RO 2848

P & D ENVIRONMENTAL, INC.

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

November 1, 2005
Letter 0363.L10

Mr. Jerry Wickham
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

SUBJECT: SUBSURFACE INVESTIGATION REPORT TRANSMITTAL
T.D. Rowe Facility
8134 Capwell Drive
Oakland, CA

Dear Mr. Wickham:

You will find enclosed one copy of the Subsurface Investigation Report (Report 0363.R3) dated October 27, 2005, prepared by P&D Environmental, Inc. for the subject site. A copy of the report and attachments was previously transmitted to you electronically. The required penalty of perjury certification statement for the enclosed report will be provided in a letter from T.D. Rowe under separate cover.

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

Sincerely,

P&D Environmental, Inc.

Paul H. King

Paul H. King
President

Enclosure

cc: Mr. Leroy Griffin, Oakland Fire Department, Emergency Services, 250 Frank Ogawa Plaza, Suite 3341, Oakland, CA 94612 (w. enclosure)
Mr. Terry Davis, T.D. Rowe, 3 Riverway, Suite 1140, Houston, TX 77056 (w. enclosure)

PHK/wrw
0363.L10

R02848

P & D ENVIRONMENTAL

A Division of Paul H. King, Inc.
55 Santa Clara Ave, Suite 240
Oakland, CA 94610
(510) 658-6916

June 28, 2005
Letter 0363.L6

Mr. Jerry Wickham
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

SUBJECT: SUBSURFACE INVESTIGATION REPORT TRANSMITTAL
T.D. Rowe Facility
8134 Capwell Drive
Oakland, CA

Dear Mr. Wickham:

You will find attached the Subsurface Investigation Report (Report 0363.R2) dated June 17, 2005, prepared by P&D Environmental for the subject site. A copy of the report and attachments was previously transmitted to you electronically. The required penalty of perjury statement for the enclosed report will be provided in a letter from T.D. Rowe under separate cover.

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

Sincerely,

P&D Environmental

Paul H. King

Paul H. King
President

Attachment

cc: Terry Davis, T.D. Rowe

PHK/efo/bl
0363.L6

RO 2848

P & D ENVIRONMENTAL, INC.

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

October 27, 2005
Report 0363.R3

Mr. Terry Davis
T.D. Rowe
3 Riverway, Suite 1140
Houston, TX 77056

SUBJECT: SUBSURFACE INVESTIGATION REPORT
(Boreholes B8 Through B11)
ACEH File #RO-2848
T.D. Rowe Facility
8134 Capwell Drive
Oakland, CA

Dear Mr. Davis:

P&D Environmental, Inc. (P&D) is pleased to present this report documenting the drilling and sampling at four locations designated as B8 through B11 at the subject site. Field activities were performed on September 6 and 7, 2005. The boreholes were drilled to further evaluate the horizontal and vertical extent of petroleum hydrocarbon impact to soil and groundwater in the vicinity of the former Underground Storage Tank (UST) pit. This investigation is intended to augment P&D's previous investigation at the site which was documented in P&D's Subsurface Investigation Report (Boreholes B5, B6, B7, and Wells MW1, MW2, MW3) dated June 17, 2005 (document 0363.R2).

The scope of work for this current investigation was performed in accordance with the scope of work set forth in the Discussion and Recommendations section of P&D's Subsurface Investigation Report (Boreholes B5, B6, B7, and Wells MW1, MW2, MW3) dated June 17, 2005 (document 0363.R2). In addition, this current investigation was performed in accordance with technical comments set forth in a July 1, 2005 letter from the Alameda County Environmental Health Department (ACEH) that concurred with the proposed scope of work in P&D's June 17, 2005 report, and subsequent telephone conversations with the site caseworker regarding the technical comments. A Site Location Map is attached as Figure 1, and a Site Vicinity Map showing the drilling locations is attached as Figure 2.

All work was performed under the direct supervision of an appropriately registered professional. This work was performed in accordance with guidelines set forth in the document "Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites" dated August 10, 1990 and "Appendix A - Workplan for Initial Subsurface Investigation" dated August 20, 1991.

BACKGROUND

P&D's understanding of historical site investigations is based on review of the following documents.

- August 6 or August 9, 1999 (different parts of the report have different dates) Underground Storage Tank Removal Report prepared by ACC Environmental Consultants (ACC),
- September 9, 2004 Additional Subsurface Investigation Report prepared by ACC,
- September 28, 2004 Opinion Letter – Subsurface Investigation Results prepared by ACC.

Review of the August, 1999 Underground Storage Tank (UST) Removal Report indicates that two 3,000-gallon capacity fiberglass USTs were removed from the site on April 16, 1999. The USTs were reported to have stored gasoline that was used to supply fuel to delivery trucks operated by T.D. Rowe. The report stated that the USTs had not been used for three years prior to their removal. Mr. Stephen Craford of the Oakland Fire Department was onsite to observe UST removal and sample collection. At the time of UST removal, no holes were observed in either UST. However, it appeared that the fittings on one UST were damaged. The pit was reported to have been excavated to a depth of approximately six feet below the ground surface, and groundwater was observed in the pit at depths ranging from 4 to 6 feet below the ground surface. The groundwater level in the pit was reported to have been directly observed to be tidally influenced. Soil exposed in the walls of the pit consisted of brown silty sand.

Significant staining was reported to have been observed and petroleum hydrocarbon odors were detected in the UST pit. A total of four sidewall soil samples were collected at the soil-groundwater interface (samples TDR-Pit-N, TDR-Pit-S, TDR-Pit-E, TDR-Pit-W), and one pit water sample was collected (TDR-Pit). In addition, one soil stockpile sample designated as TDR-SP1 through SP8 was collected. The samples were analyzed for TPH-G, BTEX, Fuel Oxygenates (TBA, MTBE, DIPE, ETBE and TAME by EPA Method 8260) and Total Lead. The sample results showed elevated TPH-G concentrations on the north wall of the pit and in the pit water. The ratio of TPH-G to benzene in one soil sample and the absence of BTEX in the remaining soil samples indicated the gasoline was aged and degraded.

On April 29, 1999 approximately 150 tons of petroleum-impacted soil was removed from the north wall of the pit, extending the pit dimensions approximately 4 feet to the north. Following over-excavation of the pit, two confirmation soil samples were collected from the north wall (samples TDR-NWall-1 and TDRNWall-2). The samples were analyzed for TPH-G, BTEX, Fuel Oxygenates, and Total Lead. Based on the confirmation soil sample results, it was concluded that over-excavation activities successfully removed residual petroleum in the soil.

On May 18, 1999 approximately 800 gallons of water was removed from the pit by a vacuum truck prior to backfilling the pit. The surface of the water was reported to have

been skimmed in order to remove as much product as possible. A groundwater sample was collected from the pit (sample Pit-2) and analyzed for TPH-G, BTEX, fuel oxygenates and total lead.

Review of the ACC report summary tables shows that the only fuel oxygenate listed in the column heading is MTBE, and that the Table 1 soil sample analytical results incorrectly identify the MTBE units as mg/kg instead of ug/kg. Similarly, all of the Table 2 water sample analytical results are incorrectly reported as mg/kg and should be reported as ug/L with the exception of lead, which should be reported as mg/L. It appears that the January 19, 2005 ACEH work plan request letter incorrectly identified residual MTBE at the site as 57 mg/kg and not 57 ug /kg based on review of the report summary tables.

The report concluded that following over-excavation of the UST pit, confirmation soil sample results did not show detectable concentrations of petroleum hydrocarbons, and that after removal of petroleum-impacted groundwater from the pit, petroleum concentrations in groundwater decreased significantly.

Review of the City of Oakland UST removal application attached with the report shows that the USTs were identified in the application as containing both gasoline and diesel fuel. Review of the Uniform Hazardous Waste Manifest attached to the report dated April 16, 1999 shows that 950 gallons of liquid identified as "Rinse Aide" was removed from the site. Figure 2 of the ACC report incorrectly shows the site building extending to Capwell Drive and incorrectly identifies the UST pit dimensions.

Review of the September 9, 2004 Additional Subsurface Investigation Report documents the drilling of four soil borings designated as TDR-B1 through TDR-B4 on August 24, 2004. The boreholes were continuously cored using Geoprobe push technology. One soil sample was collected from each borehole at a depth of 4.0 feet below the ground surface, and one groundwater sample was collected from each borehole. Groundwater was reported to have been encountered at an estimated depth of 7.0 feet below the ground surface in each of the boreholes. The soils samples at the 4-foot depth from boreholes B1 and B2 and the groundwater samples from boreholes B1, B3 and B4 were analyzed for TPH-G, BTEX and MTBE by EPA Method 8260B.

Review of the boring logs for the boreholes shows that all of the boreholes were drilled to a total depth of 8 feet below the ground surface. The boring logs show that subsurface conditions consisted of silty clay to a depth of approximately 4 feet below the ground surface in all of the boreholes except TDR-B3, where silty clay was encountered to a depth of approximately 3 feet below the ground surface. Below the silty clay, silty sand with varying amounts of gravel was encountered to the total depths explored. The boring logs show that a mild gasoline odor was reported in the silty clay in all of the boreholes except for TDR-B1, where a gasoline odor was reported. Similarly, a strong gasoline odor was reported in the silty sand from all of the boreholes except for TDR-B1, where no gasoline odor was reported. Photoionization Detector (PID) values re reported on the boring logs at depths of 4 and 8 feet below the ground surface. The three boreholes where PID values were measured in the silty clay (B1, B2, and B4) showed PID values ranging from 1.4 to 1.8 ppm. In borehole B3, the 4-foot depth sample was located in silty sand, and was 82.0

ppm. In all of the boreholes the 8-foot depth PID reading was 21.1 or 22 ppm except for borehole B3, where 74.2 ppm was reported.

Review of the report text shows that the silty clay layer is identified as extending to a depth of approximately 6 feet below the ground surface, not the 3 or 4 feet below the ground surface shown on the boring logs. The report also identifies the soil sample and groundwater samples as being summarized in Tables 3 and 4. However, the soil and groundwater sample results are summarized in Tables designated as Table 1 and Table 2, respectively in the ACC report.

Based on the soil boring sample results, ACC concluded that no significant source of impact to soil or groundwater is present, impacted groundwater appears to be confined to the site and offsite migration and potential human exposure is minimal to nonexistent, offsite migration of dissolved-phase petroleum hydrocarbons is limited in the horizontal extent and is relatively well defined, and the sample results indicate that significant natural attenuation of the petroleum hydrocarbons is occurring. The ACC report concluded by requesting case closure.

Review of the September 28, 2004 ACC Opinion Letter shows that reference to Table 1 of the August 1999 report still references MTBE concentrations in mg/kg instead of ug/kg. In addition, the letter references RWQCB RBSLs, which were superseded in 2003 by ESLs. The letter does not address TPH-G groundwater sample results from borehole B3 of 4900 ug/L exceeding the RWQCB guideline value of 500 ug/L, and does not explicitly address the potential risk to occupants of the building at the site from soil vapor migration into the building.

Review of the summary tables for soil sample results in the ACC documents shows that following over-excavation of the north end of the UST pit, no petroleum hydrocarbon concentrations exceeding RWQCB ESL values were detected in the UST pit or in any of the soil borings. Similarly, review of the summary tables for groundwater sample results in the ACC documents shows that following pumping of the UST pit, no petroleum hydrocarbon concentrations exceeding RWQCB ESL values were detected in the UST pit or in any of the ACC soil borings soil sample results with the following exceptions.

- UST pit sample Pit-2 for TPH-G and lead (although Table 2 of the March 7, 2005 Work Plan identifies the Pit-2 water sample xylenes value of 54 ug/L exceeding the associated ESL value of 13 ug/L, the 54 ug/L xylenes value does not exceed the current RWQCB February 2005 Table B ESL value of 100 ug/L)
- Soil boring sample TDR-B3-W for TPH-G.

On January 19, 2005, the ACEH issued a letter requesting a subsurface conduit study and a 2,000-foot radius well survey. In addition, the January 19, 2005 ACEH letter requested a work plan for further subsurface investigation at the subject site.

In response to the ACEH letter, P&D submitted a Conduit Study and Well Survey Report dated March 4, 2005 (document 0363.R1) and a Soil and Groundwater Investigation Work Plan dated March 7, 2005 (document 0363.W1). Completion of the scope of work in the

work plan is documented in P&D's Subsurface Investigation Report (Boreholes B5, B6, B7, and Wells MW1, MW2, MW3) dated June 17, 2005 (document 0363.R2).

FIELD ACTIVITIES

Field activities were performed on September 6 and 7, 2005. All subsurface exploration and soil and groundwater sample collection was performed by Vironex, Inc. of San Leandro, California. Prior to drilling, City of Oakland (COO) permit X0500947 and Alameda County Public Works Agency (ACPWA) permit W05-0811 were obtained for the drilling of boreholes B8 through B11. In addition, the drilling locations were marked with white paint, Underground Service Alert was notified for underground utility location, a health and safety plan was prepared, and notification of the scheduled drilling date was provided to the COO, the ACPWA and the ACEH.

Continuous Coring

On September 6, 2005 each of boreholes B8a through B11a were continuously cored to a depth of 10.0 feet using a macrocore sampler lined with cellulose acetate tubes and Geoprobe push technology. The soil from the continuous cores was logged in the field in accordance with standard geologic field techniques and the Unified Soil Classification System. All of the soil from the boreholes was evaluated with a 10.3 eV Photoionization Detector (PID) calibrated using a 100 ppm isobutylene standard.

