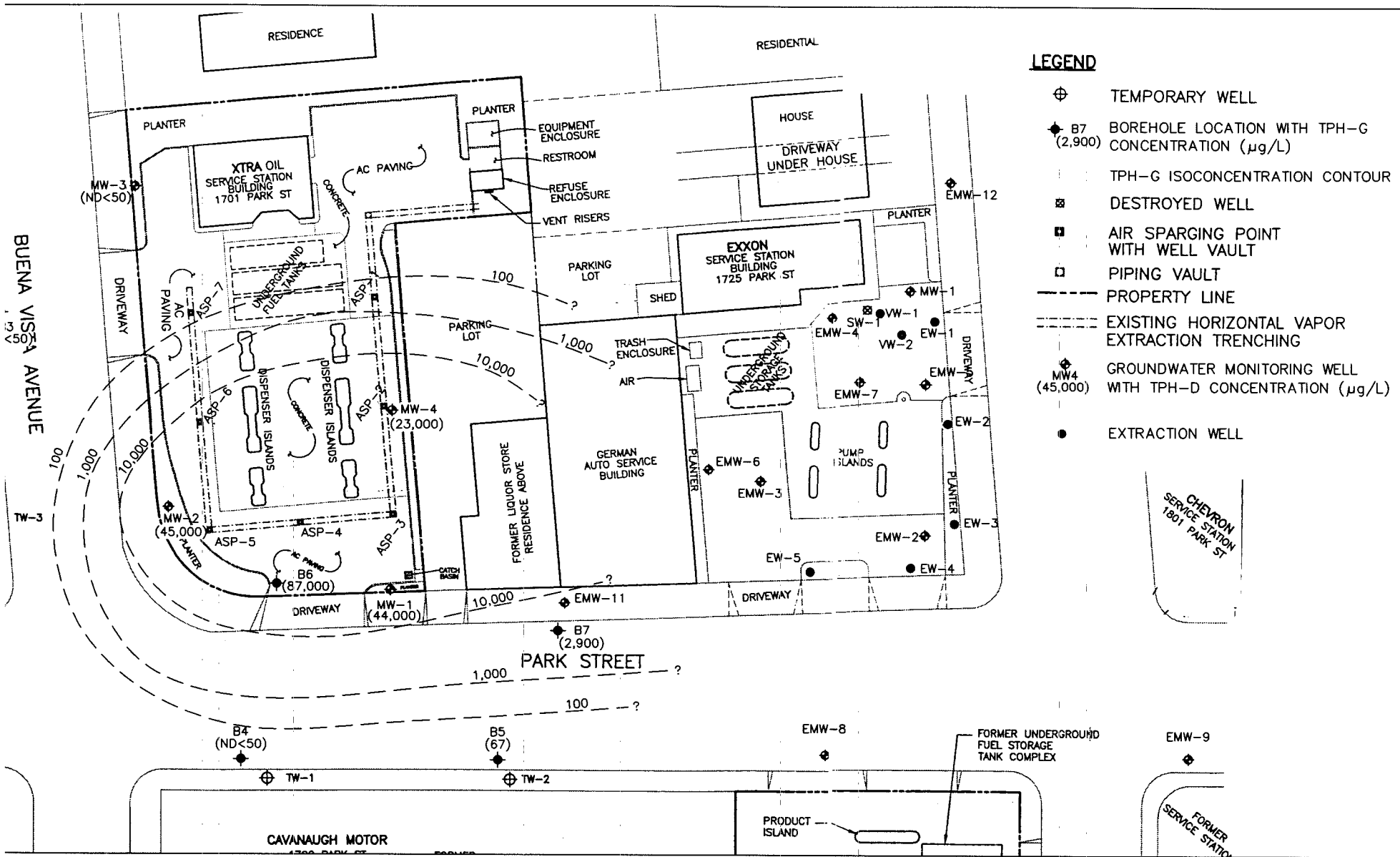
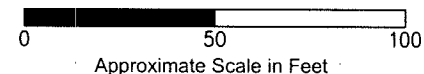


Figure 3
 Site Vicinity Map Showing TPH-G in Groundwater At 12 Feet Below Surface
 1701 Park Street
 Alameda, CA



Base Map From:
 Alisto Engineering Group, 9/23/2005
 and Environmental Resources, Inc.,
 6/15/2004

P&D Environmental, Inc.
 55 Santa Clara Ave, Ste. 240
 Oakland, CA 94610



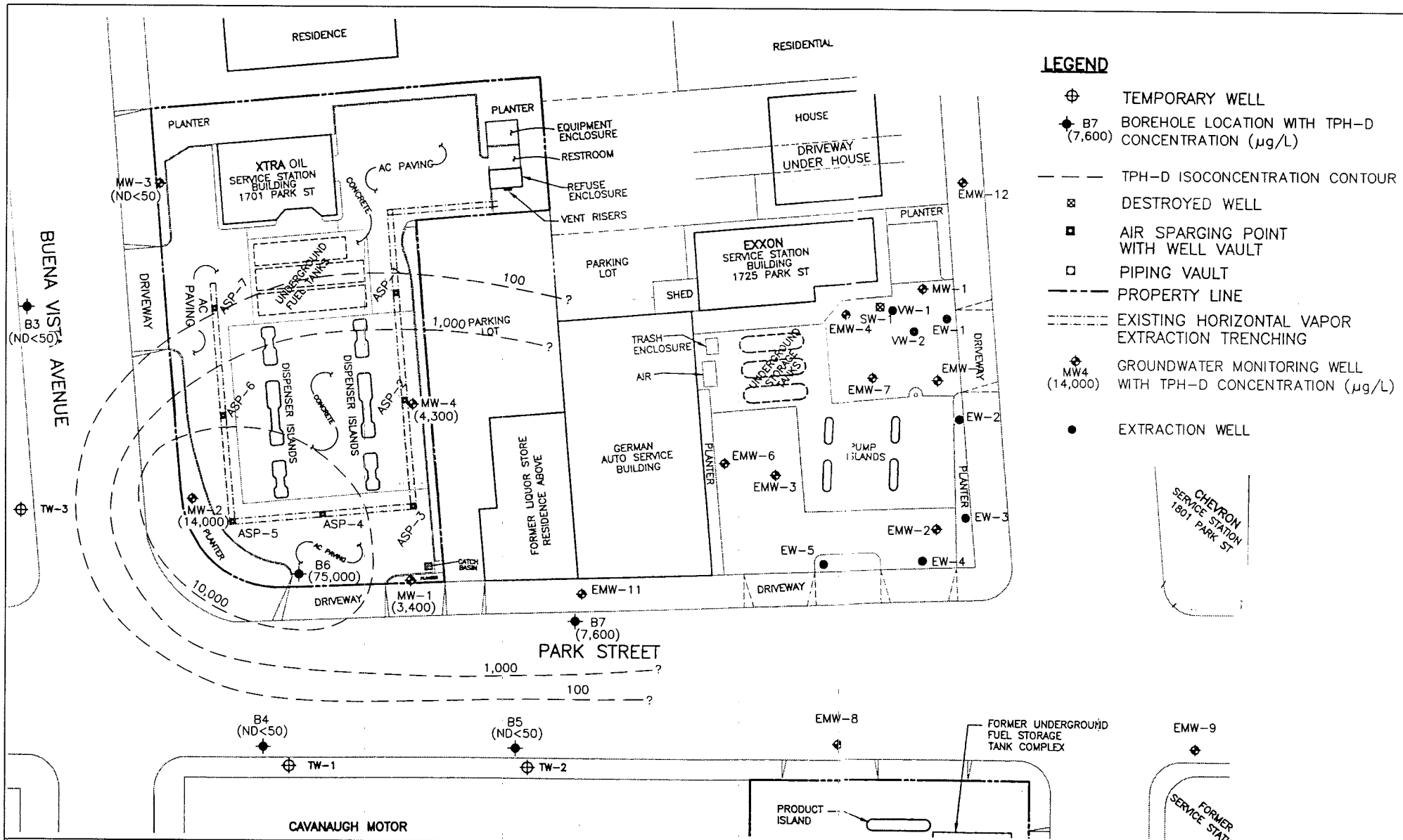


Figure 4
 Site Vicinity Map Showing TPH-D in Groundwater At 12 Feet Below Surface
 1701 Park Street
 Alameda, CA

Base Map From:
 Alisto Engineering Group, 9/23/2005
 and Environmental Resources, Inc.,
 6/15/2004

P&D Environmental, Inc.
 55 Santa Clara Ave, Ste. 240
 Oakland, CA 94610

0 50 100
 Approximate Scale in Feet

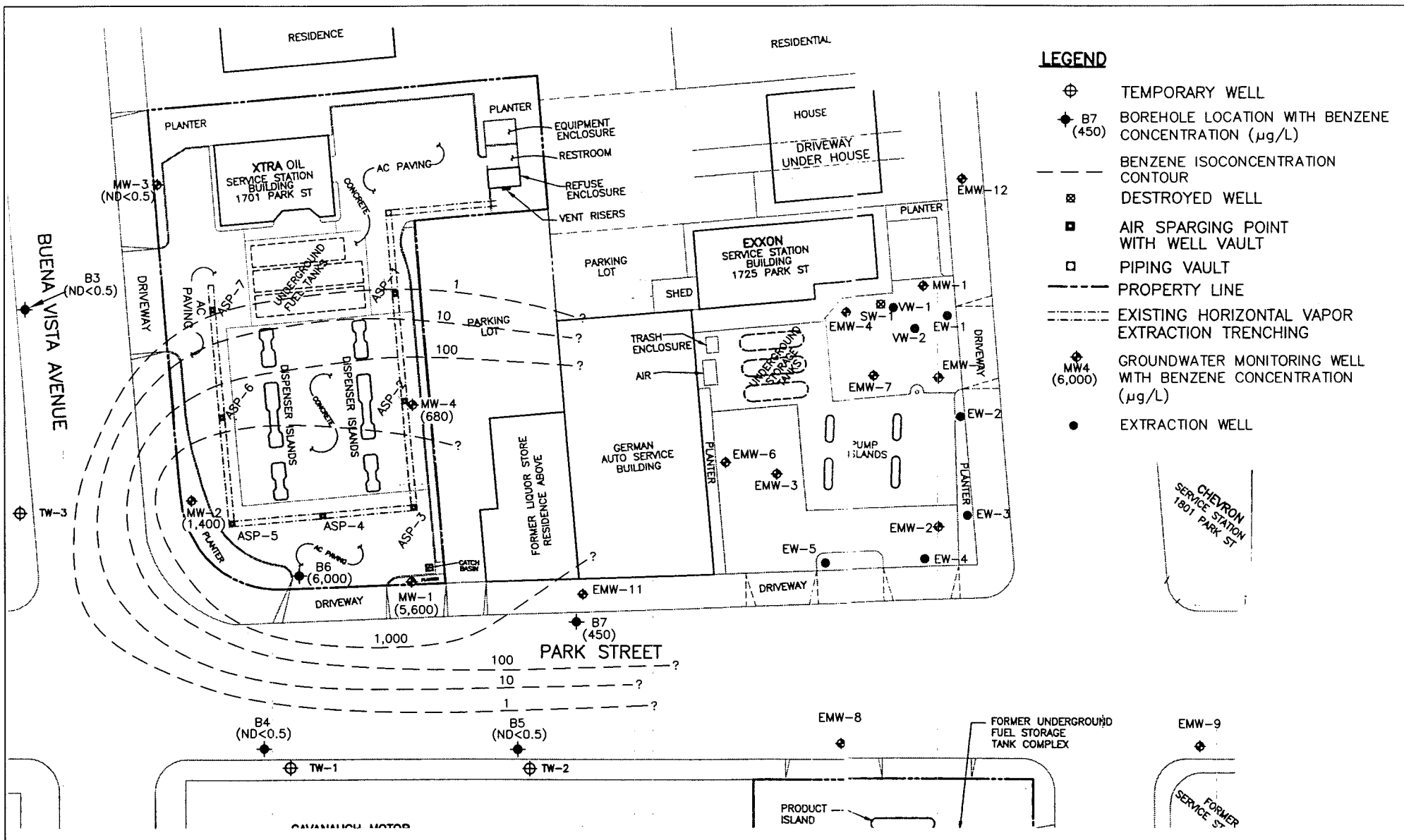
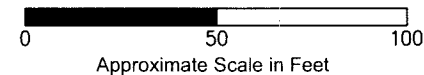


Figure 5
 Site Vicinity Map Showing Benzene in Groundwater At 12 Feet below Surface
 1701 Park Street
 Alameda, CA



Base Map From:
 Alisto Engineering Group, 9/23/2005
 and Environmental Resources, Inc.,
 6/15/2004