No organic vapors were detected with the PID with the exception of borehole B11a, where a PID value of 164 ppm was detected at a depth of 7.0 to 8.0 feet, and 3 ppm that was detected between the depths of 8.0 and 10.0 feet below the ground surface. Similarly, no odors were detected in any of the boreholes with the exception of a slight sulfurous odor in borehole B8a between the depths of 8.0 to 10.0 feet below the ground surface, and petroleum hydrocarbon odors in borehole B11a that were described as moderate between the depths of 6.5 to 7.0 feet and 8.0 to 10.0 feet, and strong between the depths of 7.0 to 8.0 feet below the ground surface.

Soil samples were retained for laboratory analysis from each of the boreholes at a depth of 4.5 feet, and additionally in borehole B11a at a depth of 7.2 feet below the ground surface. Soil samples were retained from the continuous cores as a six-inch long sample in the cellulose acetate tubes cutting the core barrel sample liner at the depths corresponding to the desired sampling interval. For each soil sample, the ends of the sample tube were sequentially covered with aluminum foil and plastic endcaps, and the tube was then labeled and stored in a cooler with ice pending delivery to the laboratory. Chain of custody procedures were observed for all sample handling.

Groundwater was initially encountered in boreholes B8a through B11a during drilling at depths of 5.0, 8.5, 8.0 and 7.0 feet below the ground surface, respectively. Groundwater was subsequently measured in the boreholes at depths of 3.9, 4.9, 4.0 and 3.9 feet below the ground surface, respectively. A groundwater grab sample was collected from each of the boreholes by placing a one-inch diameter slotted PVC pipe into each borehole and using polyethylene tubing and a stainless steel foot valve.

All water samples were transferred to 1-liter amber bottles 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. Chain of custody procedures were observed for all sample handling.

No sheen or separate phase layers of petroleum hydrocarbons were observed in any of the boreholes. No petroleum hydrocarbon sheen or odors were detected in any of the borehole groundwater grab samples, except for a slight petroleum hydrocarbon odor from the sample from borehole B11a.

All drilling equipment was steam cleaned prior to use at the site. .New PVC pipe and polyethylene tubing were used in each borehole for sample collection. All other sampling equipment was cleaned with an Alconox solution followed by a clean water rinse prior to use in each borehole. Following completion of sample collection activities, the boreholes were filled with neat cement grout. Soil and water generated during drilling were stored in one drum at the subject site pending characterization and disposal.

The locations of the boreholes are shown on Figure 2. Copies of the boring logs are attached with this report.

Soil Conductivity Logging

On September 7, 2005 a soil electrical conductivity probe was advanced at locations identified as boreholes B8EC through B11EC. Each of the borehole locations corresponded with borehole locations B8a through B11a, respectively. Soil conductivity was continuously measured for each of the boreholes with the exception of borehole B8EC, which experienced a detector malfunction for the interval extending from the ground surface to a depth of approximately 8.0 feet below the ground surface. Soil conductivity values were recorded and printed as a log. Increased conductivity values indicate finer grained materials. Copies of the conductivity logs for boreholes B8EC through B11EC are attached with this report.

The probe was advanced to a depth of 48.0 feet in all of the boreholes except for B11EC, which was advanced to a depth of 58.0 feet. Comparison of the conductivity logs with boring logs from P&D's previous investigation (see P&D's Subsurface Investigation Report (Boreholes B5, B6, B7, and Wells MW1, MW2, MW3) dated June 17, 2005 (document 0363.R2)) shows excellent correlation of the increased conductivity log values with the Bay Mud layer previously encountered to a depth of approximately 20 feet. In boreholes B8EC through B11EC the bottom of the Bay Mud layer appears to be at a depth of approximately 21.0, 20.0, 21.0 and 22.0 feet, respectively. Below the Bay Mud layer the conductivity logs suggest that the materials encountered to the total depth explored of 58.0 feet consist predominantly of silty and sandy materials.

Hydropunch Groundwater Sample Collection

On September 7, 2005 groundwater grab samples were collected using a Hydropunch at locations identified as B8b through B11b. The locations of the boreholes are shown on Figure 2, and correspond with the locations of boreholes B8a through B11a, respectively. Following review of subsurface conditions identified in the soil conductivity logs, the Hydropunch samples were collected from boreholes B8b through B11b at intervals of 24.0 to 28.0, 22.0 to 26.0, 23.0 to 27.0, and 45.0 to 48.0 feet below the ground surface, respectively. Prior to retracting the drilling rods to expose the Hydropunch screen, the interior of the drilling rods for each borehole were evaluated to determine if water was present inside the drilling rods. No water was measured in any of the drilling rods prior to retracting the drilling rods to expose the Hydropunch screen.

Following retraction of the drilling rods to expose the Hydropunch screen, water was measured inside the drilling rods prior to sample collection at depths of 19.5, 4.9, 15.5, and 19.0 feet below the ground surface, respectively. A groundwater grab sample was collected from each of the boreholes using polyethylene tubing and a stainless steel foot valve. All water samples were transferred to 1-liter amber bottles 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. Chain of custody procedures were observed for all sample handling.

Groundwater Level Monitoring

On September 7, 2005 the depth to water was measured in the three groundwater monitoring wells at the site using an electric water level indicator with an accuracy of 0.01 foot. To ensure that water levels in the wells were at equilibrium, the depth to water was measured at the time that the wells were opened, and again approximately 2.5 hours later. No change in water level was measured for any of the wells. The measured depth to water in wells MW1, MW2 and MW3 was 4.56, 5.01 and 3.99 feet, respectively. The depth to water level measurements are summarized in Table 1.

GEOLOGY AND HYDROGEOLOGY

Based on review of regional geologic maps from U. S. Geological Survey Professional Paper 943, "Flatland Deposits - Their Geology and Engineering Properties and Their Importance to Comprehensive Planning," by E. J. Helley and K. R. Lajoie, 1979, the subject site is underlain by Bay Mud (Qhbm). Bay Mud is described as unconsolidated, water-saturated, dark, plastic clay and silty clay.

The subsurface materials encountered on September 6, 2005 in continuously cored boreholes B8a, B9a, B10a and B11a consisted of coarse-grained fill material to a depth of approximately 3.8, 3.0, 1.7 and 3.7 feet below the ground surface, respectively. Beneath the fill material clay is encountered to a depth ranging from 5.0 to 8.9 feet below the ground surface, which is in turn underlain by sand to the total depth explored of 10.0 feet. The

subsurface materials encountered in the boreholes are consistent with materials encountered in previously drilled boreholes at the site.

Review of the soil conductivity logs for boreholes B8EC through B11EC shows excellent correlation of the increased conductivity log values with the Bay Mud layer encountered in previously drilled boreholes. In boreholes B8EC through B11EC the bottom of the Bay Mud layer appears to be at a depth of approximately 21.0, 20.0, 21.0 and 22.0 feet, respectively. Below the Bay Mud layer the conductivity logs suggest that the materials encountered to the total depth explored of 58.0 feet consist predominantly of silty and sandy materials.

Groundwater was initially encountered during drilling in boreholes B8a, B9a, B10a and B11a at depths of 5.0, 8.5, 8.9 and 7.0 feet below ground surface, respectively. Groundwater was subsequently measured at depths of 3.9, 4.9, 4.0 and 3.9 feet below the ground surface, respectively. In boreholes B8a, B9b, B10b, and B11b (boreholes for Hydropunch groundwater grab sample collection) groundwater was measured in the drilling rods prior to sample collection at depths of 19.5, 4.9, 15.5 and 19.0 feet below the ground surface, respectively.

The measured depth to water during well monitoring and sampling at the site from May 27 to June 6, 2005 ranged from 4.14 to 4.30 feet in well MW1, from 4.82 to 4.97 feet in well MW2, and from 3.33 to 3.48 feet in well MW3. Most recently, the measured depth to water in wells MW1, MW2 and MW3 on September 7, 2005 was 4.56, 5.01 and 3.99 feet, respectively. The depth to water level measurements are summarized in Table 1.

Based on the measured depth to groundwater in the groundwater monitoring wells, the apparent groundwater flow direction at the site from May 27 to June 6, 2005 was calculated to be to the southwest with a gradient of 0.013 or 0.014. On September 7, 2005 the groundwater flow direction was calculated to be to the southwest with a gradient of 0.0070. The groundwater flow direction at the site on September 7, 2005 is shown on Figures 5, 6 and 7. The calculated groundwater flow direction and gradient for each day of monitoring are summarized in Table 2.

A tidally influenced canal that drains to the San Francisco Bay is located approximately 200 feet to the southwest of the subject site. However, based on the consistent calculated groundwater flow direction and gradient for the six different monitoring events, groundwater does not appear to be tidally influenced at the site.

LABORATORY ANALYSIS

All of the soil and groundwater samples were analyzed at McCampbell Analytical, Inc. in Pacheco, California. McCampbell Analytical, Inc. is a state-accredited hazardous waste testing laboratory. All of the soil and groundwater samples collected from the boreholes were analyzed for Total Petroleum Hydrocarbons as Gasoline (TPH-G), Total Petroleum Hydrocarbons as Diesel (TPH-D), and Total Petroleum Hydrocarbons as Motor Oil (TPH-MO) and using EPA Method 8015C; as well as benzene, toluene, ethylbenzene, and xylenes (BTEX), fuel oxygenates, and lead scavengers using EPA Method 8260B. In addition,

water samples B8a-8.0 Water, B10a-8.0 Water, and B11a-8.0 Water were re-extracted using a silica gel cleanup and re-analyzed for TPH-D and TPH-MO using the same methods described above.

Review of the laboratory analytical results for the borehole soil samples shows that none of the analytes were detected in any of the boreholes with the exception of borehole B11a. In borehole B11a, the samples collected at depths of 4.5 and 7.2 feet below the ground surface showed TPH-G at concentrations of 5.6 and 95 mg/kg, respectively, TPH-D at concentrations of 1.0 and 89 mg/kg, respectively, and ethylbenzene at concentrations of 0.026 and 0.12 mg/kg, respectively. TPH-MO was only detected in B11a-7.2 at a concentration of 310 mg/kg. Review of the laboratory analytical reports shows that the results reported as TPH-G are identified as heavier gasoline-range compounds, aged gasoline, and with no recognizable pattern. Similarly, the TPH-D results for the sample collected at a depth of 7.2 feet are identified as gasoline, diesel, and oil-range compounds. The soil sample results are summarized in Table 3. Copies of the laboratory analytical reports and chain of custody documentation are attached with this report.

Review of the laboratory analytical results for the groundwater grab samples shows that in the shallow water samples collected at a depth of 8.0 feet from boreholes B8a through B11a BTEX, fuel oxygenates and lead scavengers were not detected with the exception of 0.00067 mg/L MTBE in borehole sample B9a, and 0.0007 mg/L toluene, 0.013 mg/L ethylbenzene, and 0.00068 mg/L MTBE in borehole sample B11a. TPH-G was only detected in borehole sample B11a at a concentration of 0.17 mg/L. TPH-D was detected in all of the boreholes at concentrations of 0.48, 0.089, 0.53, and 0.81 mg/L, respectively, and TPH-MO was detected in all of the boreholes at concentrations of 6.0, 0.41, 4.7 and 4.9 mg/L, respectively. Following re-extraction using silica gel cleanup and re-analysis of the water samples from boreholes B8a, B10a and B11a, the TPH-D concentrations were reduced to 0.23, 0.27 and 0.57 mg/L, respectively and the TPH-MO concentrations were reduced to 2.9, 2.1 and 4.1 mg/L, respectively.

Review of the laboratory analytical results for the groundwater grab samples shows that in the deeper water samples collected at depths of 26.0 to 28.0 feet from boreholes B8b, B9b and B10b, none of the analytes were detected in the samples from boreholes B8b and B9b. In the sample collected from borehole B10b, TPH-D was detected at a concentration of 0.092 mg/L, TPH-MO was detected at a concentration of 0.39 mg/L, toluene was detected at a concentration of 0.0011 mg/L, and xylenes were detected at a concentration of 0.00054 mg/L. Review of the laboratory analytical results for the deepest groundwater grab sample collected from borehole B11b at a depth of 48.0 feet shows that none of the analytes were detected with the exception of 0.077 mg/L TPH-D and 0.00086 mg/L toluene.

Review of the groundwater sample laboratory analytical reports shows that all of the results reported as TPH-D are identified as heavier gasoline-range compounds and aged gasoline. The borehole groundwater grab sample results are summarized in Table 4. Copies of the laboratory analytical reports and chain of custody documentation are attached with this report.

DISCUSSION AND RECOMMENDATIONS

All historical soil sample results for soil at a depth of approximately 4.5 feet below the ground surface in addition to soil sample results for the current investigation for TPH-G, TPH-D, and TPH-MO are shown in Figures 2, 3 and 4, respectively. All historical groundwater sample results for shallow water located above the Bay Mud layer in addition to groundwater sample results for the current investigation for TPH-G, TPH-D, and TPH-MO are shown in Figures 5, 6 and 7, respectively. All historical groundwater sample results for deeper water located below the Bay Mud layer in addition to groundwater sample results for the current investigation for TPH-G, TPH-D, and TPH-MO are shown in Figures 8, 9 and 10, respectively. When detected, EPA 8260B compound names and associated concentrations are shown on Figures 2, 5, and 8. Values exceeding their respective February 2005 Environmental Screening Level (ESL) values are in bold and identified with an asterisk. Historical laboratory sample results are provided in Appendix A. Review of Table 2 shows that the groundwater flow direction has been consistently to the southwest for all monitoring events at the site.

Both the lithologic soil boring logs and soil conductivity logs show that the Bay Mud layer is continuous across the site. Review of the soil conductivity logs shows that no extensive low permeability layer was encountered below the Bay Mud. Review of Figures 8, 9 and 10 in conjunction with Table 4 and Appendix A shows that none of the analytes were detected at concentrations exceeding their respective ESL values in the materials located beneath the Bay Mud layer with the exception of 3.9 mg/L TPH-G and 88 mg/L TPH-D detected in borehole B7 at a depth of 28.0 feet below the ground surface. The horizontal extent of petroleum hydrocarbons in the materials located beneath the Bay Mud was defined by collecting groundwater grab samples at depths of 26.0 to 28.0 feet below the ground surface in boreholes B8b, B9b and B10b. The vertical extent of petroleum hydrocarbons in the materials located beneath the Bay Mud was defined by collecting one groundwater grab sample from adjacent to the former UST pit at a depth of 48.0 feet below the ground surface in borehole B11b.

Review of Figures 2, 3 and 4 in conjunction with Table 3 and Appendix A shows that none of the analytes were detected at concentrations exceeding their respective ESL values in soil following UST removal and over-excavation of the north UST pit wall, and that the horizontal and vertical extent of petroleum hydrocarbons in soil has been defined.

Review of Figures 5, 6 and 7 in conjunction with Table 4 and Appendix A shows that, following pumping of water from the UST pit, none of the analytes were detected at concentrations exceeding their respective ESL values outside of the former UST pit in shallow groundwater located above the Bay Mud layer with the exception of TPH-G in two locations, TPH-D in two locations, and TPH-MO in three locations as follows.

TPH-G was detected above the applicable ESL in shallow groundwater outside the former UST pit at concentrations of 4.9 and 0.96 mg/L in samples from boreholes B3 and B5, respectively. The horizontal extent of TPH-G in shallow groundwater was defined by groundwater grab samples from well MW1 to the northwest, boreholes B8a and B10a to the northeast, borehole B6 to the south, and borehole B9a to the west.

TPH-D was detected above the applicable ESL in shallow groundwater outside the former UST pit at concentrations of 1.6 and 0.81 mg/L in samples from boreholes B5 and B11a, respectively. In addition, 4.4 mg/L TPH-D was detected in the sample collected from borehole B7a located within the boundaries of the former UST pit. Following silica gel cleanup extraction and re-analysis the concentration of TPH-D in the shallow groundwater sample from borehole B11a was reduced to 0.57 mg/L, which is below the applicable ESL. The horizontal extent of TPH-D in shallow groundwater was defined by groundwater grab samples from well MW1 to the northwest, boreholes B8a and B10a to the northeast, borehole B6 to the south, and borehole B9a to the west.

TPH-MO was detected above the applicable ESL in shallow groundwater outside the former UST pit at concentrations of 6, 4.7, and 4.9 mg/L in samples from boreholes B8a, B10a, and Blla, respectively. Silica gel cleanup extraction followed by re-analysis of the samples shows that the TPH-MO concentrations were reduced to 2.9, 2.1 and 4.1 mg/L respectively, none of which were below the ESL. The downgradient extent of TPH-MO in shallow groundwater was defined by groundwater grab samples from boreholes B5, B6, and B9a, as well as from well MW2.

The general absence of BTEX in all of the sample results in conjunction with the laboratory report descriptions of the TPH as aged gasoline suggests that the more toxic components of the gasoline have degraded. The only compound detected in boreholes located adjacent to the site building that exceeds it's respective ESL is TPH-MO in the shallow groundwater sample collected from borehole B11a. The absence of BTEX and other EPA 8260B compounds in the soil sample collected where the highest concentrations of petroleum hydrocarbons encountered in borehole B11a (sample B11a-7.2, see Table 3, boring log B11a, and Figure 2) in conjunction with the similar absence of BTEX and other EPA 8260B compounds in the shallow water sample collected from borehole B11a (see Table 4 and Figure 5) indicates that VOCs at concentrations exceeding their respective ESL values are not present beneath the adjacent building. For this reason volatilization from groundwater or soil to indoor air is not considered an exposure pathway of concern. Similarly, groundwater is not pumped at or near the site, and dermal and ingestion exposure pathways are therefore not considered to be of concern.

The vertical and horizontal extent of petroleum hydrocarbons in soil and groundwater has been defined at the site. The residual TPH concentrations in groundwater exceeding their respective ESL values are limited in extent and do not pose an exposure risk to sensitive receptors at the site, as discussed above. Based on the extent of petroleum hydrocarbons having been defined vertically and horizontally in soil and groundwater and the absence of unacceptable levels of risk posed by residual petroleum hydrocarbons in soil and groundwater at the site, P&D recommends that the responsible party request case closure.

DISTRIBUTION

A copy of this report should be forwarded to Mr. Jerry Wickham at the ACEH. The report should be accompanied by a transmittal letter signed by an authorized representative of T.D. Rowe, in accordance with requirements set forth in the letter to TD Rowe from the ACDEH dated July 1, 2005.

LIMITATIONS

This report was prepared solely for the use of T.D. Rowe. 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 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 boreholes 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 is 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.

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

Sincerely,
P&D Environmental, Inc.

Paul H. King

Paul H. King
President
Professional Geologist # 5901
Expires: 12/31/05

Attachments:
Table 1: Groundwater Level Monitoring Data
Table 2: Calculated Groundwater Flow Direction and Gradient For Wells MW1, MW2 and MW3
Table 3: Summary of Laboratory Analytical Results – Borehole Soil Samples
Table 4: Summary of Laboratory Analytical Results – Borehole Groundwater Grab Samples
Figure 1: Site Location Map
Figure 2: TPH-G in Soil at 4.5 Feet Below Ground Surface
Figure 3: TPH-D in Soil at 4.5 Feet Below Ground Surface
Figure 4: TPH-MO in Soil at 4.5 Feet Below Ground Surface
Figure 5: TPH-G in Shallow Groundwater at 8 Feet Below Ground Surface
Figure 6: TPH-D in Shallow Groundwater at 8 Feet Below Ground Surface
Figure 7: TPH-MO in Shallow Groundwater at 8 Feet Below Ground Surface
Figure 8: TPH-G in Deeper Groundwater at 26-28 Feet Below Ground Surface
Figure 9: TPH-D in Deeper Groundwater at 26-28 Feet Below Ground Surface
Figure 10: TPH-MO in Deeper Groundwater at 26-28 Feet Below Ground Surface
Soil Boring Logs
Laboratory Analytical Reports and Chain of Custody Documentation
Appendix A: Historical Laboratory Sample Results

PHK
wrw/efo
0363.R3

TABLE 1
GROUNDWATER LEVEL MONITORING DATA
FOR WELLS MW1, MW2, AND MW3

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)	Water Table Elev. (ft.)
MW1	9/7/05	11.27	4.56	6.71
	6/6/05		4.30	6.97
	6/2/05		4.24	7.03
	6/1/05		4.22	7.05
	5/31/05		4.26	7.01
	5/27/05		4.14	7.13
MW2	9/7/05	11.75	5.01	6.74
	6/6/05		4.97	6.78
	6/2/05		4.96	6.79
	6/1/05		4.94	6.81
	5/31/05		4.93	6.82
	5/27/05		4.82	6.93
MW3	9/7/05	11.14	3.99	7.15
	6/6/05		3.48	7.66
	6/2/05		3.43	7.71
	6/1/05		3.37	7.77
	5/31/05		3.39	7.75
	5/27/05		3.33	7.81

TABLE 2
CALCULATED GROUNDWATER FLOW DIRECTION AND GRADIENT
FOR WELLS MW1, MW2, AND MW3

Date Monitored	**Flow Direction**	**Gradient (ft./ft.)**
9/7/05	S62°W	0.0070
6/6/05	S56°W	0.013
6/2/05	S54°W	0.013
6/1/05	S54°W	0.014
5/31/05	S57°W	0.014
5/27/05	S54°W	0.013

TABLE 4
SUMMARY OF LABORATORY ANALYTICAL RESULTS - BOREHOLE GROUNDWATER GRAB SAMPLES

Sample Name	TPH-G	TPH-D/ TPH-D With SGC	TPH-MO/ TPH-MO With SGC	Benzene	Toluene	Ethyl-benzene	Xylenes	Other VOCs By 8260B
B8a-8.0, Water	ND<0.05	0.48,a,d/ 0.23,a,d	6.0/ 2.9	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005
B9a-8.0, Water	ND<0.05	0.089,a,d	0.41	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005, except MTBE = 0.00067
B10a-8.0, Water	ND<0.05	0.53,a,d/ 0.27,a,d	4.7/ 2.1	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005
B11a-8.0, Water	0.17, a	0.81,a,d/ 0.57,a,d,f	4.9/ 4.1	ND<0.0005	0.0007	0.013	ND<0.0005	ND<0.0005 except MTBE = 0.00068
B8b-28.0, Water	ND<0.05	ND<0.05	ND<0.25	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005
B9b-26.0, Water	ND<0.05	ND<0.05	ND<0.25	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005
B10b-27.0, Water	ND<0.05	0.092,d,a	0.39	ND<0.0005	0.0011	ND<0.0005	0.00054	ND<0.0005
B11b-48.0, Water	ND<0.05	0.077,a	ND<0.25	ND<0.0005	0.00086	ND<0.0005	ND<0.0005	ND<0.0005
ESL_2	0.64	0.64	0.5	0.046	0.13	0.29	0.10	MTBE = 1.8

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
SGC = Silica Gel Cleanup performed to remove non-petroleum hydrocarbons.
TPH-MO= Total Petroleum Hydrocarbons as Motor Oil.
VOCs = Volatile Organic Compounds.
MTBE = Methyl-butyl either
ESL_2 = Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB) updated February 2005, from Table B – Shallow Soils, Groundwater is not a current or potential source of drinking water.
a = Laboratory analytical report note: heavier gasoline range compounds are significant, possibly aged gasoline.
b = Laboratory analytical report note: diesel range compounds are significant; no recognized pattern.
c = Laboratory analytical report note: no recognizable pattern.
d = Laboratory analytical report note: strongly aged gasoline or diesel range compounds are significant.
e = Laboratory analytical report note: oil range compounds are significant.
f = Laboratory analytical report note: gasoline range compounds are significant
ND = Not detected.
Results are in mg/L, unless otherwise indicated.

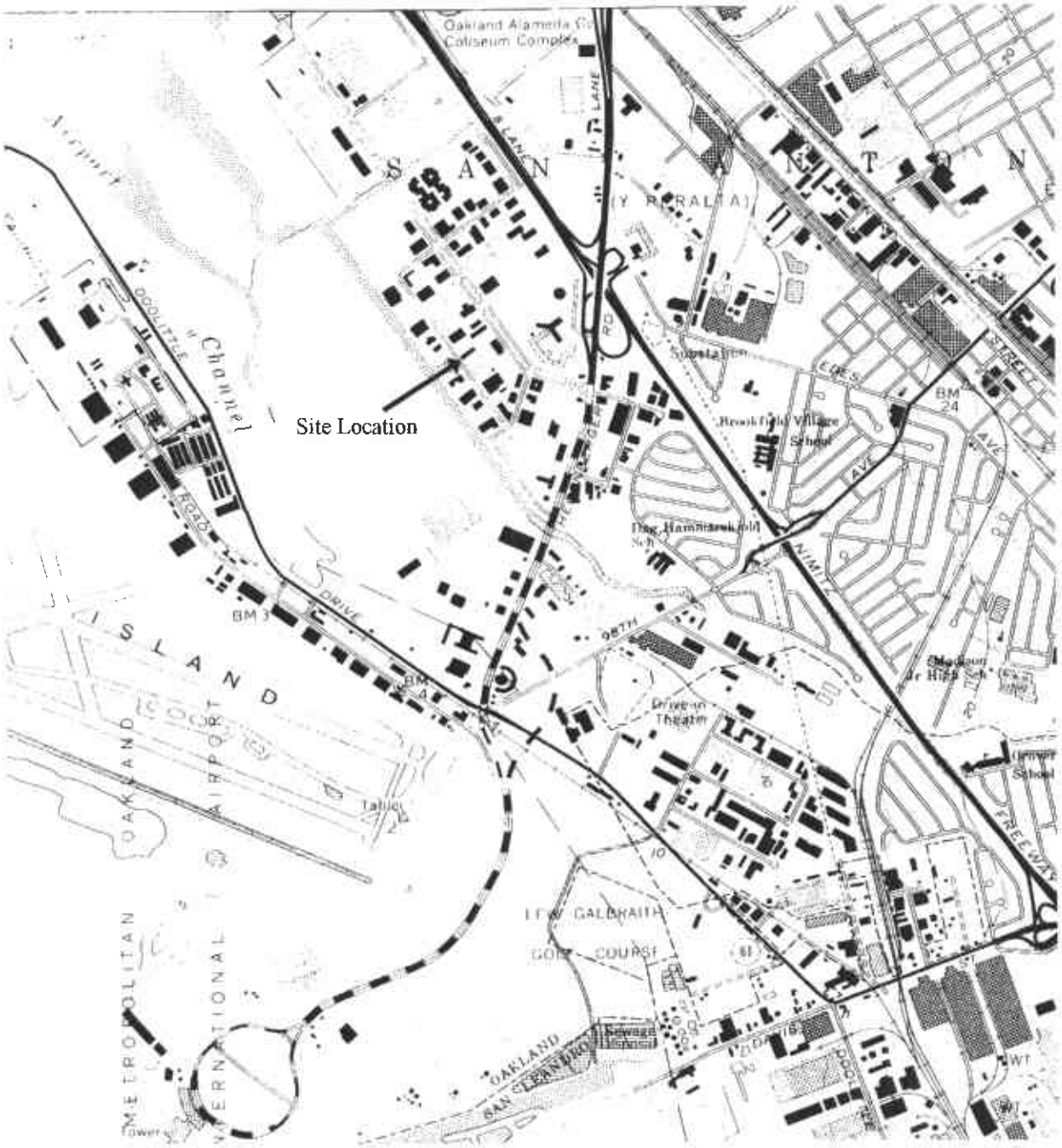

Figure 1
Site Location Map
8134 Capwell Drive
Oakland, California

N

Base Map From:
U.S. Geological Survey
San Leandro, Calif.
Photorevised 1980

P & D ENVIRONMENTAL, INC.
55 Santa Clara Avenue, Suite 240
Oakland, CA 94610
(510) 658-6916