P&D Environmental, Inc.
 55 Santa Clara Ave, Ste. 240
 Oakland, CA 94610



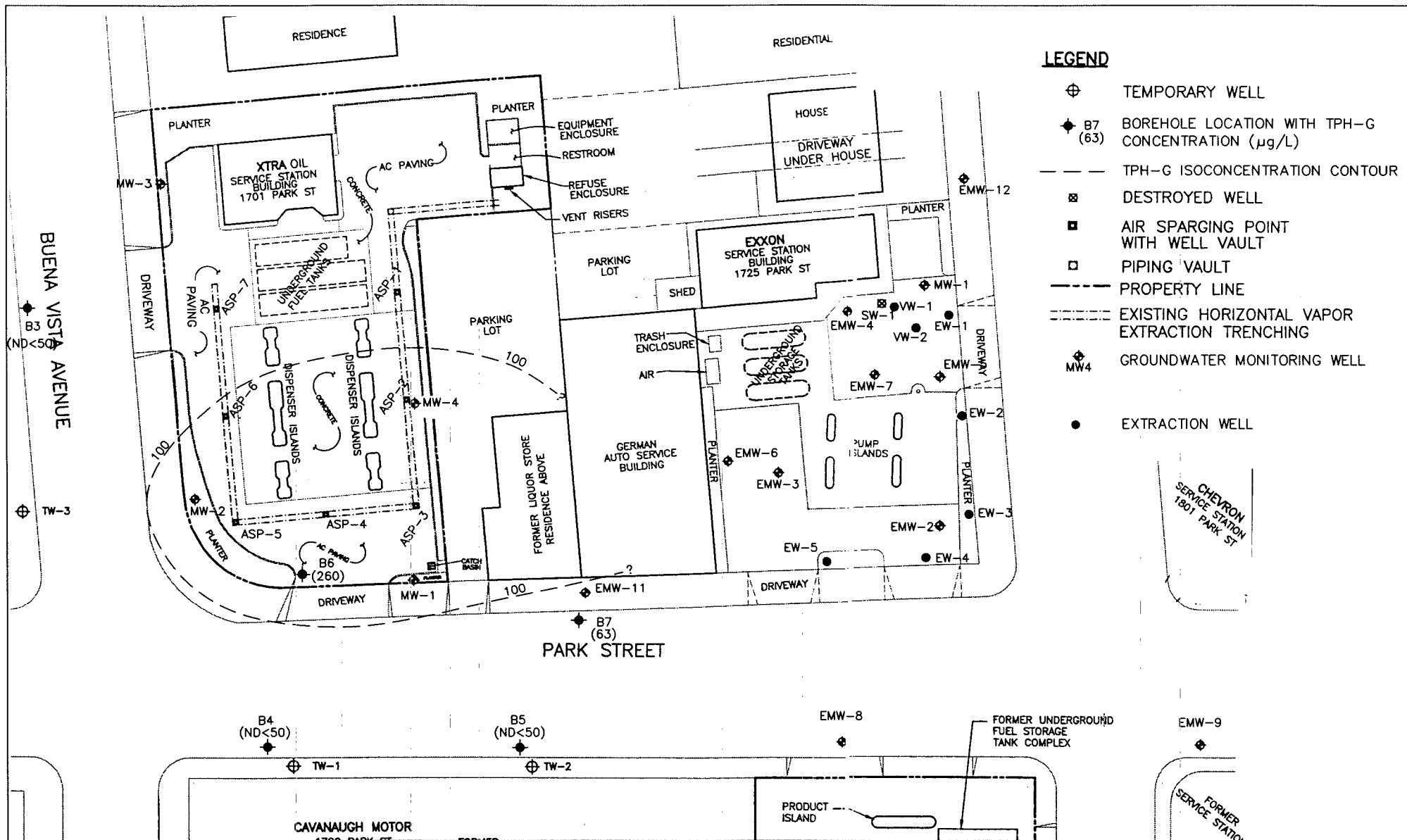
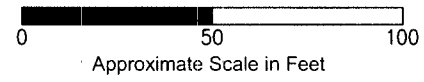


Figure 6
 Site Vicinity Map Showing TPH-G in Groundwater At 42 Feet Below Surface
 1701 Park Street
 Alameda, CA

Base Map From:
 Alisto Engineering Group, 9/23/2005
 and Environmental Resources, Inc.,
 6/15/2004

P&D Environmental, Inc.
 55 Santa Clara Ave, Ste. 240
 Oakland, CA 94610



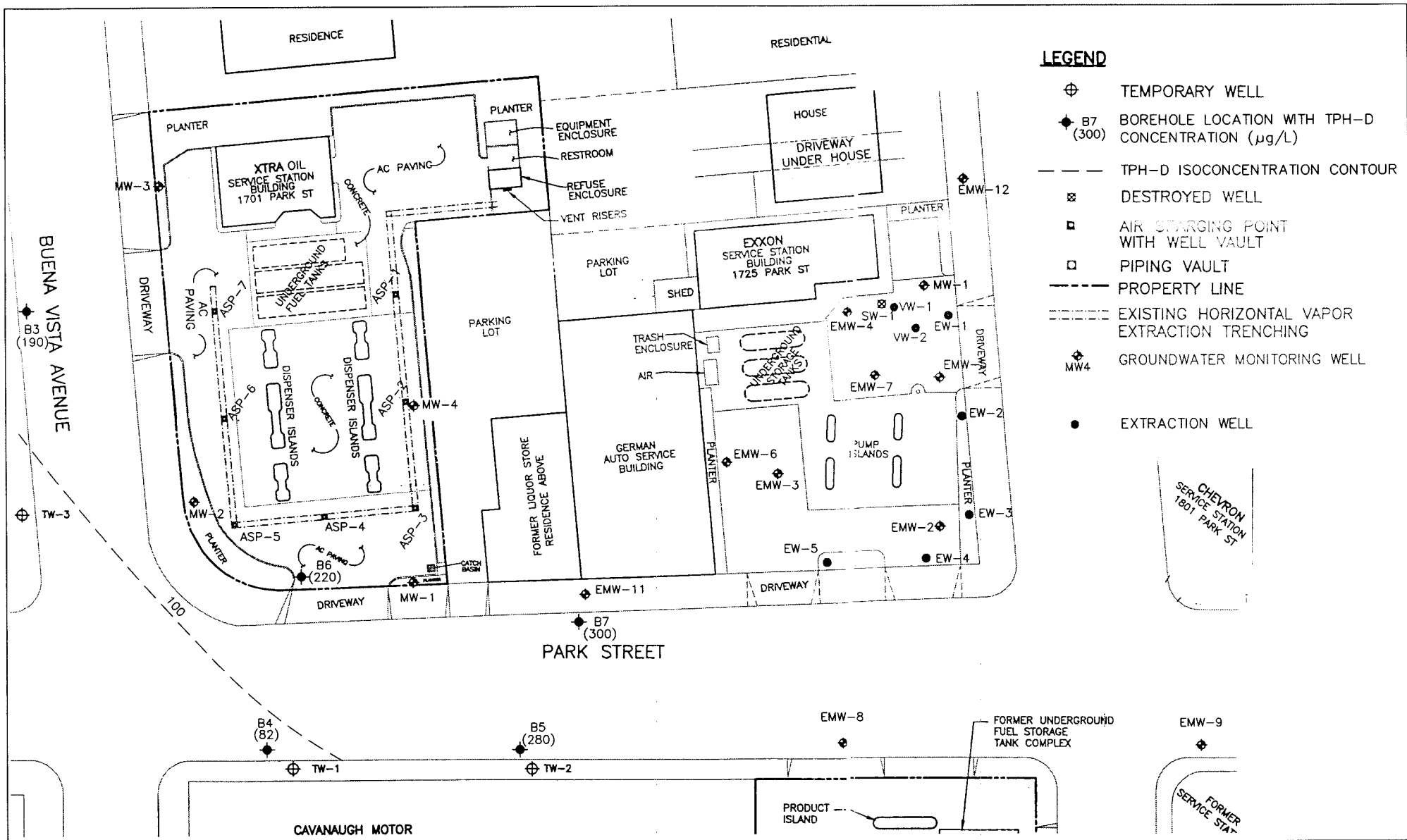
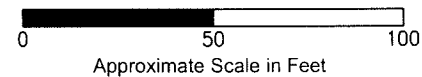


Figure 7
 Site Vicinity Map Showing TPH-D in Groundwater At 42 Feet Below Surface
 1701 Park Street
 Alameda, CA



Base Map From:
 Alisto Engineering Group, 9/23/2005
 and Environmental Resources, Inc.,
 6/15/2004

P&D Environmental, Inc.
 55 Santa Clara Ave, Ste. 240
 Oakland, CA 94610



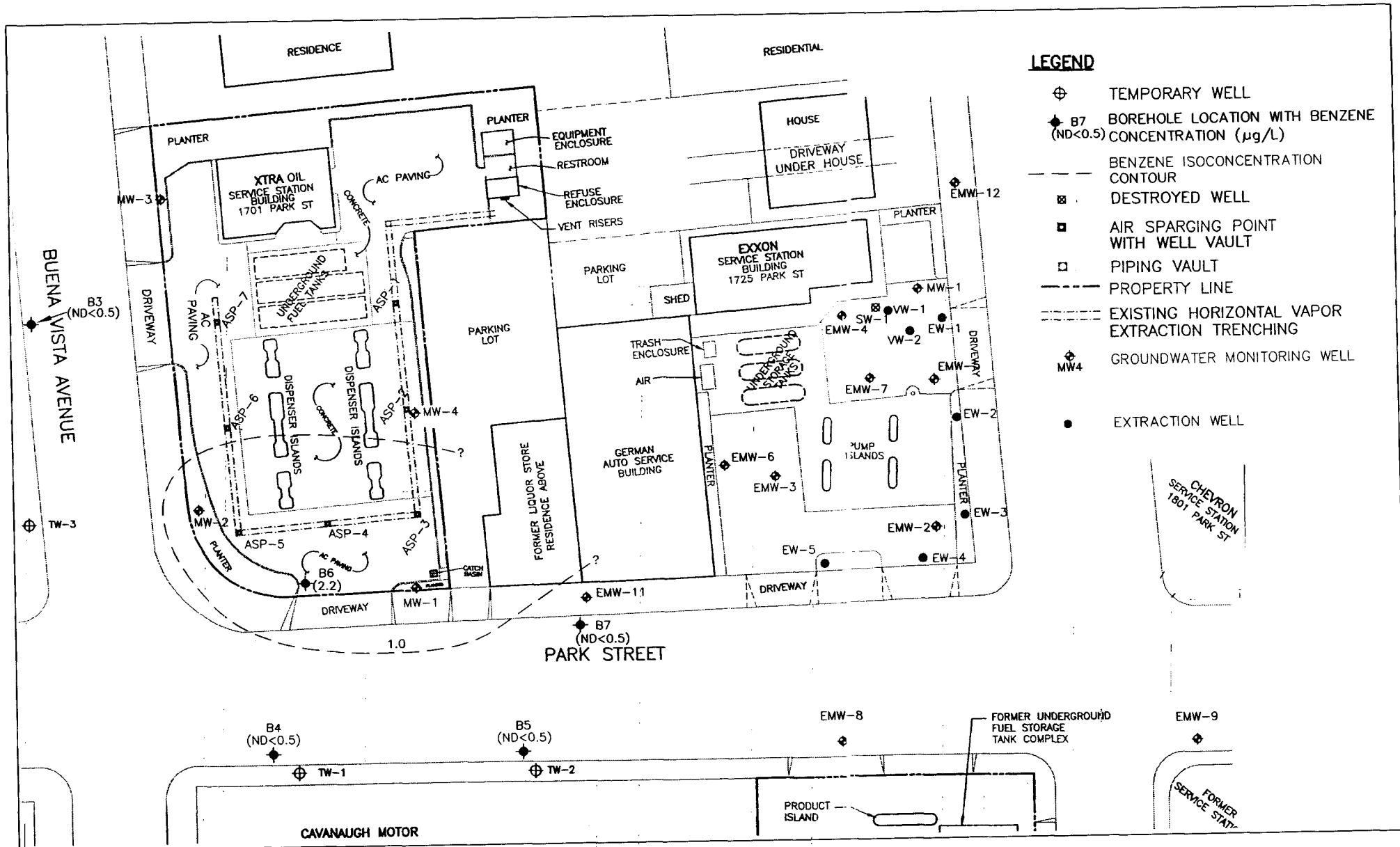
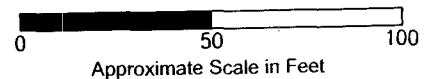


Figure 8
 Site Vicinity Map Showing Benzene in Groundwater At 42 Feet below Surface
 1701 Park Street
 Alameda, CA



Base Map From:
 Alisto Engineering Group, 9/23/2005
 and Environmental Resources, Inc.,
 6/15/2004

P&D Environmental, Inc.
 55 Santa Clara Ave, Ste. 240
 Oakland, CA 94610



MIP REPORT



MIP REPORT

Xtra Oil 0058
1701 Park Street, Alameda, CA



TABLE OF CONTENTS

PAGE	
1	Table of Contents
2	MIP Summary
3	MIP Summary Cont.
4	Quality Control
5	Site Map
6	B6 Data
7	B6 Data Cont.
8	B3 Data
9	B3 Data Cont.
10	B4 Data
11	B4 Data Cont.
12	B7 Data
13	B7 Data Cont.
14	B5 Data
15	B5 Data Cont.
16	MIP Data/Consolidation
17	MIP Data/Consolidation Cont.
18	MIP Data Summary



Client: P&D Environmental
 Paul King / P_Denvironmental@msn.com
 55 Santa Clara Ave, Suite 240
 Oakland, CA

Start Date: 11/2/2006
Completed Date: 11/3/2006

Site Address: 1701 Park Street, Alameda, CA
Project Name: Xtra Oil 0058

Project Scope: Collected Membrane Interface Probe logs from 5 boring locations from approximately surface to as deep as 50 feet to provide better definition of the vertical extent of impacted groundwater and to identify whether groundwater grab samples at TW1-3 missed deeper dissolved TPH.