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SCALE IN FEET

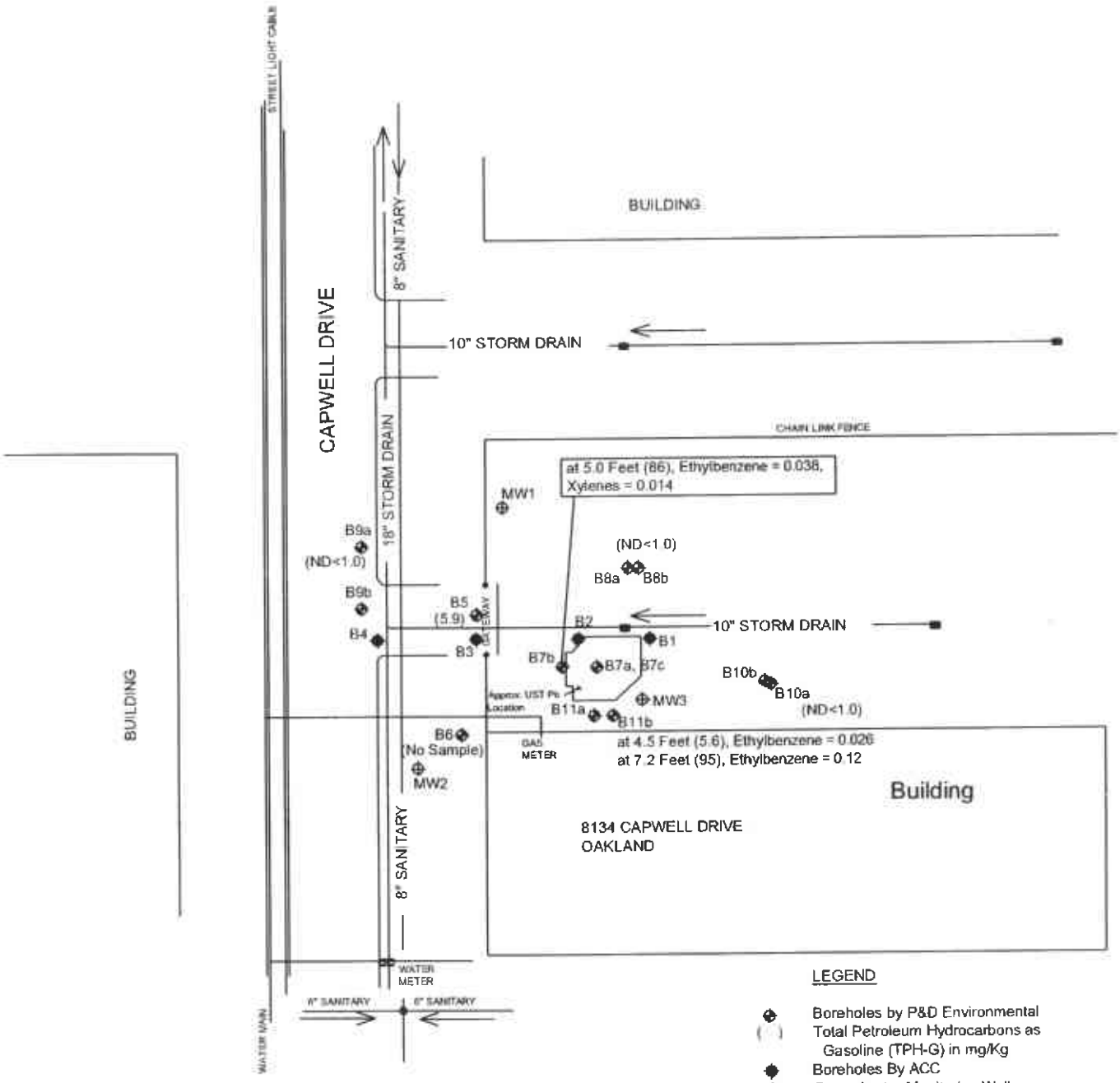

Figure 2
TPH-G in Soil at 4.5 Feet Below Ground Surface
8134 Capwell Drive
Oakland, California

N

Base Map From
California Utility Surveys
Feb. 14, 2005

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

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Scale In Feet

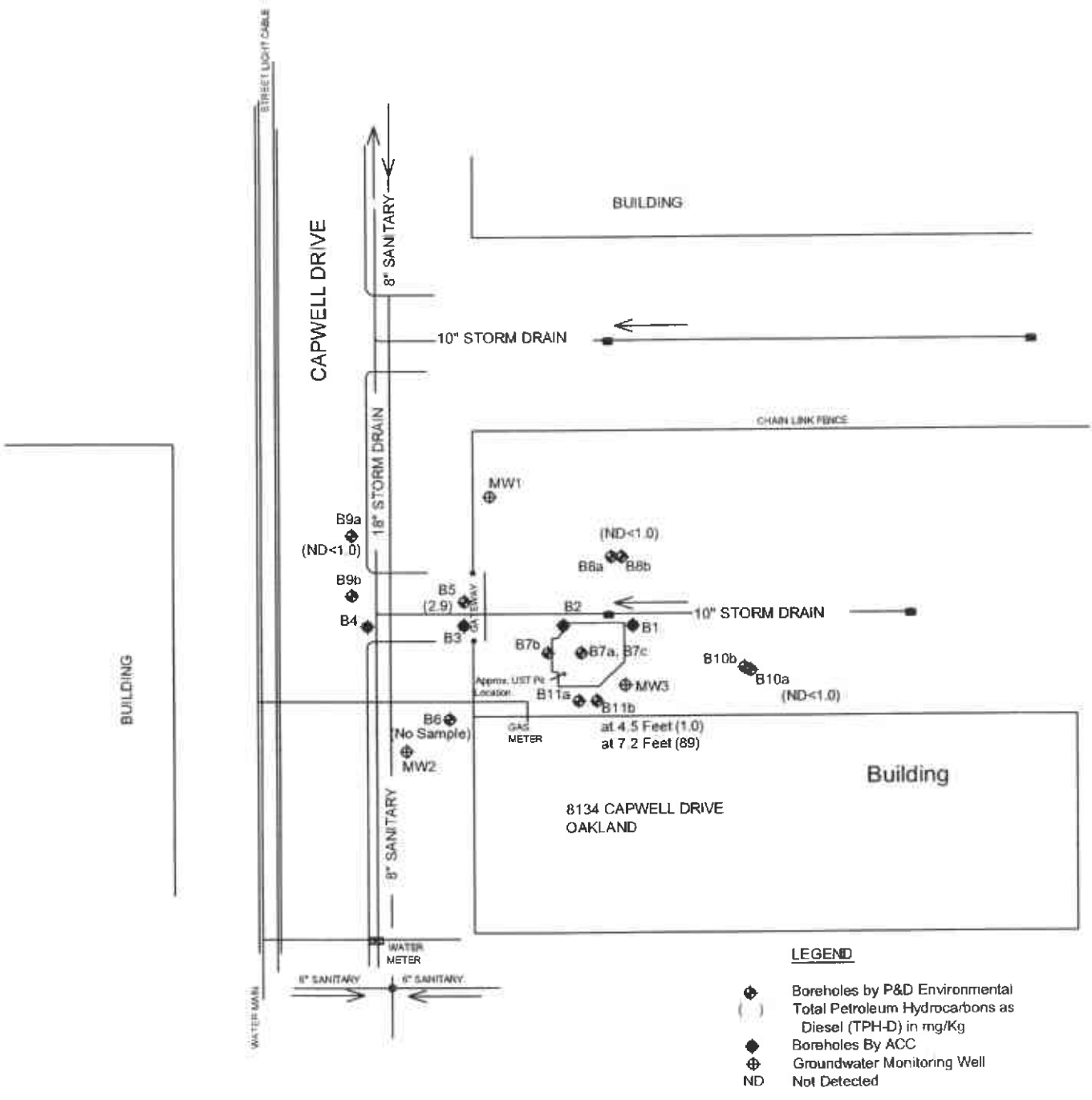

Figure 3
TPH-D in Soil at 4.5 Feet Below Ground Surface
8134 Capwell Drive
Oakland, California

N

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California Utility Surveys
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Oakland, CA 94610
(510) 658-6916

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Scale In Feet

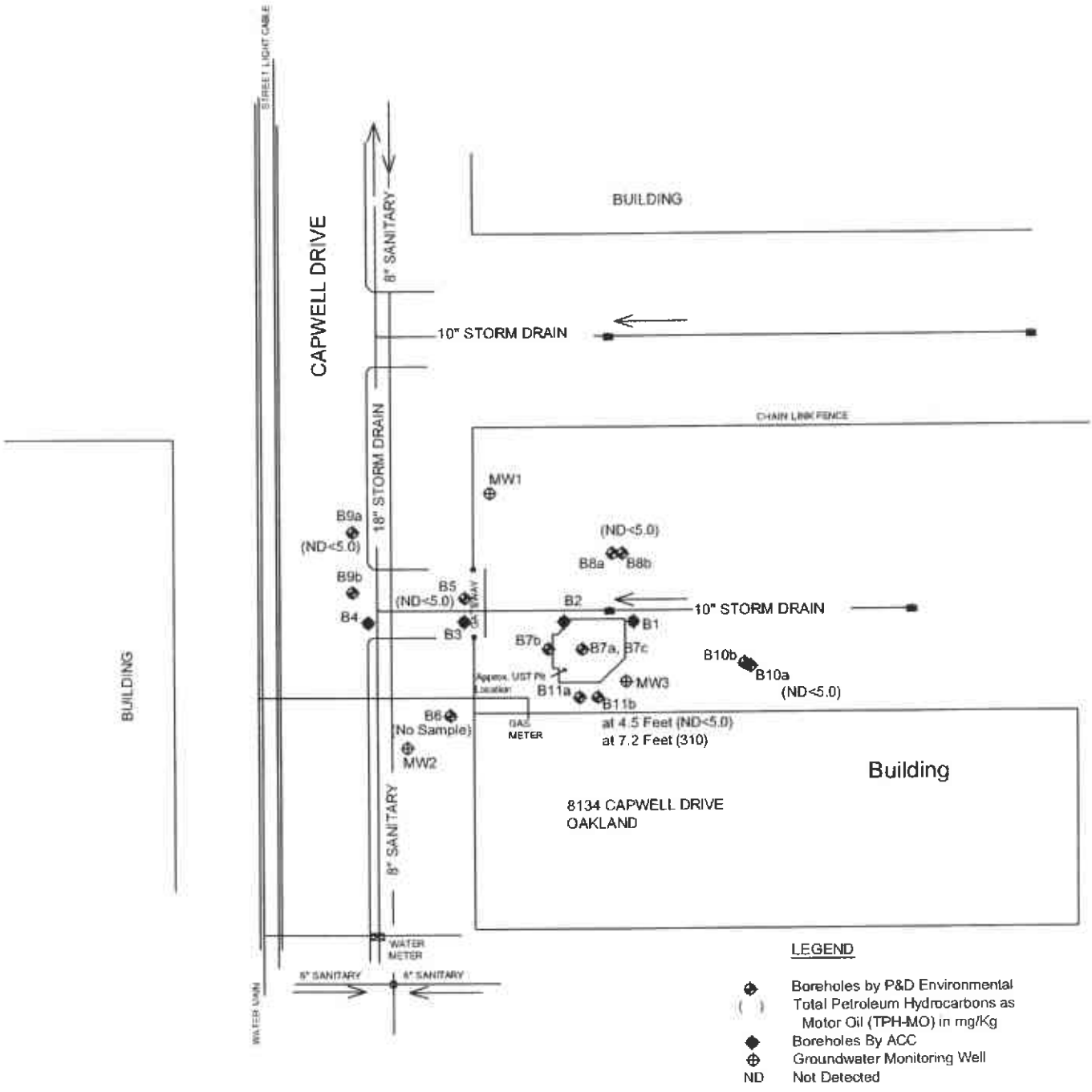

Figure 4
TPH-MO in Soil at 4.5 Feet Below Ground Surface
8134 Capwell Drive
Oakland, California

N

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California Utility Surveys
Feb. 14, 2005

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Scale In Feet

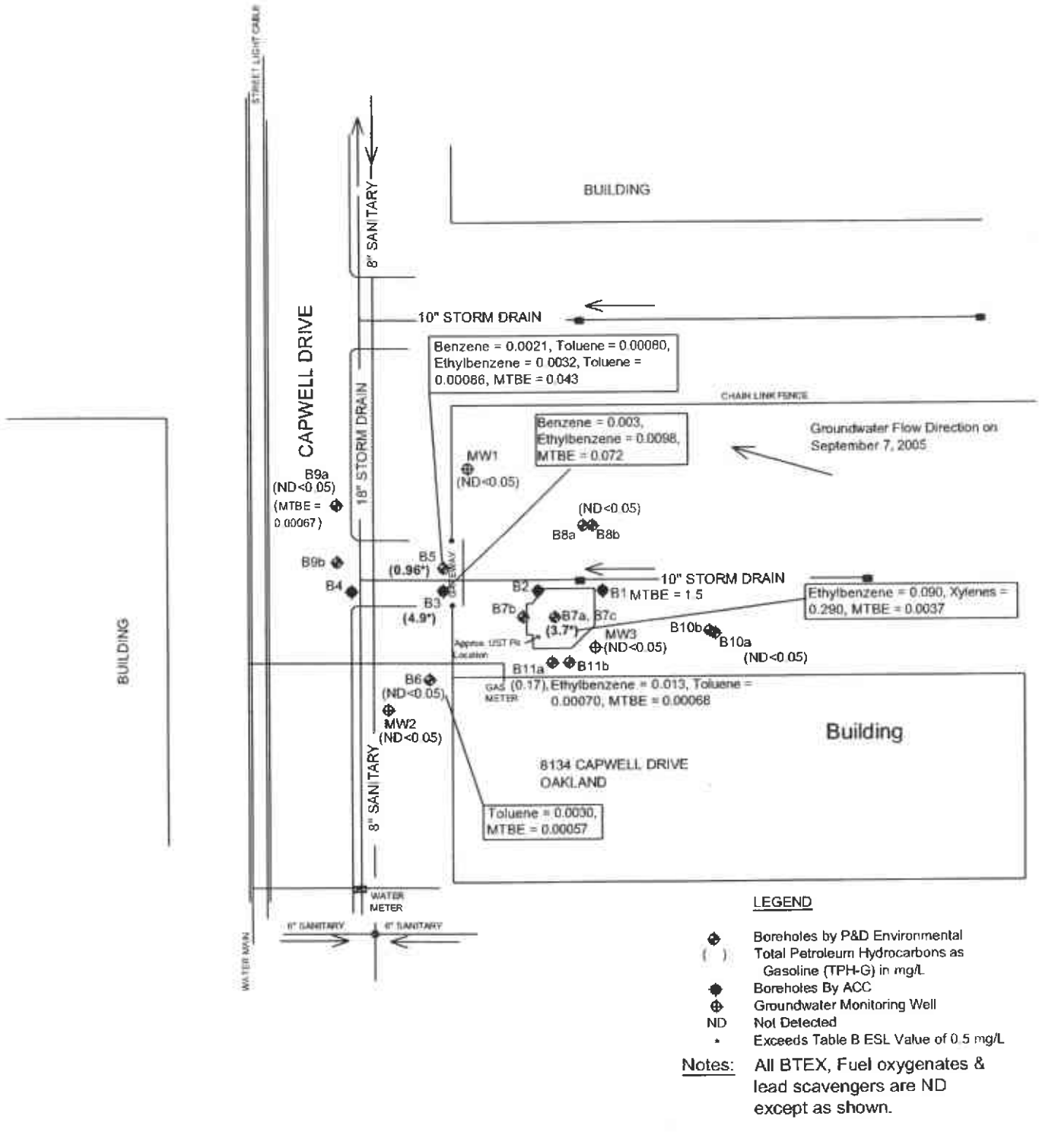

Figure 5
TPH-G in Shallow Groundwater at 8 Feet Below Ground Surface
8134 Capwell Drive
Oakland, California

N

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California Utility Surveys
Feb. 14, 2005

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Oakland, CA 94610
(510) 658-6916

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Scale In Feet

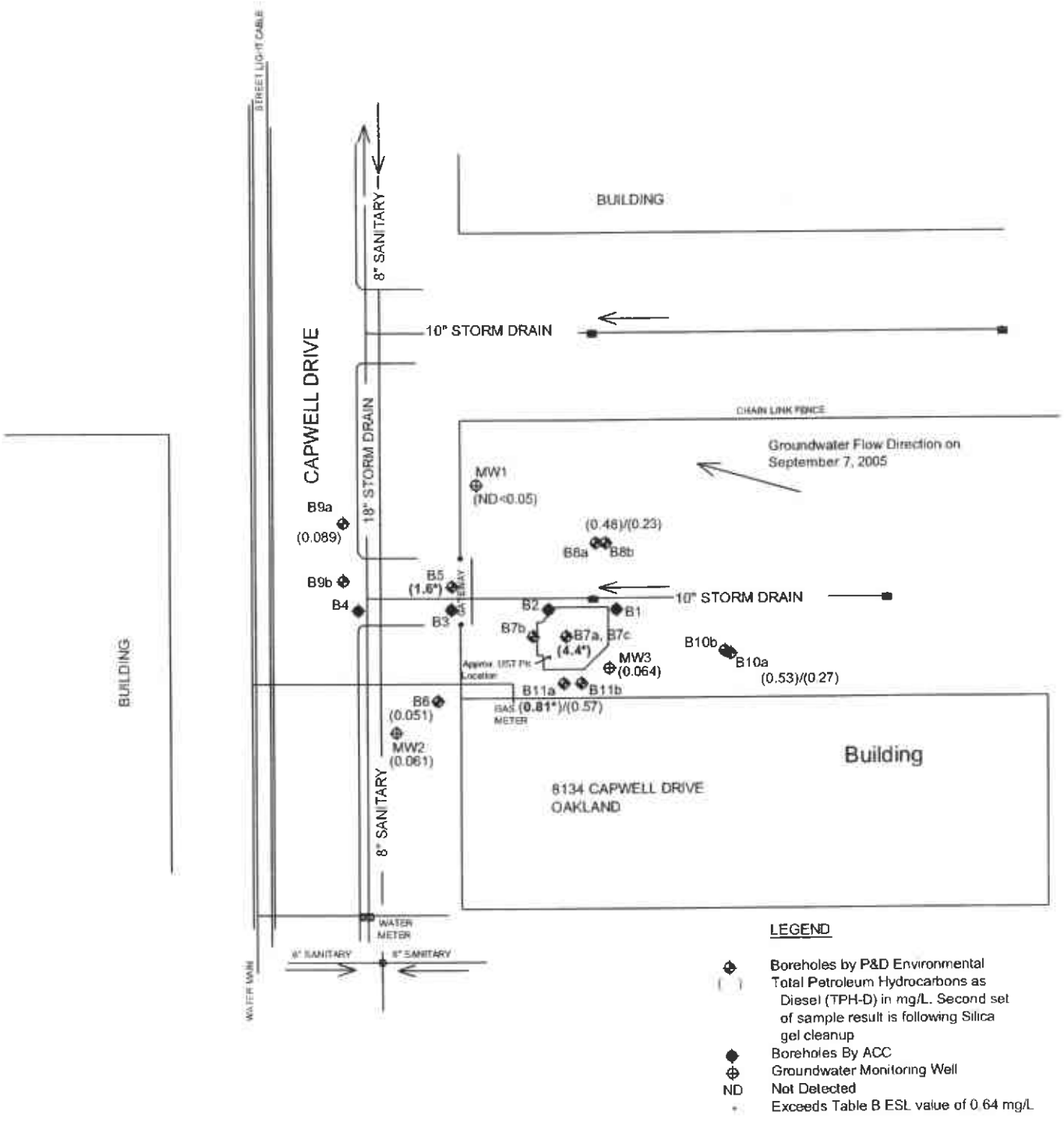

Figure 6
TPH-D in Shallow Groundwater at 8 Feet Below Ground Surface
8134 Capwell Drive
Oakland, California

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California Utility Surveys
Feb. 14, 2005

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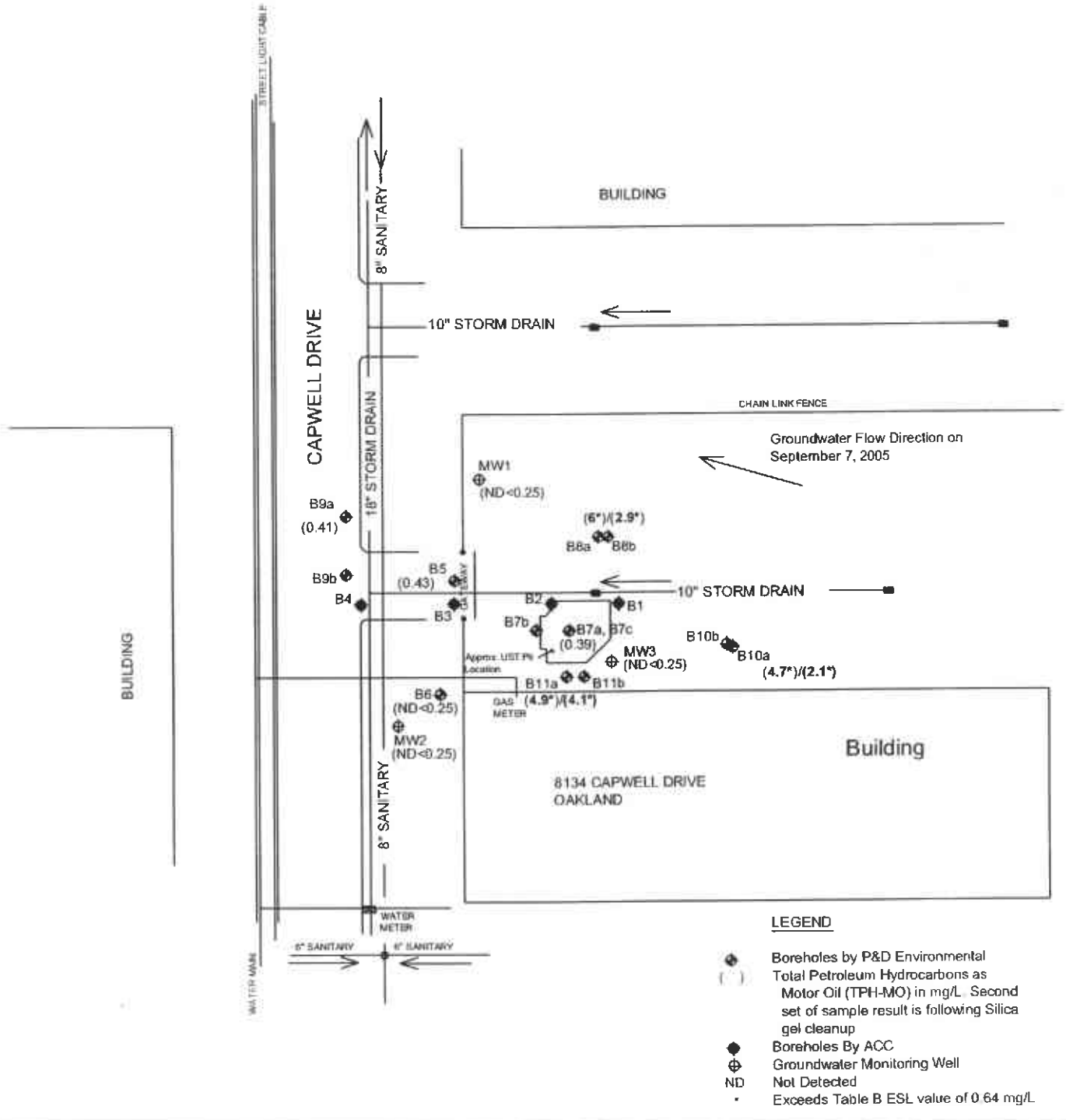

Figure 7
TPH-MO in Shallow Groundwater at 8 Feet Below Ground Surface
8134 Capwell Drive
Oakland, California

N

Base Map From
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Feb. 14, 2005

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Scale In Feet

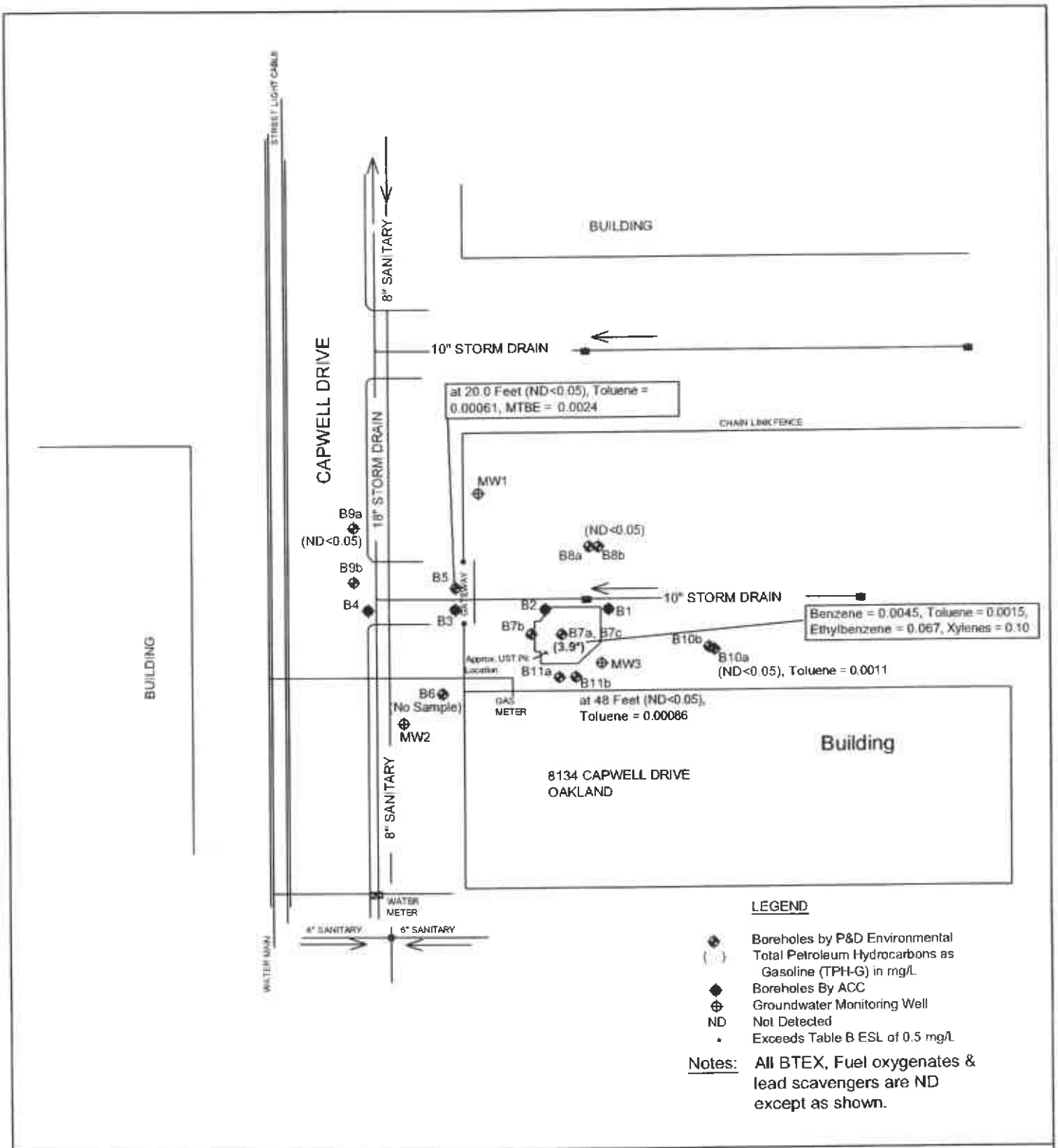

Figure 8
TPH-G in Deeper Groundwater at 26-28 Feet Below Ground Surface
8134 Capwell Drive
Oakland, California