Project Information:

B6	Hand augered to 5' bgs. Tech's noted having a strong petroleum based odor from 1' to 5' bgs. Stopped at 11.05 to allow system to purge for 15 minutes. Refusal at 40 feet bgs.
B3	None
B4	Hand Augered to 5' bgs.
B7	Hand Augered to 5' bgs.
B5	Hand Augered to 5' bgs. Only Electrical Conductivity collected not gas samples.

MIP Boring and Confirmation Sampling Summary

Date Sampled	Time Sampled	Boring Name	Total Depth	Confirmation Samples Soil	Confirmation Samples Groundwater
Nov 02 2006	09:56	B6	40.05	Not Provided	Not Provided
Nov 02 2006	12:11	B3	50.45	Not Provided	Not Provided
Nov 02 2006	14:45	B4	49.95	Not Provided	Not Provided
Nov 02 2006	16:56	B7	49.85	Not Provided	Not Provided
Nov 03 2006	12:59	B5	49.95	Not Provided	Not Provided



Quality Control: Vironex utilizes a response test* prior to each MIP boring. A solution containing water, Trichloroethene & Toluene are mixed and transferred into a galvanized test pipe. The MIP is then lowered into the test pipe for 45 seconds and then extracted. The trip time** is then noted and entered into the SC4000 MIP computer.

**Response Test - A test that ensures that the MIP system is working correctly.*

***Trip Time - Time it takes for the standard to enter the MIP probe, at the probe membrane, till the time a significant response is noticed on the SC 4000 Computer*

MIP Components

- Geoprobe 6600

Used:

- FC 5000 MIP Computer
- Flow Control Box
- HP Gas Chromatograph
- ECD (Electron Capture Detector)
- PID (Photo Ionization Detector)
- FID (Flame Ionization Detector)
- 150' Trunk Line
- 1.5" MIP Probe
- 1.5" Drive Rods

Soil Confirmation No confirmation data was provided to Vironex by P&D.

Qualitative Analysis (Identification): The MIP system will detect most VOC's (Volatile Organic Compounds) which have the capability of migrating through the membrane. The ECD (Electron Capture Detector) will typically detect chlorinated compounds. The PID will typically detect aromatic and double bonded compounds, typical of gasoline components and some solvents. At high concentrations the ECD, PID and FID may detect other compounds not normally associated with the detector. Physical soil samples which are prepared by EPA Method 5035, and analyzed by EPA Method 8260, may be semi correlated with the MIP responses. The MIP responses are semi-correlated with most detected compounds, even those which are not reported nor detected by EPA Method 8260.

Lithology: The conductivity of soils is different for each type of media. Finer grained sediments, such as silts or clays, will have a higher EC signal. While coarser grained sediments, sands and gravel, will have a lower EC signal. Lithology should be correlated with a physical soil sample.

*Frank Stolfi
National Director of MIP Services*



Client: P&D Environmental
 55 Santa Clara Ave, Suite 240
 Oakland, CA

Start Date: 11/2/2006
Completed Date: 11/3/2006

Site Address: 1701 Park Street, Alameda, CA
Project Name: Xtra Oil 0058

MIP Quality Control

Standard Summary

Boring Name	Date	Time	Standard	PID Response	ECD Response	Pressure (PSI)	Response Time (s)
QA QC 1	Nov 02 2006	09:15	1 ppm TCE & Toluene	Yes	Yes	14.22	64
B6	Nov 02 2006	09:56				13.99	64
QA QC 2	Nov 02 2006	11:39	1 ppm TCE & Toluene	Yes	Yes	14.40	55
B3	Nov 02 2006	12:11				14.12	55
QA QC 3	Nov 02 2006	14:30	1 ppm TCE & Toluene	Yes	Yes	14.10	53
B4	Nov 02 2006	14:45				13.75	53
QA QC 4	Nov 02 2006	16:23	1 ppm TCE & Toluene	Yes	Yes	14.64	51
B7	Nov 02 2006	16:56				14.70	51
B5	Nov 03 2006	12:59				None	None

End of Day QA QC Summary

Boring Name	Date	Time	Standard	PID Response	ECD Response	Pressure (PSI)	Response Time (s)
End of Day 1	Nov 02 2006	18:10	1 ppm TCE & Toluene	Yes	Yes	14.52	60



SITE MAP

Map Not Provided



MIP Log Results by Boring - Detector Reading vs. Depth

Client: P&D Environmental

Boring I.D.: B6

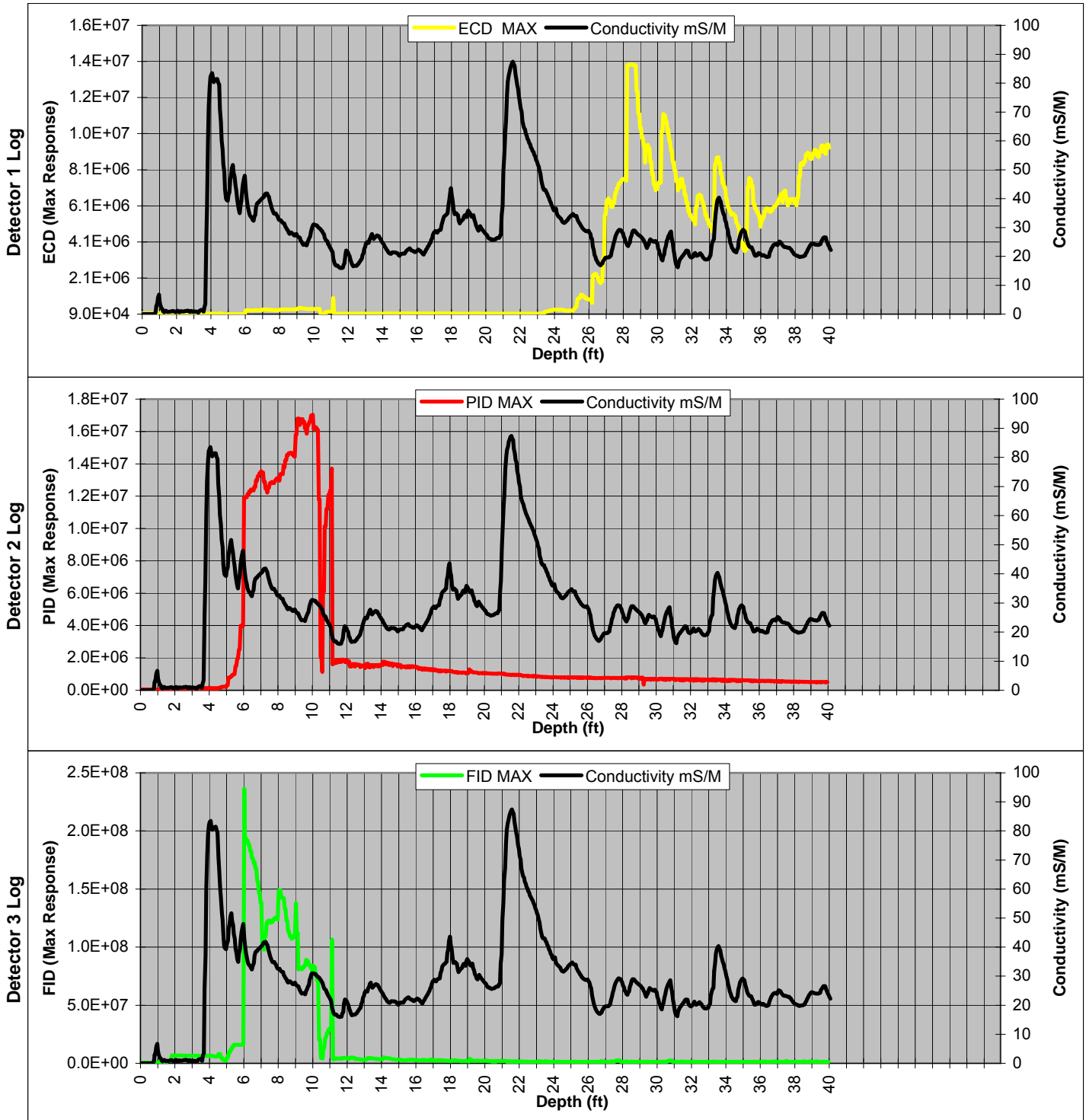
Detector 1 : Electron Capture (ECD)

Date: Nov 02 2006

Detector 2 : Photo Ionization (PID)

Time: 09:56

Detector 3 : Flame Ionization (FID)





MIP Log Results by Boring - Detector Reading vs. Depth

Client: P&D Environmental

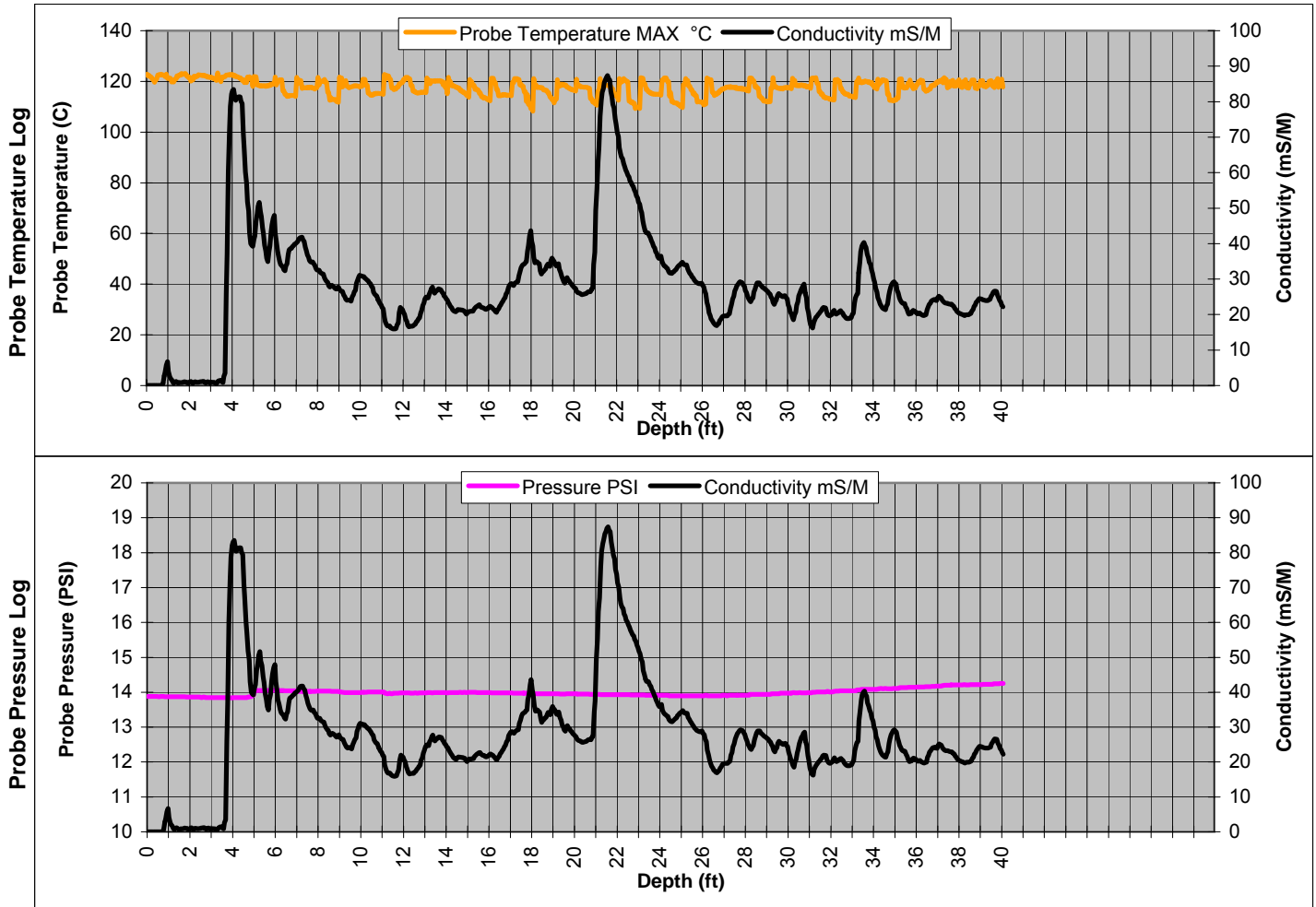
Boring I.D.: B6

Graph 1 : Probe Temperature (C)

Date: Nov 02 2006

Graph 2 : Probe Pressure (PSI)

Time: 09:56



Explanation: Hand augered to 5' bgs. Tech's noted having a strong petroleum based odor from 1' to 5' bgs. Stopped at 11.05 to allow system to purge for 15 minutes. Refusal at 40 feet bgs.