N

Base Map From
California Utility Surveys
Feb. 14, 2005

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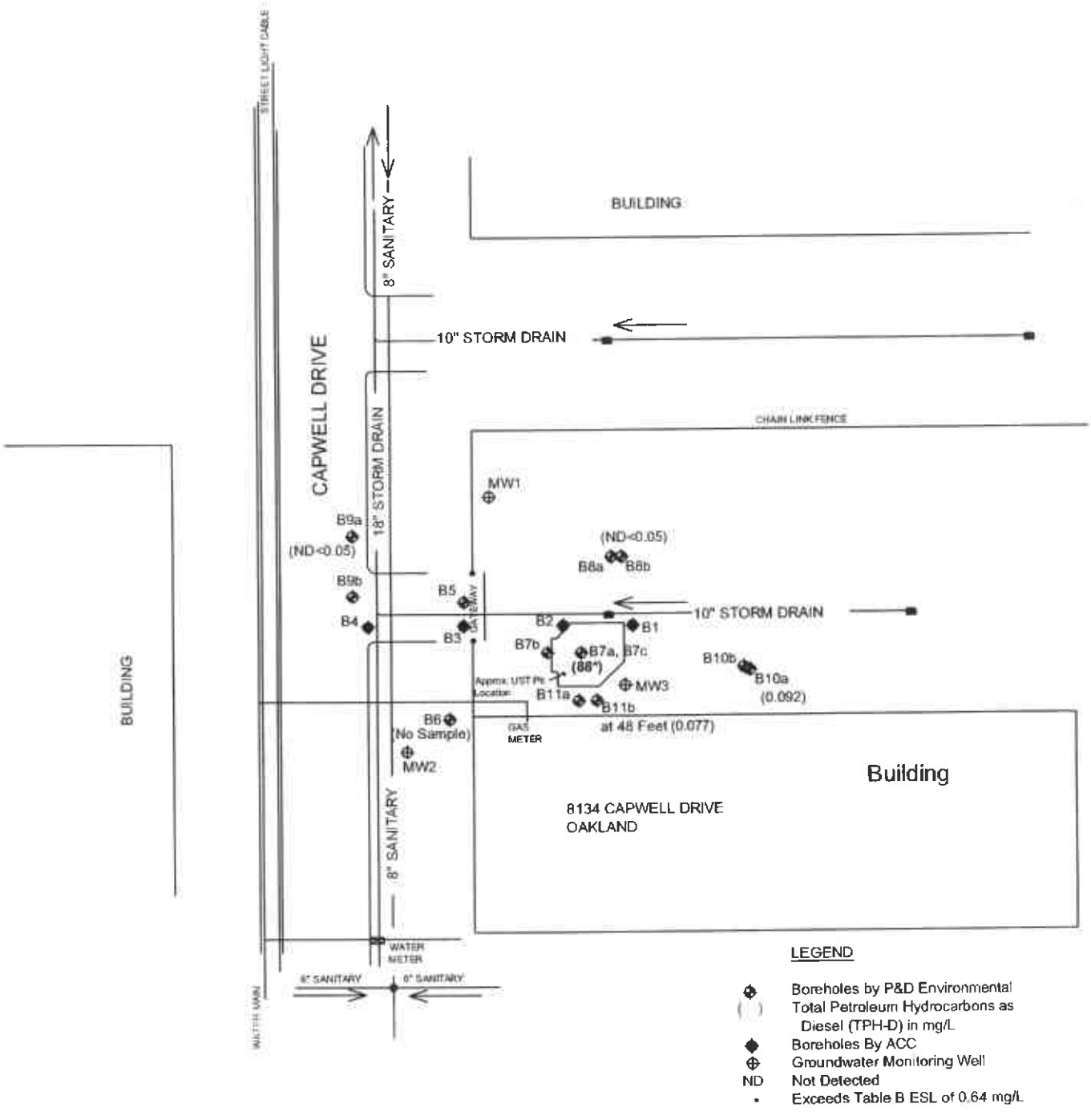

Figure 9
TPH-D in Deeper Groundwater at 26-28 Feet Below Ground Surface
8134 Capwell Drive
Oakland, California

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Base Map From
California Utility Surveys
Feb. 14, 2005

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Oakland, CA 94610
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Scale In Feet

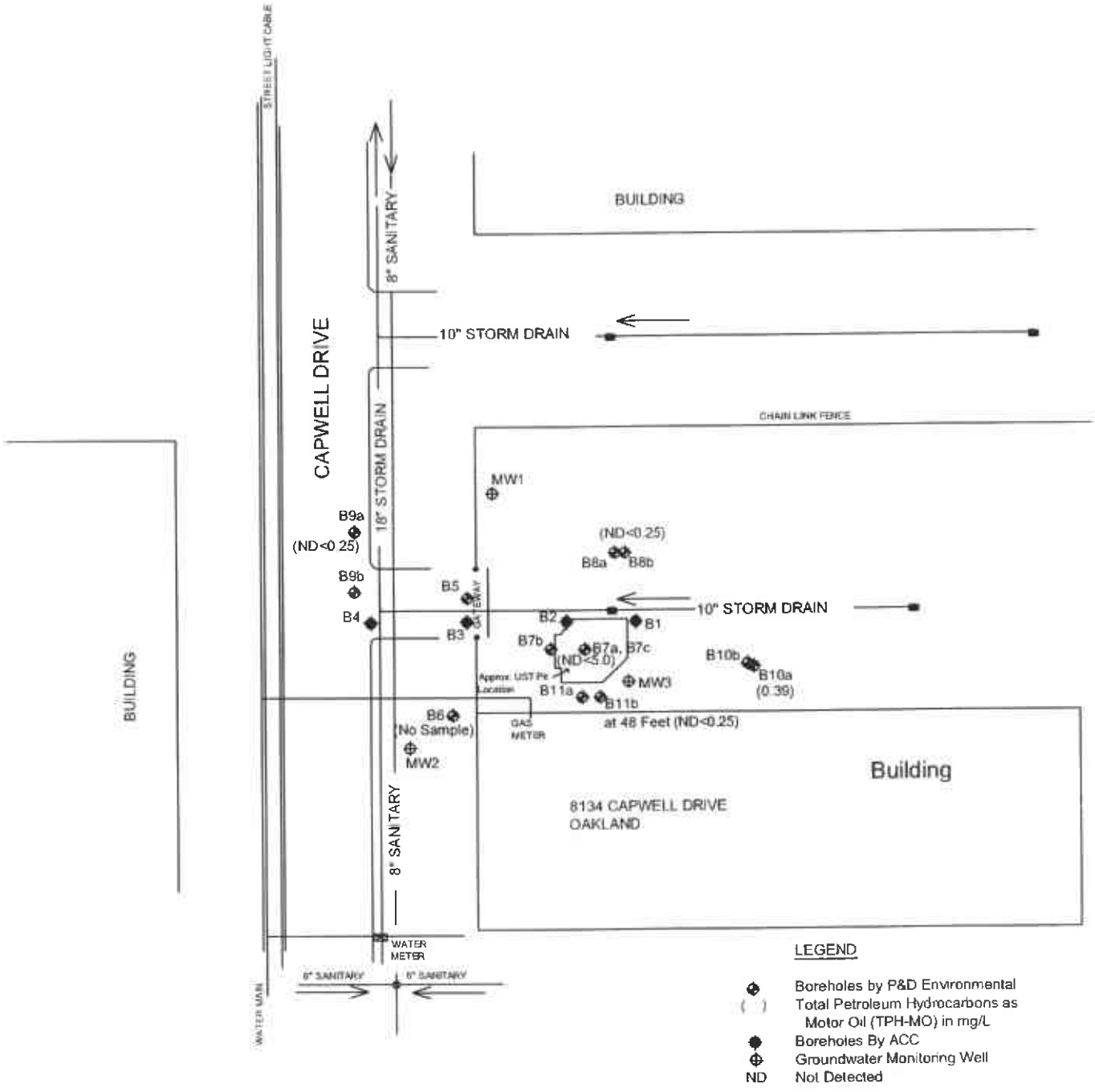

Figure 10
TPH-MO in Deeper Groundwater at 26-28 Feet Below Ground Surface
8134 Capwell Drive
Oakland, California

N

Base Map From
California Utility Surveys
Feb. 14, 2005

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Oakland, CA 94610
(510) 658-6916

0 10 20 30 40 50
Scale In Feet

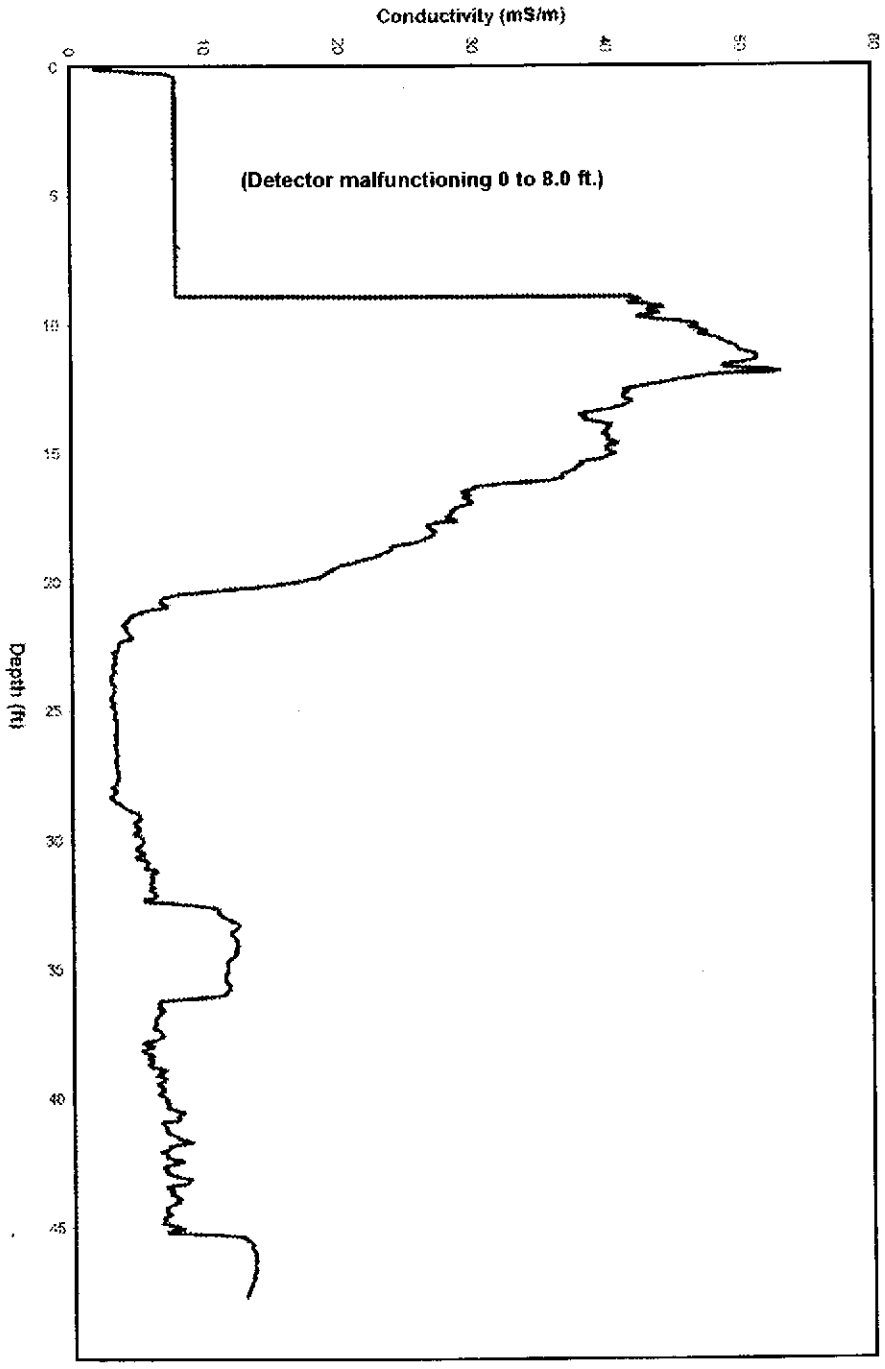
P&D ENVIRONMENTAL, INC.

BORING NO.: B8a	PROJECT NO.: 0363	PROJECT NAME: T.D. Rowe, Oakland		
BORING LOCATION: North of UST Pit		ELEVATION AND DATUM: NONE		
DRILLING AGENCY: Vironex, Inc		DRILLER: Kurt and Kyle	DATE & TIME STARTED: 9/6/05	DATE & TIME FINISHED: 9/6/05
DRILLING EQUIPMENT: Geoprobe 6610 DT Track Rig				
COMPLETION DEPTH: 10.0 FEET		BEDROCK DEPTH: None encountered	LOGGED BY: WRW	CHECKED BY:
FIRST WATER DEPTH: 5.0 FEET		NO. OF SAMPLES: 1 soil, 1 water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	REMARKS
0	2 in. Asphalt Est. 6 in. Baserock 8 in. to 2.4 ft. Medium brown silty sand (FILL); loose, dry. No Petroleum Hydrocarbon (PHC) odor.	FILL	No Well Constructed		0	Borehole continuously cored using a 5-ft. long 2.5-in. O.D. Geoprobe Macrocore barrel sampler. Samples collected in 5 ft. intervals. The sampler was lined with 5-ft. long, 2-in. O.D. cellulose acetate tubes. First water encountered at approx. 5.0 ft. during drilling. Water measured at 3.9 ft., 10:30am approx. 5 min. after completion of drilling.
	2.4 to 3.8 ft. Grayish black gravelly silt (FILL); medium stiff, slightly moist. No PHC odor.				0	
5	3.8 to 5.0 ft. Gray sandy clay (CL); soft, moist. Orange mottling. No PHC odor.	< CL			0	
	5.0 to est. 8.0 ft. Dark gray sand (SP); loose, saturated. No PHC odor.	SP			0	
	8.0 to 10.0 ft. Dark gray gravelly sand (SW); gravel < 3/4 in. diam., loose, saturated. No PHC odor, but slight sulfurous odor.	SW			0	
10						Borehole terminated at 10.0-ft. depth, 9/6/05. 1-in. diam. PVC casing set in borehole and water sample collected using polyethylene tubing and a stainless steel foot valve. No PHC sheen or odor on water sample. Borehole tremie grouted with neat cement and an asphalt cold-patch surface seal, 9/6/05.
15						
20						
25						
30						

P&D ENVIRONMENTAL, INC.

BORING NO.: B8EC	PROJECT NO.: 0363	PROJECT NAME: T.D. Rowe, Oakland		
BORING LOCATION:	Northwest of former UST Pit	ELEVATION AND DATUM: NONE		
DRILLING AGENCY:	Vironex, Inc	DRILLER: Kurt and Kyle	DATE & TIME STARTED: 9/7/05	DATE & TIME FINISHED: 9/7/05
DRILLING EQUIPMENT:	Geoprobe 6610 DT Track Rig			
COMPLETION DEPTH: 48.0	FEET	BEDROCK DEPTH: None encountered	LOGGED BY: WRW	CHECKED BY:
FIRST WATER DEPTH: Unknown	FEET	NO. OF SAMPLES: None		



P&D ENVIRONMENTAL, INC.

BORING NO.: B8b	PROJECT NO.: 0363	PROJECT NAME: T.D. Rowe, Oakland	
BORING LOCATION: Northwest of former UST Pit		ELEVATION AND DATUM: NONE	
DRILLING AGENCY: Vironex, Inc		DRILLER: Kurt and Kyle	DATE & TIME STARTED: 9/7/05 / DATE & TIME FINISHED: 9/7/05
DRILLING EQUIPMENT: Geoprobe 6610 DT Track Rig			
COMPLETION DEPTH: 28.0 FEET		BEDROCK DEPTH: None encountered	LOGGED BY: WRW / CHECKED BY:
FIRST WATER DEPTH: 19.5 FEET		NO. OF SAMPLES: 1 water	

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	REMARKS
5	Hydropunch only.	▼	No Well Constructed			Borehole B8b Hydro-punched to 28.0 ft. No water present inside Hydropunch rods, 2:50pm. Rods withdrawn to 24.0 ft. to expose screened inter-val. Water measured at 19.5 ft., 3:00pm, in Hydropunch set from 24.0 to 28.0 ft. Water sample collected using Hydropunch with polyethylene tubing and a stainless steel foot valve.
10						
15						
20						
25						Borehole grouted from bottom up through hydro-punch rods with neat ce-ment and an asphalt cold-patch surface seal, 9/7/05.
30						

P&D ENVIRONMENTAL, INC.

BORING NO.: B9a	PROJECT NO.: 0363	PROJECT NAME: T.D. Rowe, Oakland		
BORING LOCATION:	Edge of Street, SW of Pit	ELEVATION AND DATUM: NONE		
DRILLING AGENCY:	Vironex, Inc	DRILLER: Kurt and Kyle	DATE & TIME STARTED: 9/6/05	DATE & TIME FINISHED: 9/6/05
DRILLING EQUIPMENT:	Geoprobe 6610 DT Track Rig			
COMPLETION DEPTH: 10.0	FEET	BEDROCK DEPTH: None encountered	LOGGED BY: WRW	CHECKED BY:
FIRST WATER DEPTH: 8.5	FEET	NO. OF SAMPLES: 1 soil, 1 water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	REMARKS
	3 in. Asphalt Est. 6 in. Baserock 8 in. to 3.0 ft. Reddish brown silty gravel (FILL); dry. No Petroleum Hydrocarbon (PHC) odor.	FILL	No Well Constructed		0	Borehole continuously cored using a 5-ft. long 2.5-in. O.D. Geoprobe Macrocore barrel sampler. Samples collected in 5-ft. intervals. The sampler was lined with 5-ft. long, 2-in. O.D. cellulose acetate tubes. First water encountered at 8.5 ft. during drilling. Water measured at 4.9 ft. approx. 11:00 am approx. 5 min. after completion of drilling.
	3.0 to 8.5 ft. Gray silty clay (CL); medium stiff, moist. Orange mottling. No PHC odor.	CL			0	
5					0	
					0	
	8.5 to 10.0 ft. gray sand (SW); loose, saturated. No PHC odor.	SW			0	
10						Borehole terminated at 10.0-ft. depth, 9/6/05. 1-in. diam. PVC casing set in borehole and water sample collected using polyethylene tubing and a stainless steel foot valve. No PHC sheen or odor on water sample. Borehole termie grouted with neat cement and an asphalt cold-patch surface seal, 9/6/05.
15						
20						
25						
30						

P&D ENVIRONMENTAL, INC.

BORING NO.: B9b	PROJECT NO.: 0363	PROJECT NAME: T.D. Rowe, Oakland		
BORING LOCATION: Edge of Street, SW of Pit		ELEVATION AND DATUM: NONE		
DRILLING AGENCY: Vironex, Inc		DRILLER: Kurt and Kyle	DATE & TIME STARTED: 9/7/05	DATE & TIME FINISHED: 9/7/05
DRILLING EQUIPMENT: Geoprobe 6610 DT Track Rig				
COMPLETION DEPTH: 26.0 FEET		BEDROCK DEPTH: None encountered	LOGGED BY: WRW	CHECKED BY:
FIRST WATER DEPTH: 4.9 FEET		NO. OF SAMPLES: 1 water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	REMARKS
5	Hydropunch only.	▼	No Well Constructed			Borehole B9b Hydro-punched to 26.0 ft. No water present inside Hydropunch rods, 3:30pm. Rods withdrawn to 22.0 ft. to expose screened inter-val. Water measured at 4.9 ft., 3:40pm, in Hydropunch set from 22.0 to 26.0 ft. Water sample collected using Hydropunch with polyethylene tubing and a stainless steel foot valve.
10						
15						
20						
25						Borehole grouted from bottom up through Hydro-punch rods with neat ce-ment and an asphalt cold-patch surface seal, 9/7/05.
30						

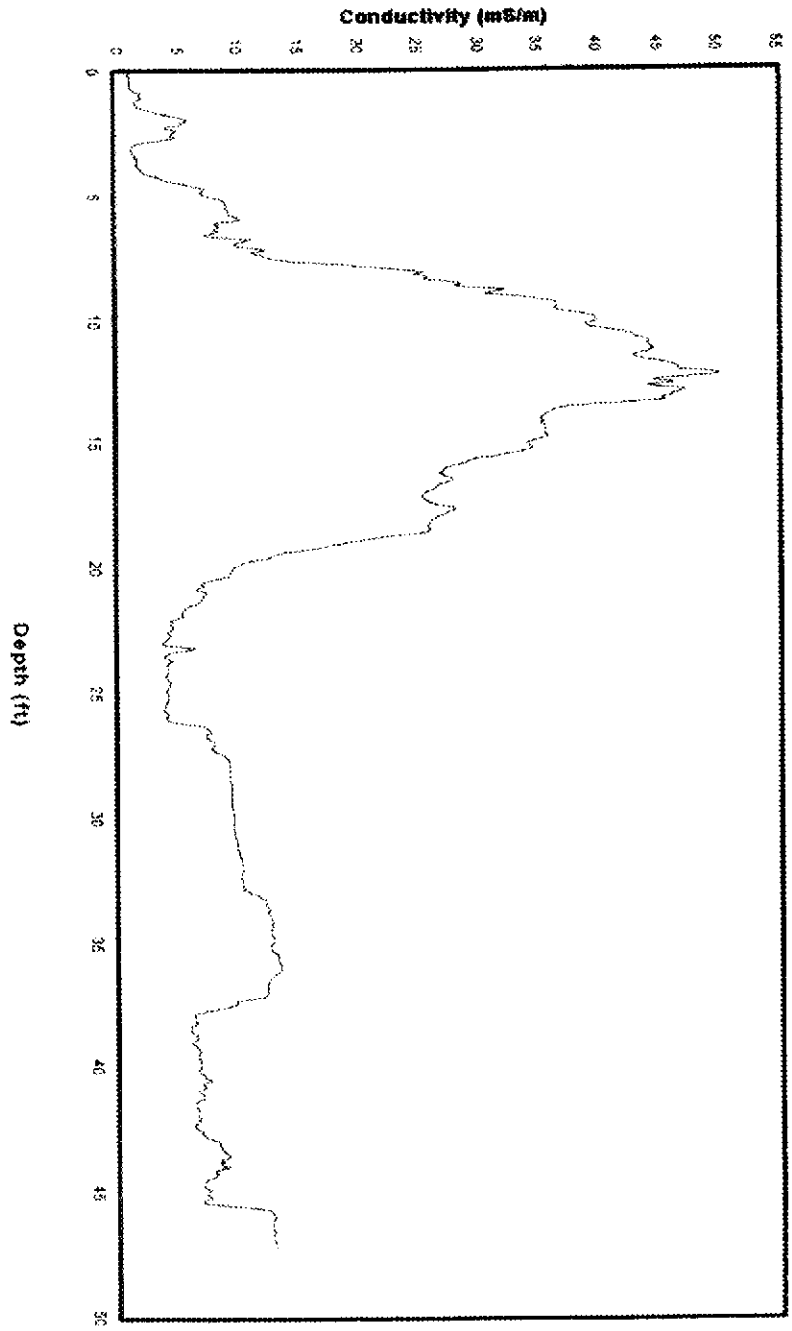
P&D ENVIRONMENTAL, INC.

BORING NO.: B10a	PROJECT NO.: 0363	PROJECT NAME: T.D. Rowe, Oakland		
BORING LOCATION: Northeast of former UST Pit		ELEVATION AND DATUM: NONE		
DRILLING AGENCY: Vironex, Inc		DRILLER: Kurt and Kyle	DATE & TIME STARTED: 9/6/05	DATE & TIME FINISHED: 9/6/05
DRILLING EQUIPMENT: Geoprobe 6610 DT Track Rig				
COMPLETION DEPTH: 10.0 FEET		BEDROCK DEPTH: None encountered	LOGGED BY: WRW	CHECKED BY:
FIRST WATER DEPTH: 8.9 FEET		NO. OF SAMPLES: 1 soil, 1 water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	REMARKS
	2 in. Asphalt Est. 6 in. Baserock 8 in. to 1.7 ft. Light brown gravelly sand (FILL); loose, moist. No Petroleum Hydrocarbon (PHC) odor.	FILL	No Well Constructed		0	Borehole continuously cored using a 5-ft. long 2.5-in. O.D. Geoprobe Macrocore barrel sampler. Samples collected in 5-ft. intervals. The sampler was lined with 5-ft. long, 2-in. O.D. cellulose acetate tubes. First water encountered at 8.9 ft. during drilling. Water measured at 4.0 ft., 11:15am approx. 5 min. after completion of drilling.
	1.7 to 3.4 ft. Gray silty clay (CL); medium stiff, moist. No PHC odor.	CL			0	
5	3.4 to 8.9 ft. Gray sandy gravelly clay (CL); medium stiff to soft, moist. Orange mottling. No PHC odor.	CL			0	
					0	
	8.9 to 9.9 ft. Gray and light gray gravelly sand (SW); loose, saturated. No PHC odor.	SW			0	
10	9.9 to 10.0 ft. Gray sandy silt (ML); loose, saturated. No PHC odor.		ML			Borehole terminated at 10.0-ft. depth, 9/6/05. 1-in. diam. PVC casing set in borehole and water sample collected using polyethylene tubing and a stainless steel foot valve. No PHC sheen or odor on water sample. Borehole tremie grouted with neat cement and an asphalt cold-patch surface seal, 9/6/05.
15						
20						
25						
30						