MIP Log Results by Boring - Detector Reading vs. Depth

Client: P&D Environmental

Boring I.D.: B3

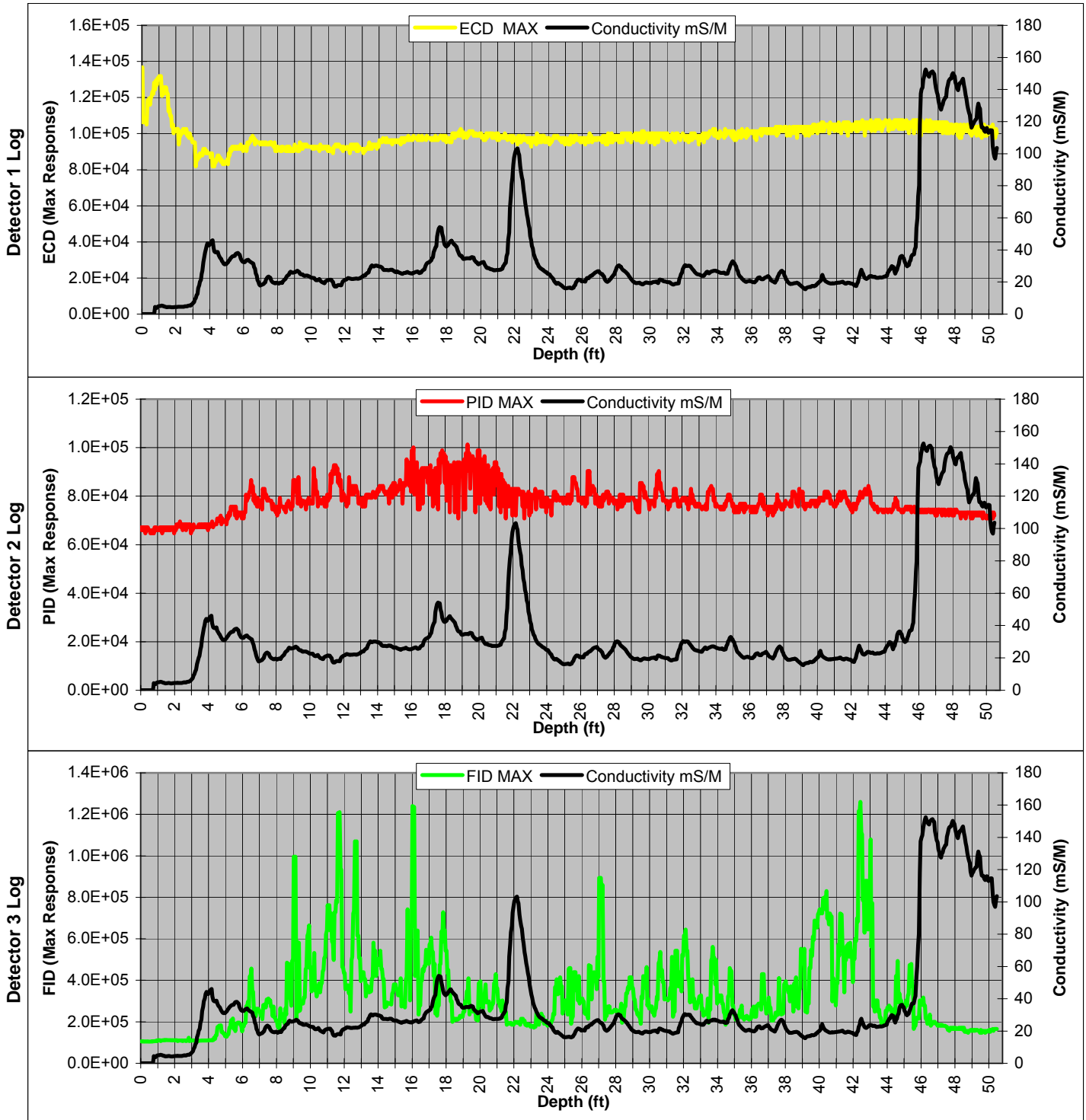
Detector 1 : Electron Capture (ECD)

Date: Nov 02 2006

Detector 2 : Photo Ionization (PID)

Time: 12:11

Detector 3 : Flame Ionization (FID)





MIP Log Results by Boring - Detector Reading vs. Depth

Client: P&D Environmental

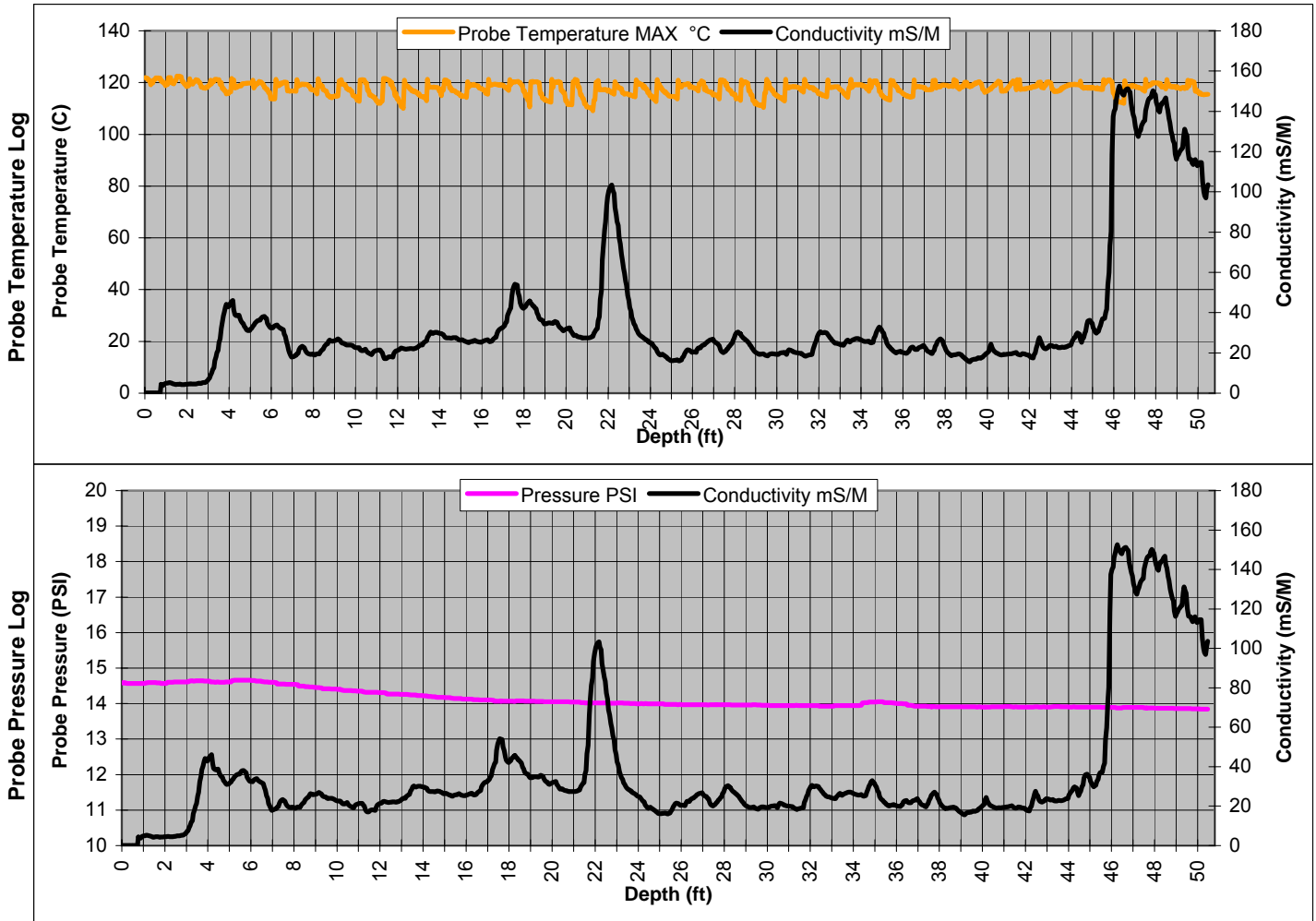
Boring I.D.: B3

Graph 1 : Probe Temperature (C)

Date: Nov 02 2006

Graph 2 : Probe Pressure (PSI)

Time: 12:11



Explanation: None



MIP Log Results by Boring - Detector Reading vs. Depth

Client: P&D Environmental

Boring I.D.: B4

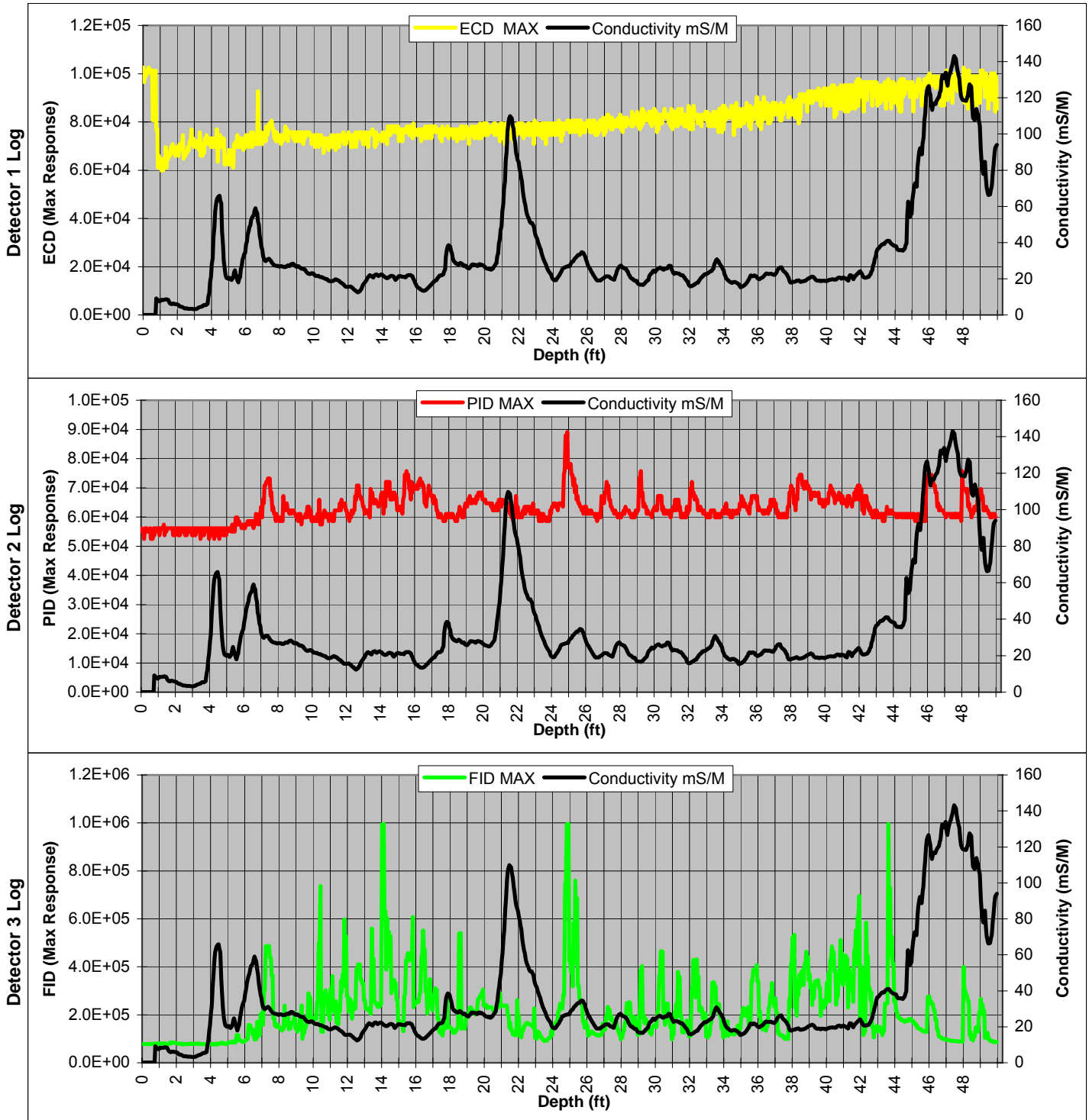
Detector 1 : Electron Capture (ECD)

Date: Nov 02 2006

Detector 2 : Photo Ionization (PID)

Time: 14:45

Detector 3 : Flame Ionization (FID)





MIP Log Results by Boring - Detector Reading vs. Depth

Client: P&D Environmental

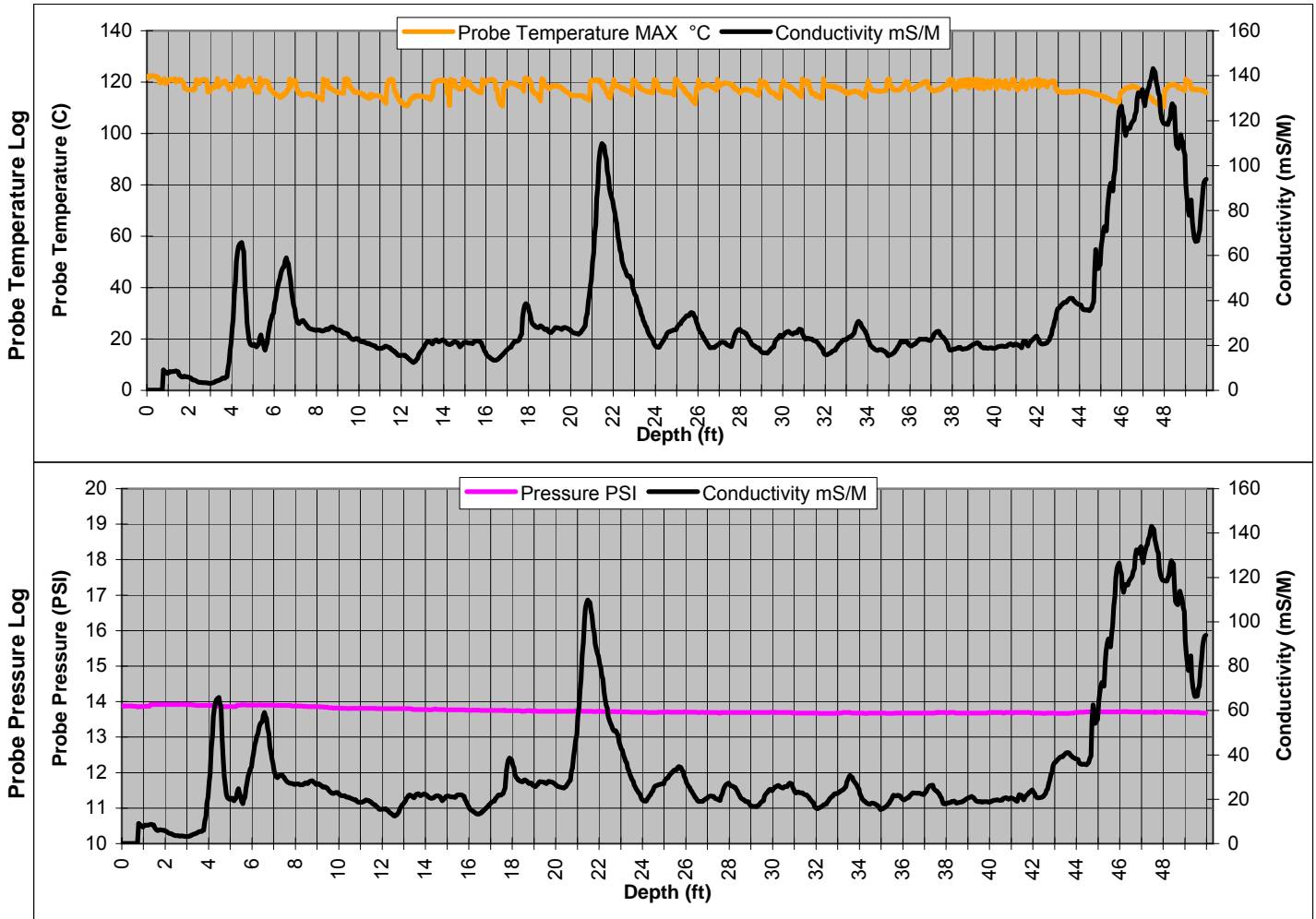
Boring I.D.: B4

Graph 1 : Probe Temperature (C)

Date: Nov 02 2006

Graph 2 : Probe Pressure (PSI)

Time: 14:45



Explanation: Hand Augered to 5' bgs.



MIP Log Results by Boring - Detector Reading vs. Depth

Client: P&D Environmental

Boring I.D.: B7

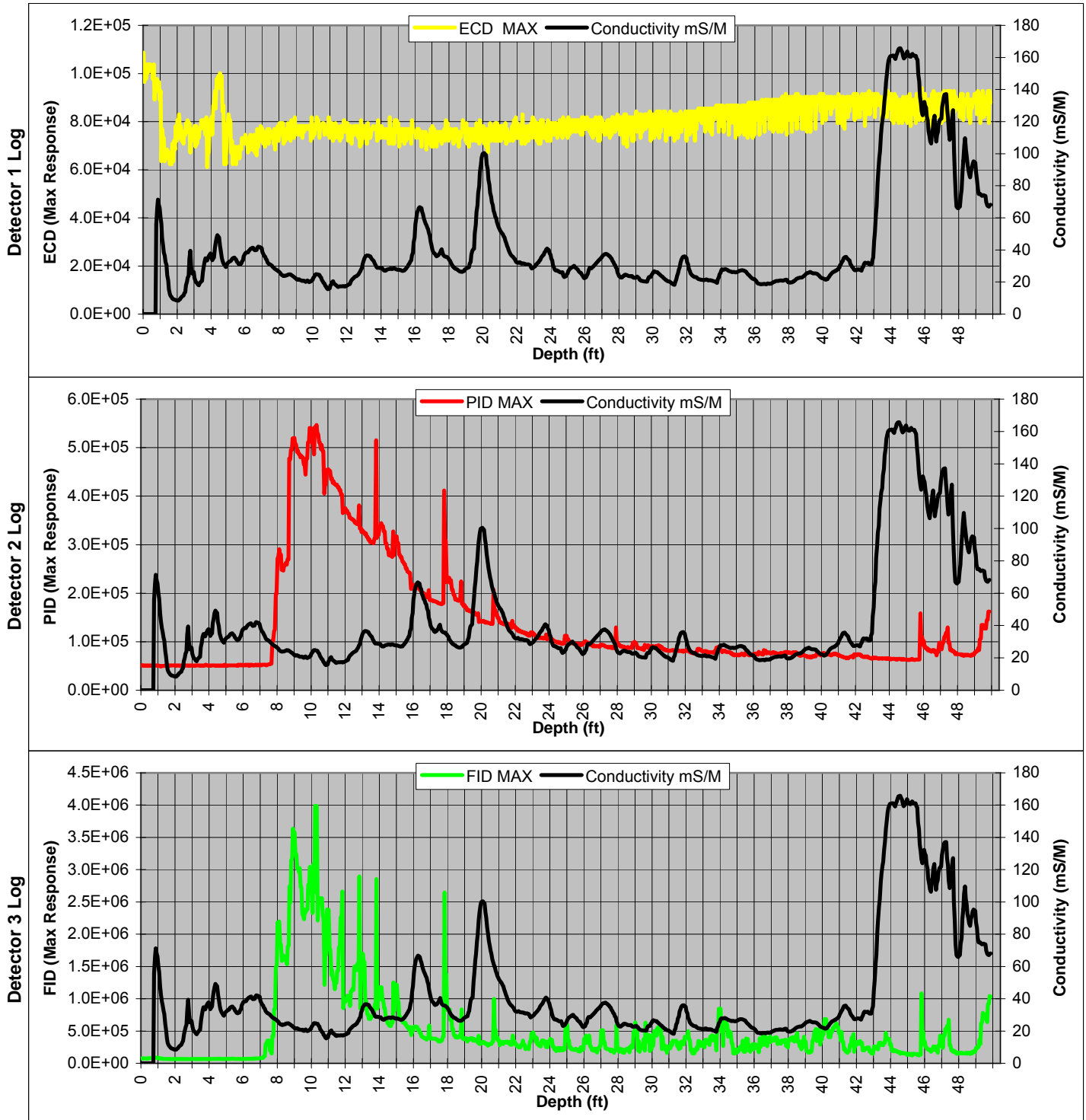
Date: Nov 02 2006

Time: 16:56

Detector 1 : Electron Capture (ECD)

Detector 2 : Photo Ionization (PID)

Detector 3 : Flame Ionization (FID)





MIP Log Results by Boring - Detector Reading vs. Depth

Client: P&D Environmental

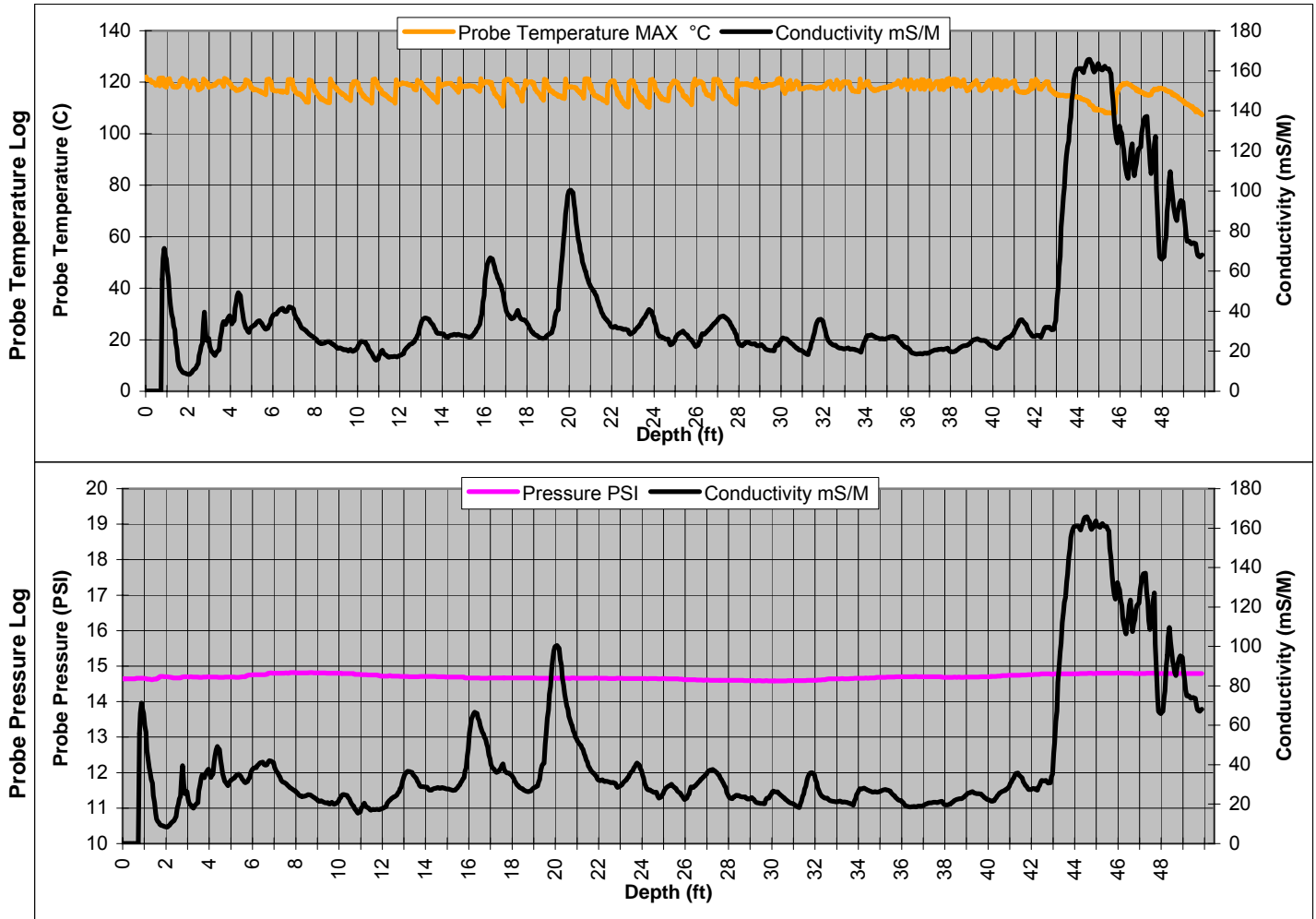
Boring I.D.: B7

Graph 1 : Probe Temperature (C)

Date: Nov 02 2006

Graph 2 : Probe Pressure (PSI)

Time: 16:56



Explanation: Hand Augered to 5' bgs.



MIP Log Results by Boring - Detector Reading vs. Depth

Client: P&D Environmental

Boring I.D.: B5

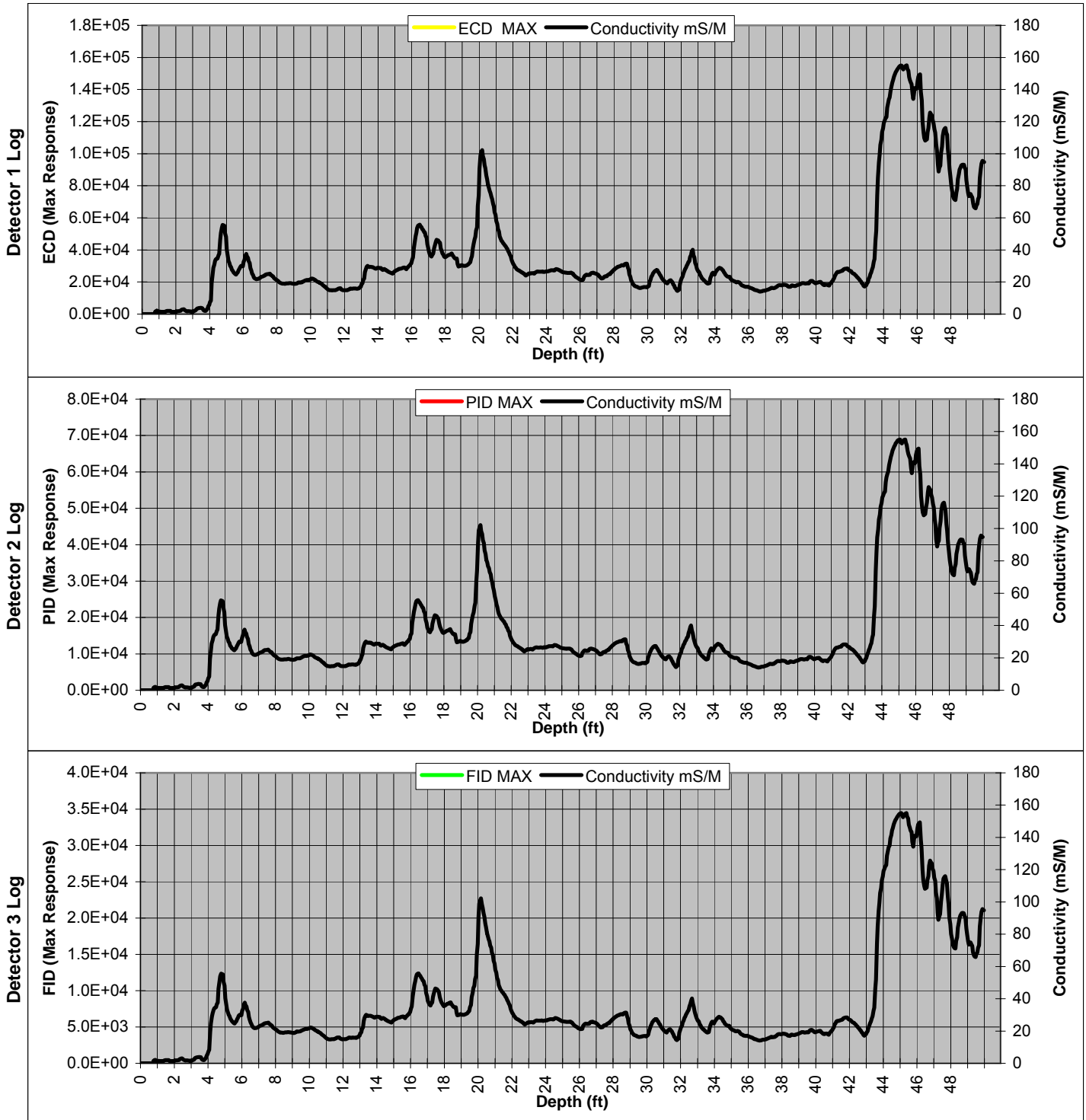
Detector 1 : Electron Capture (ECD)

Date: Nov 03 2006

Detector 2 : Photo Ionization (PID)

Time: 12:59

Detector 3 : Flame Ionization (FID)





MIP Log Results by Boring - Detector Reading vs. Depth

Client: P&D Environmental

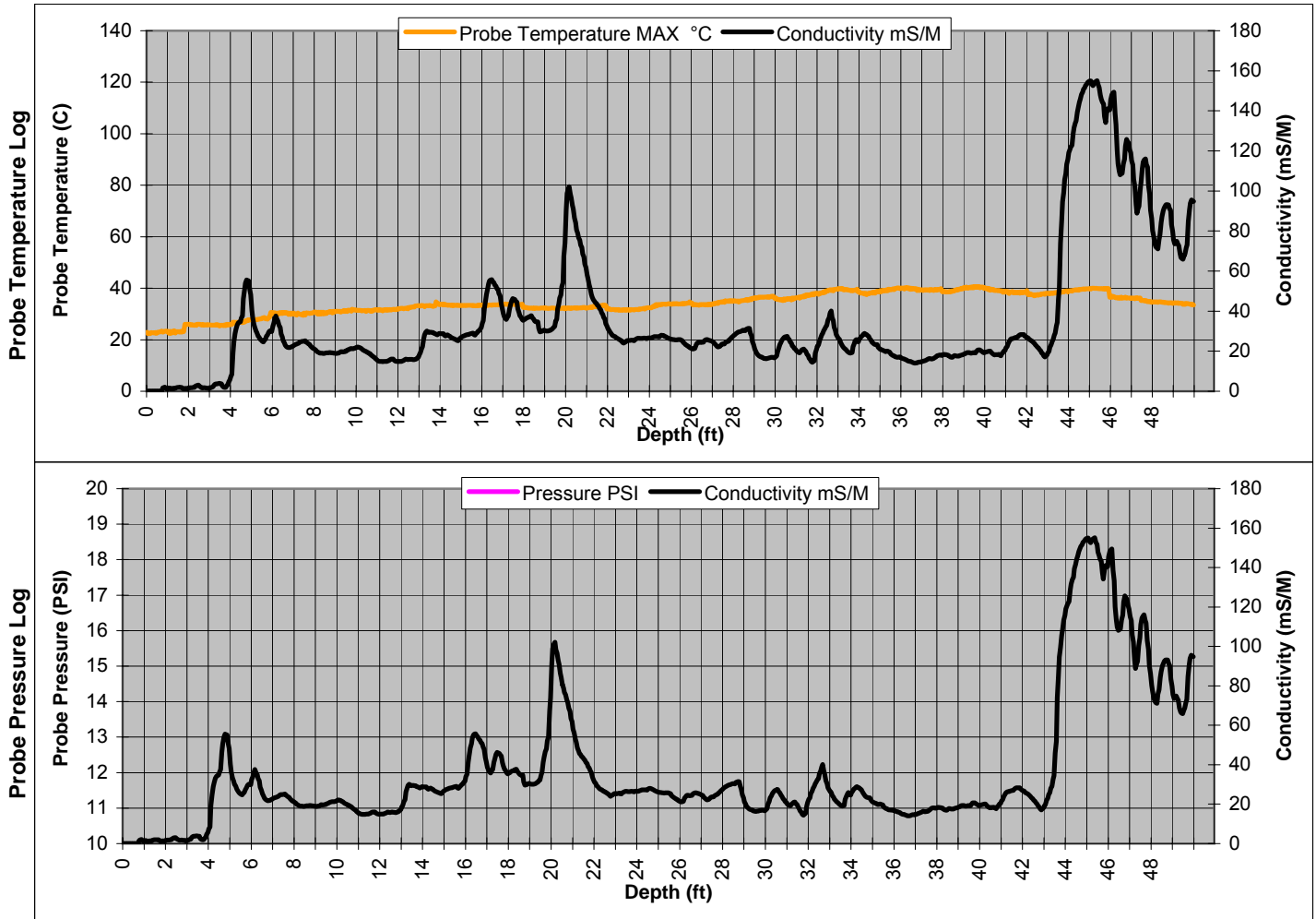
Boring I.D.: B5

Graph 1 : Probe Temperature (C)

Date: Nov 03 2006

Graph 2 : Probe Pressure (PSI)

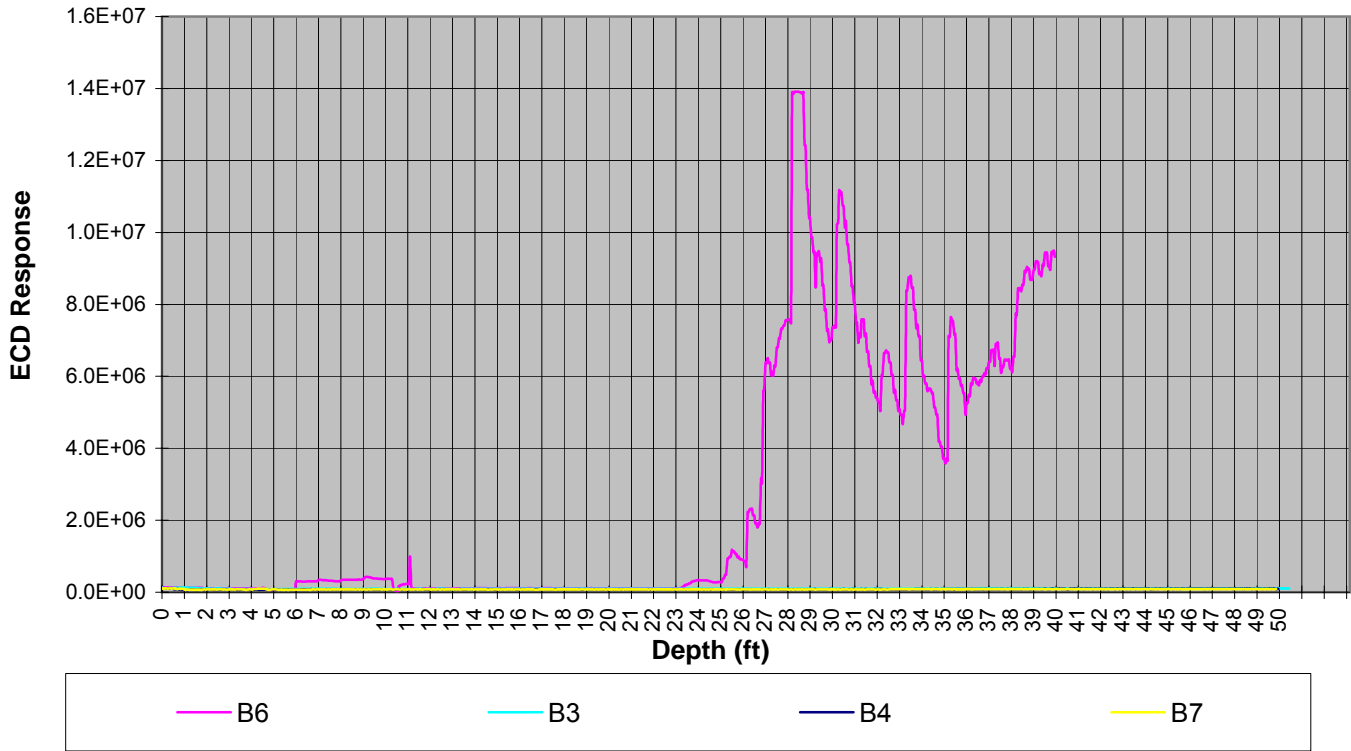
Time: 12:59



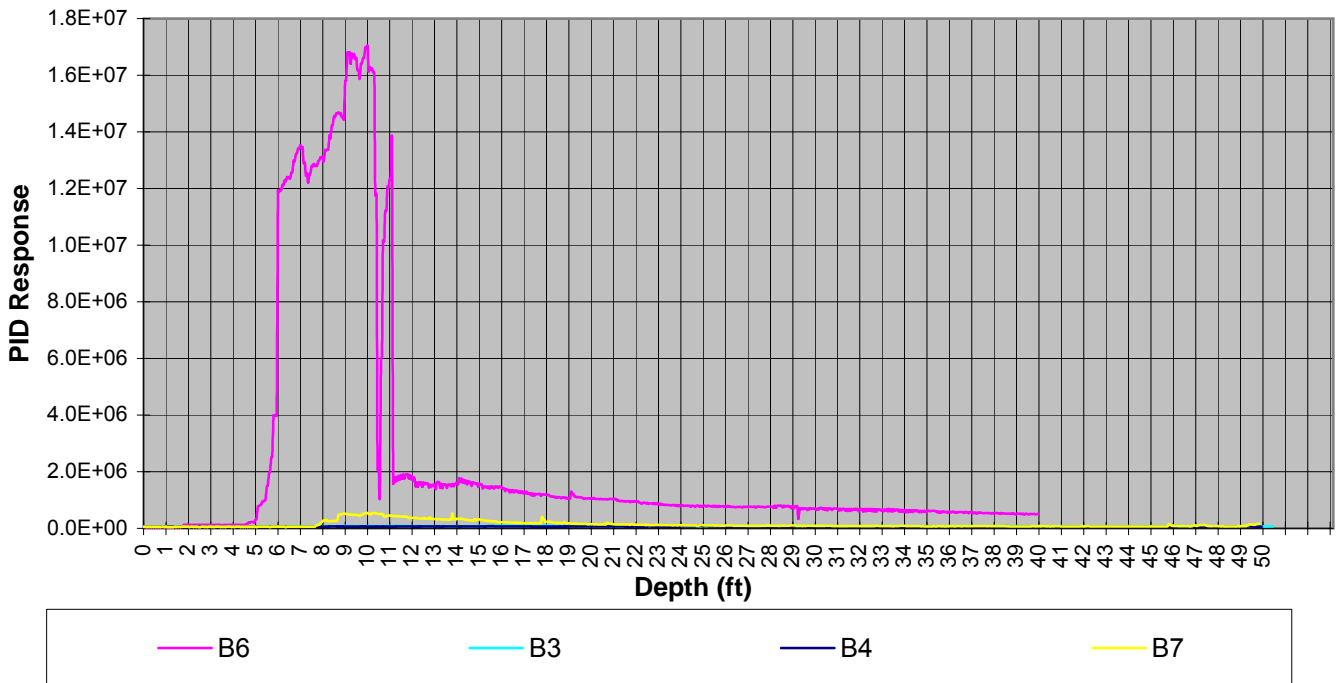
Explanation: Hand Augered to 5' bgs. Only Electrical Conductivity collected not gas samples.



Maximum ECD Response Same Scale

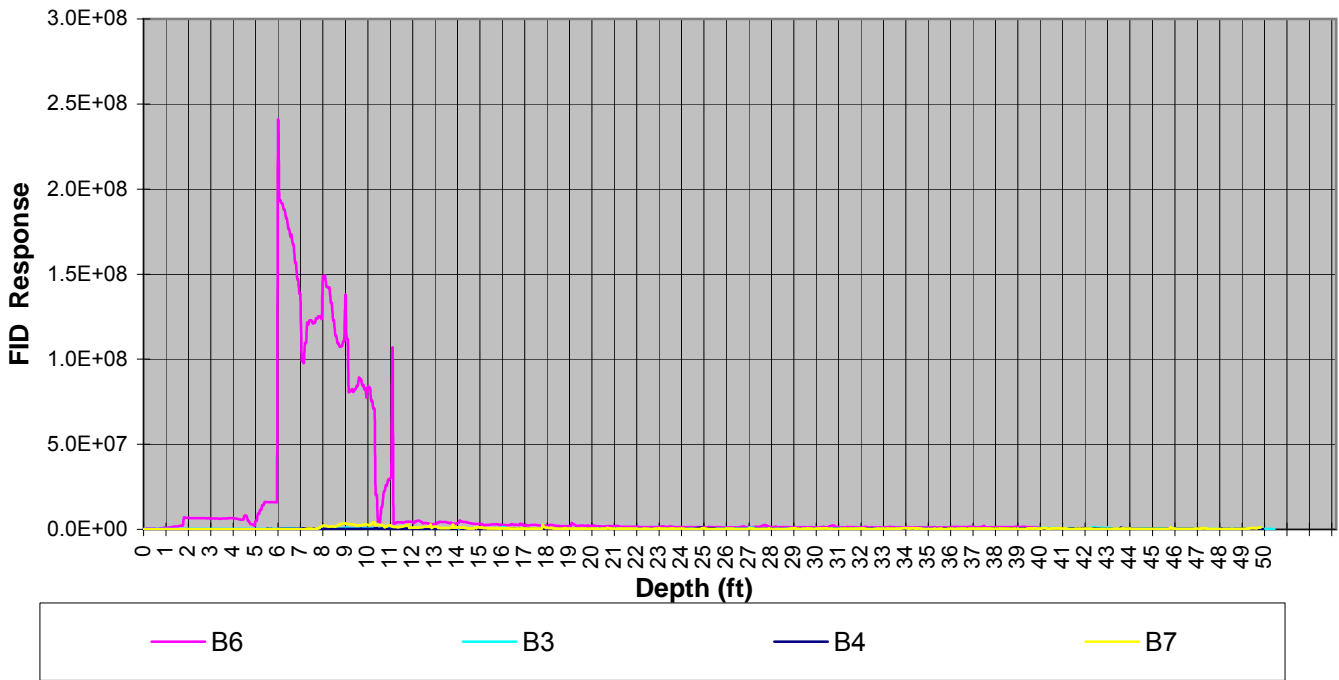


Maximum PID Response Same Scale

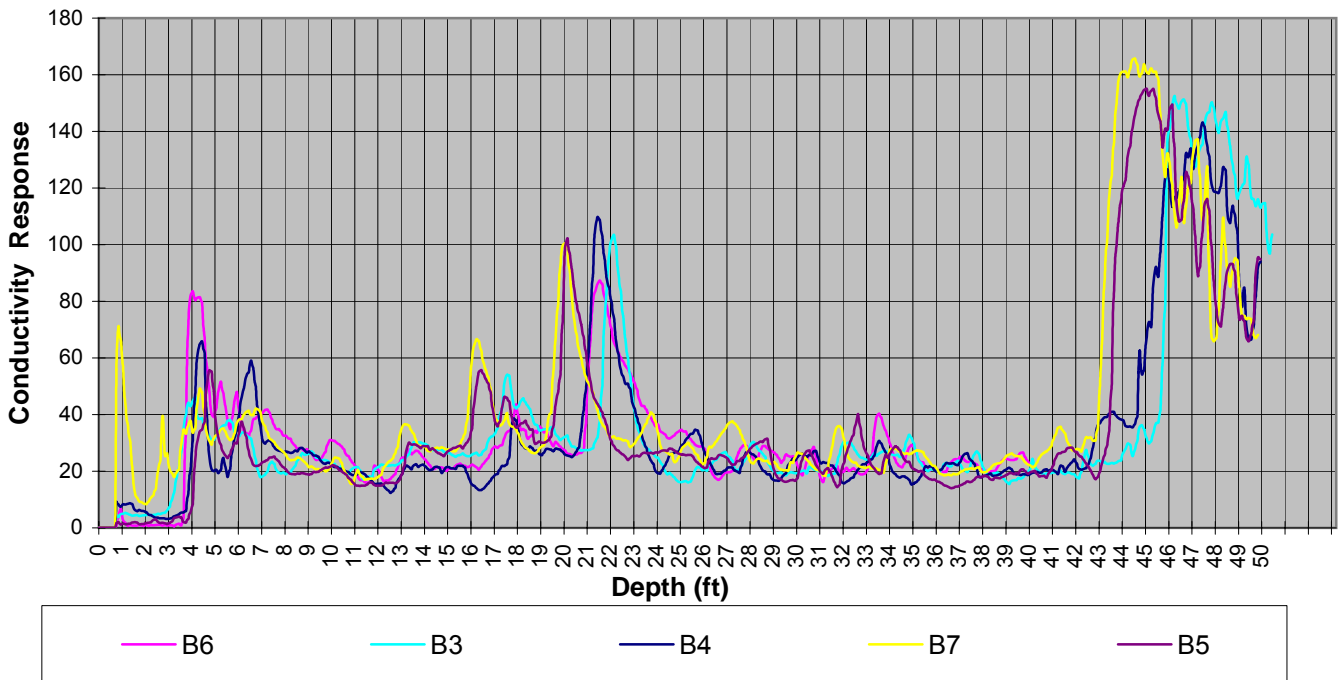




Maximum FID Response Same Scale



Conductivity Response Same Scale



**Summary:**

Data was collected at Xtra Oil 0058 located at 1701 Park Street, Alameda, CA using the MIP (Membrane Interface Probe) and a Geoprobe 6600 at ?? sampling locations, collecting data from the surface to as deep as 54' bgs. An ECD (Electron Capture Detector), PID (Photo Ionization Detector) and a FID (Flame Ionization Detector) were used with a Hewlett Packard 5890 Gas Chromatograph.

The purpose of this MIP project was to provide better definition of the vertical extent of impacted groundwater and to identify whether groundwater grab samples at TW1-3 missed deeper dissolved TPH.

Contaminant Mass:

ECD detections were noted at B6. ECD detections were primarily located between 24' to the total depth of 40' bgs. The highest ECD reached its maximum detection of 1.4E+7 which was noted at B6 which was at approximately 28-29' bgs. ECD detections are an indication of halogenated compounds.

PID detections were noted at B6 and B7. PID detections were primarily located as shallow as 5' bgs and as deep as 21' bgs. The highest PID detection of 1.7E+7 was noted at B6 which was noted approximately 9'-10' bgs. PID detections are an indication of double bonded compounds.

FID detections were noted at all MIP boring. FID detections were primarily located shallow as 5' bgs and as deep as 46' bgs. The highest FID detection 2.4E+8 was noted at B6 which was noted approximately 6' bgs. FID detections are an indication of combustible hydrocarbons.

Per request of P&D Environmental, only electrical conductivity was collected at B5.

Soil Conductivity:

A higher conductive or lower permeable zone above 80 milli-siemens was noted from 20' bgs to 22' bgs, and again from 43' bgs to the total depth of each boring. A lower conductive or higher permeable zone below 80 milli-siemens was noted from 1' bgs to 19' bgs, and again from 23' bgs to 42' bgs.

The conductivity of soils is different for each type of media. Finer grained sediments, such as silts or clays, will have a higher EC signal. While coarser grained sediments, sands and gravel, will have a lower EC signal.

Confirmation Samples:

No confirmation data was provided.

BORING LOG

BORING NO.: B6		PROJECT NO.: 0058		PROJECT NAME: XTRA Oil 1701 Park Street, Alameda, CA			
BORING LOCATION: Onsite, Near Park Street				ELEVATION AND DATUM: None			
DRILLING AGENCY: Vironex, Inc.		DRILLER: Jeff/Bryan		DATE & TIME STARTED:		DATE & TIME FINISHED:	
DRILLING EQUIPMENT: Geoprobe 6600				11/7/06 8:00		11/17/06	
COMPLETION DEPTH: 50.0 FEET		BEDROCK DEPTH: None Encountered		LOGGED BY:		CHECKED BY:	
FIRST WATER DEPTH: 17.0 FEET		NO. OF SAMPLES: 2 Soil, 2 Water		EFO		DMG	
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	REMARKS	
	0.0 to 0.3 ft Concrete Slab						
5	0.3 to 7.0 ft Gray-black silty sand (SM); soft, moist. No Petroleum Hydrocarbon (PHC) odor.	SM			NA 32 863		Borehole continuously cored using a 5-ft. long 2-inch O.D. Geoprobe Macrocore Barrel Sampler. The sampler was lined with 4.8-ft long 1 3/4 in. O.D. cellulose acetate tubes.
10	7.0 to 14.0 ft Green sand (SW); soft, moist. Strong PHC odor.	SW			1440 1572 115		First water encountered at 17.0 ft during drilling, 11/7/06. Borehole terminated at 50.0 ft., 11/17/06. Borehole grouted with neat cement and a 4 in. surface seal of concrete 11/17/06.
15	14.0 to 15.0 ft Brown sand (SW); loose, saturated. Slight PHC odor.	SW			17		
	15.0 to 18.0 ft Green sand (SW); soft, saturated. Moderate PHC odor.	SW			5		
20	18.0 to 24.0 ft Brown-green sand (SW); soft, saturated. Moderate PHC odor.	SW			40 NA		
25	24.0 to 25.0 ft Green sandy clay (CL); stiff, moist. Slight PHC odor.	CL			NA		
30	25.0 to 35.0 ft Brown-Green silty sand (SM); wet. Strong PHC odor.	SM			NA		
	(continued on page 2)				NA		

BORING NO.: B6		PROJECT NO.: 0058		PROJECT NAME: XTRA Oil 1701 Park Street, Alameda, CA			
BORING LOCATION: Onsite, Near Park Street				ELEVATION AND DATUM: None			
DRILLING AGENCY: Vironex, Inc.		DRILLER: Jeff/Bryan		DATE & TIME STARTED:		DATE & TIME FINISHED:	
DRILLING EQUIPMENT: Geoprobe 6600				11/7/06 8:00		11/17/06	
COMPLETION DEPTH: 50.0 FEET		BEDROCK DEPTH: None Encountered		LOGGED BY:		CHECKED BY:	
FIRST WATER DEPTH: 17.0 FEET		NO. OF SAMPLES: None		EFO		DMG	
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	REMARKS	
	(continued from page 1)						
35	25.0 to 35.0 ft Brown-Green silty sand (SM); wet. Strong PHC odor.	SM			NA NA		
40	35.0 to 45.0 ft Green sand (SW); wet. Strong PHC odor.	SW			45 134 134 205		
45	45.0 to 50.0 ft No Recovery due to jammed barrel.				17 NA		
50					NA NA		
55					NA		
60							

**LABORATORY REPORTS
AND CHAIN OF CUSTODY
DOCUMENTATION**



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

RGA Environmental 1466 66th Street Emeryville, CA 94608	Client Project ID: #0058; Xtra Oil-1701 Park St.	Date Sampled: 11/09/06
		Date Received: 11/09/06
	Client Contact: Eric Olson	Date Reported: 11/16/06
	Client P.O.:	Date Completed: 11/16/06

WorkOrder: 0611209

November 16, 2006

Dear Eric:

Enclosed are:

- 1). the results of 2 analyzed samples from your **#0058; Xtra Oil-1701 Park St. project,**
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions please contact me. McC Campbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager

McC Campbell Analytical, Inc.



1534 Willow Pass Rd
 Pittsburg, CA 94565-1701
 (925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0611209

ClientID: RGAE

EDF

Fax

Email

HardCopy

ThirdParty

Report to:

Eric Olson
 RGA Environmental
 1466 66th Street
 Emeryville, CA 94608

Email:

TEL: (510) 547-7771 FAX: (510) 547-1983
 ProjectNo: #0058; Xtra Oil-1701 Park St.
 PO:

Bill to:

Accounts Payable
 Xtra Oil Company
 2307 Pacific Avenue
 Alameda, CA 94501

Requested TAT:

5 days

Date Received: 11/09/2006

Date Printed: 11/09/2006

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
0611209-001	B6-9.0	Soil	11/9/06	<input type="checkbox"/>	A	A											
0611209-002	B6-20.0	Soil	11/9/06	<input type="checkbox"/>	A	A											

Test Legend:

1	G-MBTX_S	2	TPH(DMO)_S	3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Melissa Valles

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
 Web: www.mccampbell.com E-mail: main@mccampbell.com
 Telephone: 877-252-9262 Fax: 925-252-9269

RGA Environmental 1466 66th Street Emeryville, CA 94608	Client Project ID: #0058; Xtra Oil-1701 Park St.	Date Sampled: 11/09/06
	Client Contact: Eric Olson	Date Received: 11/09/06
	Client P.O.:	Date Extracted: 11/09/06
		Date Analyzed 11/12/06-11/15/06

Diesel (C10-23) and Oil (C18+) Range Extractable Hydrocarbons as Diesel and Motor Oil*

Extraction method: SW3550C Analytical methods: SW8015C Work Order: 0611209

Lab ID	Client ID	Matrix	TPH(d)	TPH(mo)	DF	% SS
0611209-001A	B6-9.0	S	1300,d,b	ND<100	20	93
0611209-002A	B6-20.0	S	ND	ND	1	101

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA	ug/L
	S	1.0	5.0	mg/Kg

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or, surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant; d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel (asphalt?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range/jet fuel; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit; o) mineral oil; p) see attached narrative.



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder: 0611209

EPA Method SW8021B/8015Cm		Extraction SW5030B			BatchID: 24727			Spiked Sample ID: 0611204-007a				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) [£]	ND	0.60	117	112	4.03	109	111	1.75	70 - 130	30	70 - 130	30
MTBE	ND	0.10	89.5	86.7	3.22	92.5	88.3	4.65	70 - 130	30	70 - 130	30
Benzene	ND	0.10	102	99.4	2.50	98.7	101	2.60	70 - 130	30	70 - 130	30
Toluene	ND	0.10	92.8	90.1	2.95	90.7	92.6	2.14	70 - 130	30	70 - 130	30
Ethylbenzene	ND	0.10	95.5	102	7.04	102	103	1.07	70 - 130	30	70 - 130	30
Xylenes	ND	0.30	100	103	3.28	96.7	100	3.39	70 - 130	30	70 - 130	30
%SS:	106	0.10	104	99	4.93	103	102	0.976	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 24727 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0611209-001	11/09/06	11/09/06	11/10/06 6:01 AM	0611209-002	11/09/06	11/09/06	11/15/06 2:08 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701

Web: www.mcccampbell.com E-mail: main@mcccampbell.com

Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder 0611209

EPA Method SW8015C		Extraction SW3580C			BatchID: 24726			Spiked Sample ID: 0611204-007A				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(d)	ND	20	102	103	0.848	93.7	92.9	0.848	70 - 130	30	70 - 130	30
%SS:	112	50	112	113	0.717	102	102	0	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 24726 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0611209-001	11/09/06	11/09/06	11/13/06 8:19 PM	0611209-002	11/09/06	11/09/06	11/12/06 11:12 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mcccampbell.com E-mail: main@mcccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

P & D Environmental 55 Santa Clara, Ste.240 Oakland, CA 94610	Client Project ID: #0058; Xtra Oil-1701 Park St.	Date Sampled: 11/03/06
		Date Received: 11/06/06
	Client Contact: Eric Olson	Date Reported: 11/13/06
	Client P.O.:	Date Completed: 11/17/06

WorkOrder: 0611120

November 17, 2006

Dear Eric:

Enclosed are:

- 1). the results of 6 analyzed samples from your **#0058; Xtra Oil-1701 Park St. project**,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions please contact me. McC Campbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager

P & D ENVIRONMENTAL, INC.

55 Santa Clara Ave, Suite 240
Oakland, CA 94610
(510) 658-6916

CHAIN OF CUSTODY RECORD

PROJECT NUMBER: 0058			PROJECT NAME: Xtra Oil - 1701 Park St.			NUMBER OF CONTAINERS	ANALYSIS(ES): TEH MUDROCK						REMARKS
SAMPLED BY: (PRINTED AND SIGNATURE) Eric Olson <i>[Signature]</i>													
SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION									
120 B5-12W	1/3-06		Water			7	X					ICE	Normal Turnaround
110 B5-42W	"		"			7	X					"	"
120 B6-10W	"		"			5	X					"	"
110 B6-42W	"		"			7	X					"	"
150 B7-12W	"		"			7	X					"	"
110 B7-42W	"		"			7	X					"	"
ICE# 10.74 GOOD CONDITION <input checked="" type="checkbox"/> APPROPRIATE CONTAINERS <input checked="" type="checkbox"/> HEAD SPACE ABSENT <input checked="" type="checkbox"/> PRESERVED IN LAB <input checked="" type="checkbox"/> DECHLORINATED IN LAB <input checked="" type="checkbox"/>						VOAS <input checked="" type="checkbox"/> O&G <input type="checkbox"/> METALS <input type="checkbox"/> OTHER <input type="checkbox"/>		PRESERVATION					
RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>			DATE 1/16/06	TIME 2:07	RECEIVED BY: (SIGNATURE) <i>[Signature]</i>			TOTAL NO. OF SAMPLES (THIS SHIPMENT)		LABORATORY: McCampbell Analytical			
RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>			DATE 1/15/06	TIME 3:45	RECEIVED BY: (SIGNATURE) Mel Vall			TOTAL NO. OF CONTAINERS (THIS SHIPMENT)		LABORATORY CONTACT: Angel Rodriguez		LABORATORY PHONE NUMBER: (925) 252-9262	
RELINQUISHED BY: (SIGNATURE)			DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)			SAMPLE ANALYSIS REQUEST SHEET ATTACHED: () YES (X) NO					
REMARKS:						Vials preserved w/ HCl							

PTX 10-518021

McC Campbell Analytical, Inc.



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0611120

ClientID: PDEO

EDF

Fax

Email

HardCopy

ThirdParty

Report to:

Eric Olson
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Email:

TEL: (510) 658-6916 FAX: 510-834-0152
ProjectNo: #0058; Xtra Oil-1701 Park St.
PO:

Bill to:

Accounts Payable
Xtra Oil Company
2307 Pacific Avenue
Alameda, CA 94501

Requested TAT:

5 days

Date Received: 11/06/2006

Date Printed: 11/06/2006

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)													
					1	2	3	4	5	6	7	8	9	10	11	12		
0611120-001	B5-12W	Water	11/3/06	<input type="checkbox"/>	A													
0611120-002	B5-42W	Water	11/3/06	<input type="checkbox"/>	A													
0611120-003	B6-10W	Water	11/3/06	<input type="checkbox"/>	A													
0611120-004	B6-42W	Water	11/3/06	<input type="checkbox"/>	A													
0611120-005	B7-12W	Water	11/3/06	<input type="checkbox"/>	A													
0611120-006	B7-42W	Water	11/3/06	<input type="checkbox"/>	A													

Test Legend:

1	G-MBTX_W	2		3		4		5	
6		7		8		9		10	
11		12							

The following SampIDs: 0611120-001A, 0611120-002A, 0611120-003A, 0611120-004A, 0611120-005A, 0611120-006A contain testgroup.
Please make sure all relevant testcodes are reported. Many thanks.

Prepared by: Melissa Valles

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701

Web: www.mcccampbell.com E-mail: main@mcccampbell.com

Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0611120

EPA Method SW8021B/8015Cm		Extraction SW5030B				BatchID: 24677			Spiked Sample ID: 0611121-002A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) ^f	ND	60	101	104	2.35	103	104	0.974	70 - 130	30	70 - 130	30
MTBE	ND	10	103	114	10.3	106	106	0	70 - 130	30	70 - 130	30
Benzene	ND	10	105	103	1.56	101	88.3	13.7	70 - 130	30	70 - 130	30
Toluene	ND	10	95.6	95.8	0.155	94.4	74.9	23.1	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	104	101	2.42	101	95.3	5.82	70 - 130	30	70 - 130	30
Xylenes	ND	30	95	95	0	94.7	90.3	4.68	70 - 130	30	70 - 130	30
%SS:	111	10	104	102	2.29	100	104	4.07	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 24677 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0611120-001	11/03/06	11/08/06	1/08/06 12:44 AM	0611120-002	11/03/06	11/08/06	1/08/06 1:18 AM
0611120-003	11/03/06	11/07/06	11/07/06 5:36 PM	0611120-004	11/03/06	11/08/06	1/08/06 1:51 AM
0611120-005	11/03/06	11/07/06	1/07/06 11:37 PM	0611120-006	11/03/06	11/09/06	1/09/06 8:30 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

^f TPH(btex) = sum of BTEX areas from the FID.



QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0611120

EPA Method SW8015C		Extraction SW3510C				BatchID: 24670			Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(d)	N/A	1000	N/A	N/A	N/A	117	119	1.94	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	95	94	0.629	N/A	N/A	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 24670 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0611120-001	11/03/06	11/06/06	11/08/06 8:28 AM	0611120-002	11/03/06	11/06/06	1/13/06 12:27 PM
0611120-003	11/03/06	11/06/06	11/13/06 1:20 PM	0611120-004	11/03/06	11/06/06	11/09/06 5:28 PM
0611120-005	11/03/06	11/06/06	11/10/06 9:20 PM	0611120-006	11/03/06	11/06/06	1/09/06 3:40 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

P & D Environmental 55 Santa Clara, Ste.240 Oakland, CA 94610	Client Project ID: #0058; Xtra Oil Alameda	Date Sampled: 11/09/06
		Date Received: 11/10/06
	Client Contact: Steve Carmack	Date Reported: 11/17/06
	Client P.O.:	Date Completed: 11/17/06

WorkOrder: 0611249
 November 17, 2006

Dear Steve:

Enclosed are:

- 1). the results of 4 analyzed samples from your **#0058; Xtra Oil Alameda project,**
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McC Campbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,



Angela Rydelius, Lab Manager

CHAIN OF CUSTODY RECORD

PROJECT NUMBER: 0058		PROJECT NAME: Xtra Oil Alameda			NUMBER OF CONTAINERS	ANALYSIS(ES): TPH Multi-range MBTEX				PRESERVATIVE	REMARKS
SAMPLED BY: (PRINTED AND SIGNATURE) Steve Carmack [Signature]											
SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION							
115 B3-12w	11/09/06	1442	Water		7						
115 B3-71w	↓	1505	↓		7	X	X				
115 B4-14w	↓	1545	↓		7	X	X				
115 B4-42w	↓	1620	↓		7	X	X				
					7	X	X				
GOOD CONDITION <input checked="" type="checkbox"/> APPROPRIATE CONTAINERS <input checked="" type="checkbox"/> HEAD SPACE ABSENT <input checked="" type="checkbox"/> PRESERVED IN LAB <input checked="" type="checkbox"/> DICHLORINATED IN LAB <input type="checkbox"/> PRESERVATION <input checked="" type="checkbox"/>					VOAS <input checked="" type="checkbox"/> O&G <input type="checkbox"/> METALS <input type="checkbox"/> OTHER <input type="checkbox"/>						
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	TOTAL NO. OF SAMPLES (THIS SHIPMENT)	LABORATORY: McCampbell Analytical						
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	TOTAL NO. OF CONTAINERS (THIS SHIPMENT)	LABORATORY CONTACT: Angela Rydellias		LABORATORY PHONE NUMBER: (925) 252-9262				
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: () YES () NO							
REMARKS: * HCL preservative removed from VOAS only for B3-41w due to reactivity w/ water other 3 samples have HCL preservative in VOAS											

McC Campbell Analytical, Inc.

1534 Willow Pass Rd
 Pittsburg, CA 94565-1701
 (925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0611249

ClientID: PDEO

EDF

Fax

Email

HardCopy

ThirdParty

Report to:

Steve Carmack
 P & D Environmental
 55 Santa Clara, Ste.240
 Oakland, CA 94610

Email:
 TEL: (510) 658-6916 FAX: 510-834-0152
 ProjectNo: #0058; Xtra Oil Alameda
 PO:

Bill to:

Accounts Payable
 Xtra Oil Company
 2307 Pacific Avenue
 Alameda, CA 94501

Requested TAT:

5 days

Date Received: **11/10/2006**

Date Printed: **11/10/2006**

Sample ID	ClientSampleID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
0611249-001	B3-12W	Water	11/9/06 2:42:00 PM	<input type="checkbox"/>	A	B											
0611249-002	B3-41W	Water	11/9/06 3:05:00 PM	<input type="checkbox"/>	A	B											
0611249-003	B4-14W	Water	11/9/06 3:45:00 PM	<input type="checkbox"/>	A	B											
0611249-004	B4-42W	Water	11/9/06 4:20:00 PM	<input type="checkbox"/>	A	B											

Test Legend:

1	G-MBTX_W	2	TPH(DMO)_W	3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Melissa Valles

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mcccampbell.com E-mail: main@mcccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0611249

EPA Method SW8021B/8015Cm		Extraction SW5030B				BatchID: 24728			Spiked Sample ID: 0611206-005A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) ^f	ND	60	106	101	3.90	103	100	2.60	70 - 130	30	70 - 130	30
MTBE	ND	10	91.2	92.3	1.24	91.3	87.8	3.97	70 - 130	30	70 - 130	30
Benzene	ND	10	99.8	101	1.40	97.2	98.1	0.903	70 - 130	30	70 - 130	30
Toluene	ND	10	94.6	95.1	0.575	90.7	91.3	0.696	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	98.7	96.7	2.11	97.5	96.2	1.35	70 - 130	30	70 - 130	30
Xylenes	ND	30	90.3	91	0.735	90	89.7	0.371	70 - 130	30	70 - 130	30
%SS:	117	10	109	107	1.47	104	105	0.374	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 24728 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0611249-001	11/09/06 2:42 PM	11/14/06	11/14/06 9:03 AM	0611249-002	11/09/06 3:05 PM	11/14/06	11/14/06 10:12 AM
0611249-003	11/09/06 3:45 PM	11/14/06	11/14/06 10:46 AM	0611249-004	11/09/06 4:20 PM	11/14/06	11/14/06 11:19 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

^f TPH(btex) = sum of BTEX areas from the FID.



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0611249

EPA Method SW8015C	Extraction SW3510C					BatchID: 24705			Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(d)	N/A	1000	N/A	N/A	N/A	111	114	3.48	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	107	109	1.92	N/A	N/A	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 24705 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0611249-001	11/09/06 2:42 PM	11/10/06	11/16/06 6:23 PM	0611249-002	11/09/06 3:05 PM	11/10/06	11/16/06 3:54 AM
0611249-003	11/09/06 3:45 PM	11/10/06	1/15/06 10:33 PM	0611249-004	11/09/06 4:20 PM	11/10/06	1/17/06 10:05 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.