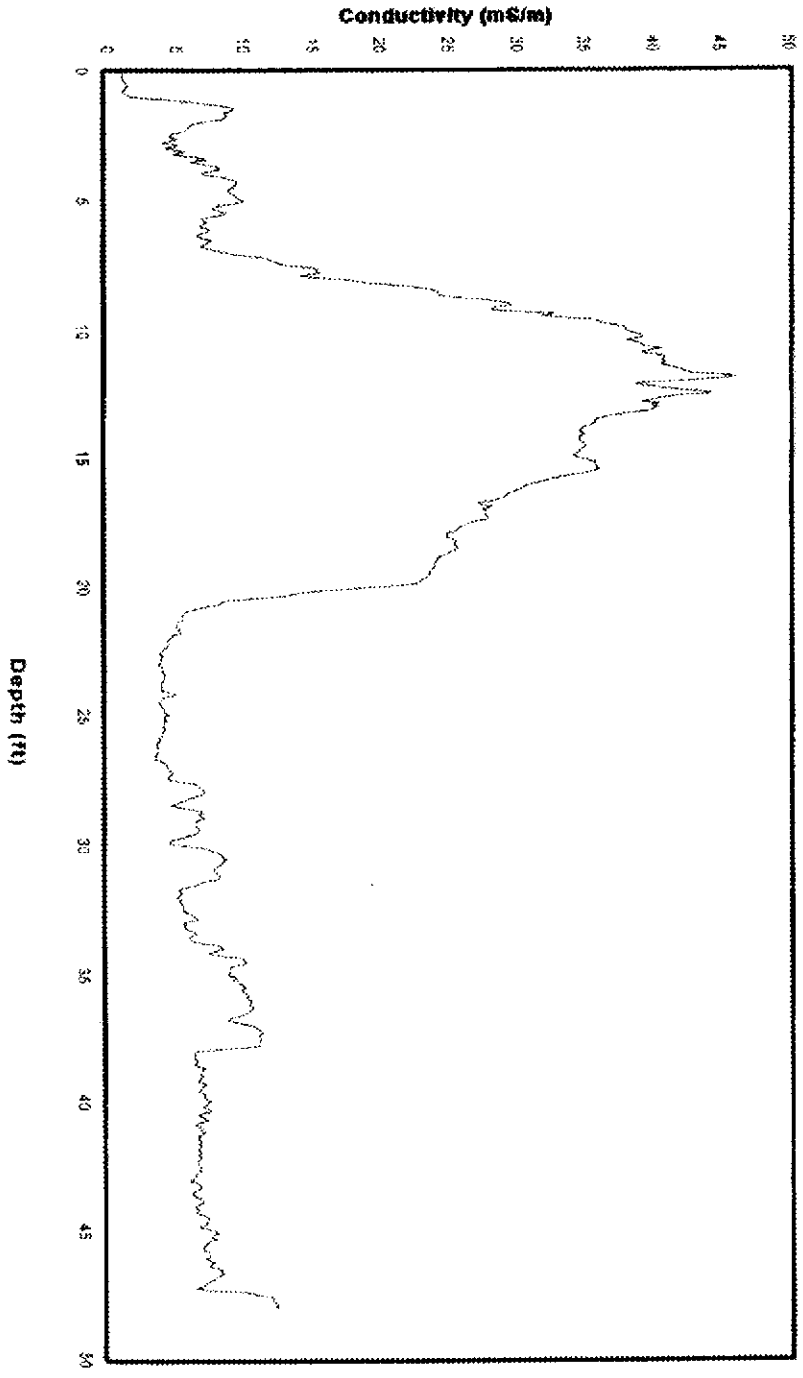
P&D ENVIRONMENTAL, INC.

BORING NO.: B9EC	PROJECT NO.: 0363	PROJECT NAME: T.D. Rowe, Oakland		
BORING LOCATION:	Edge of Street, SW of Pit	ELEVATION AND DATUM: NONE		
DRILLING AGENCY:	Vironex, Inc	DRILLER: Kurt and Kyle	DATE & TIME STARTED: 9/7/05	DATE & TIME FINISHED: 9/7/05
DRILLING EQUIPMENT:	Geoprobe 6610 DT Track Rig			
COMPLETION DEPTH:	48.0 FEET	BEDROCK DEPTH: None encountered	LOGGED BY: WRW	CHECKED BY:
FIRST WATER DEPTH:	Unknown FEET	NO. OF SAMPLES: None		



P&D ENVIRONMENTAL, INC.

BORING NO.: B10EC	PROJECT NO.: 0363	PROJECT NAME: T.D. Rowe, Oakland		
BORING LOCATION:	Northeast of former UST Pit	ELEVATION AND DATUM: NONE		
DRILLING AGENCY:	Vironex, Inc	DRILLER: Kurt and Kyle	DATE & TIME STARTED: 9/7/05	DATE & TIME FINISHED: 9/7/05
DRILLING EQUIPMENT:	Geoprobe 6610 DT Track Rig			
COMPLETION DEPTH: 48.0 FEET		BEDROCK DEPTH: None encountered	LOGGED BY: WRW	CHECKED BY:
FIRST WATER DEPTH: Unknown FEET		NO. OF SAMPLES: None		



P&D ENVIRONMENTAL, INC.

BORING NO.: B10b	PROJECT NO.: 0363	PROJECT NAME: T.D. Rowe, Oakland		
BORING LOCATION:	Northeast of former UST Pit	ELEVATION AND DATUM: NONE		
DRILLING AGENCY:	Vironex, Inc	DRILLER: Kurt and Kyle	DATE & TIME STARTED: 9/7/05	DATE & TIME FINISHED: 9/7/05
DRILLING EQUIPMENT:	Geoprobe 6610 DT Track Rig			
COMPLETION DEPTH: 27.0	FEET	BEDROCK DEPTH: None encountered	LOGGED BY: WRW	CHECKED BY:
FIRST WATER DEPTH: 15.5	FEET	NO. OF SAMPLES: 1 water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	REMARKS
5 10 15 20 25 30	Hydropunch only.	▼	No Well Constructed			Borehole B10b Hydro-punched to 27.0 ft. No water present inside Hydropunch rods, 3:55pm. Rods withdrawn to 23.0 ft. to expose screened inter-val. Water measured at 15.5 ft., 4:00pm, in Hydropunch set from 23.0 to 27.0 ft. Water sample collected using Hydropunch with polyethylene tubing and a stainless steel foot valve. Borehole grouted from bottom up through Hydro-punch rods with neat ce-ment and an asphalt cold-patch surface seal, 9/7/05.

P&D ENVIRONMENTAL, INC.

BORING NO.: B11a	PROJECT NO.: 0363	PROJECT NAME: T.D. Rowe, Oakland	
BORING LOCATION: Between building and former UST Pit		ELEVATION AND DATUM: NONE	
DRILLING AGENCY: Vironex, Inc	DRILLER: Kurt and Kyle	DATE & TIME STARTED: 9/6/05	DATE & TIME FINISHED: 9/6/05
DRILLING EQUIPMENT: Geoprobe 6610 DT Track Rig			
COMPLETION DEPTH: 10.0 FEET	BEDROCK DEPTH: None encountered	LOGGED BY: WRW	CHECKED BY:
FIRST WATER DEPTH: 7.0 FEET	NO. OF SAMPLES: 2 soil, 1 water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	REMARKS
	2 in. Asphalt Est. 6 in. Baserock 8 in. to 3.7 ft. White and brown silty gravelly sand (FILL); gravel < 1 in. diam., loose, slightly moist. No PHC odor.	FILL	No Well Constructed		0	Borehole continuously cored using a 5-ft. long 2.5-in. O.D. Geoprobe Macrocore barrel sampler. Samples collected in 5-ft. intervals. The sampler was lined with 5-ft. long, 2-in. O.D. cellulose acetate tubes. First water encountered at 7.0 ft. during drilling. Water measured at 3.9 ft., 11:55am approx. 5 min. after completion of drilling.
	3.7 to 7.0 ft. Brown and gray sand gravelly clay (CL); gravel < 1 in. diam., very stiff, moist. Orange mottling. No PHC odor from 3.7 to 6.5 ft. Moderate PHC odor from 6.5 to 7.0 ft.	CL			0	
	7.0 to 10.0 ft. Gray sand (SP); loose, saturated. Strong PHC odor from 7.0 to 8.0 ft. Moderate PHC odor from 8.0 to 10.0 ft.	SP			0	
10					0	
15						Borehole terminated at 10.0-ft. depth. 1 in. diam. PVC casing set in borehole and water sample collected using polyethylene tubing and a stainless steel foot valve. Slight PHC odor but no sheen on water sample. Borehole termie grouted with neat cement and an asphalt cold-patch surface seal, 9/6/05.
20						
25						
30						

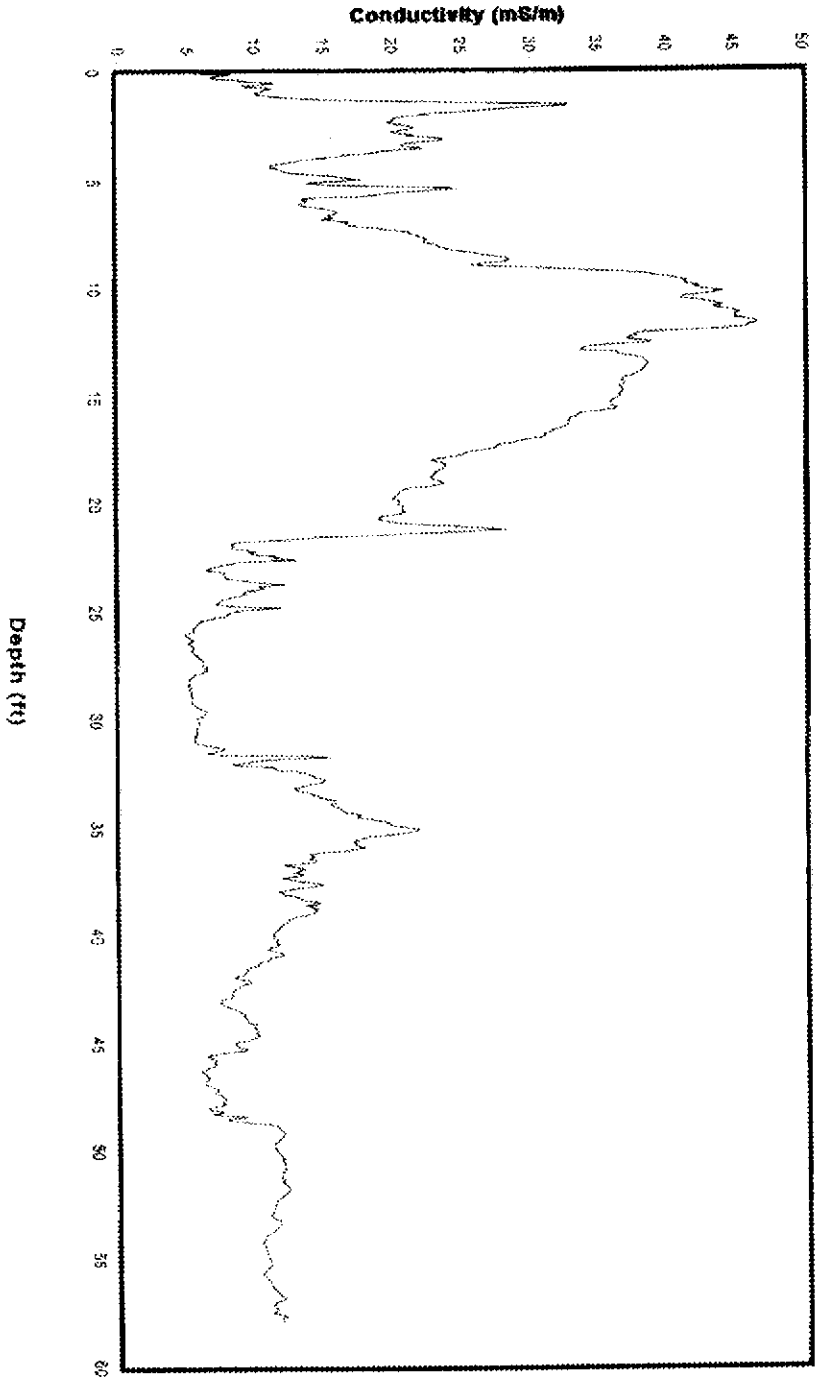
P&D ENVIRONMENTAL, INC.

BORING NO.: B11b	PROJECT NO.: 0363	PROJECT NAME: T.D. Rowe, Oakland			
BORING LOCATION:	Between building and former UST Pit	ELEVATION AND DATUM: NONE			
DRILLING AGENCY:	Vironex, Inc	DRILLER: Kurt and Kyle	DATE & TIME STARTED: 9/7/05	DATE & TIME FINISHED: 9/7/05	
DRILLING EQUIPMENT:	Geoprobe 6610 DT Track Rig				
COMPLETION DEPTH: 48.0	FEET	BEDROCK DEPTH: None encountered	LOGGED BY: WRW	CHECKED BY:	
FIRST WATER DEPTH: 19.0	FEET	NO. OF SAMPLES: 1 water			

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	REMARKS
10	Hydropunch only.	▼	No Well Constructed			Borehole B11b Hydro-punched to 48.0 ft. No water present inside Hydropunch rods, 4:35pm. Rods withdrawn to 45.0 ft. to expose screened inter-val. Water measured at 19.0 ft., 4:40pm, in Hydropunch set from 45.0 to 48.0 ft. Water sample collected using Hydropunch with polyethylene tubing and a stainless steel foot valve.
20						
30						
40						
50						Borehole grouted from bottom up through Hydro-punch rods with neat ce-ment and an asphalt cold-patch surface seal, 9/7/05.
60						

P&D ENVIRONMENTAL, INC.

BORING NO.: B11EC	PROJECT NO.: 0363	PROJECT NAME: T.D. Rowe, Oakland		
BORING LOCATION:	Between building and former UST Pit	ELEVATION AND DATUM: NONE		
DRILLING AGENCY:	Vironex, Inc	DRILLER: Kurt and Kyle	DATE & TIME STARTED: 9/7/05	DATE & TIME FINISHED: 9/7/05
DRILLING EQUIPMENT:	Geoprobe 6610 DT Track Rig			
COMPLETION DEPTH: 58.0 FEET		BEDROCK DEPTH: None encountered	LOGGED BY: WRW	CHECKED BY:
FIRST WATER DEPTH: Unknown FEET		NO. OF SAMPLES: None		



Laboratory Analytical Reports And Chain of Custody Documentation

McCampbell Analytical, Inc.

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P & D Environmental 55 Santa Clara, Ste.240 Oakland, CA 94610	Client Project ID: #0363; T.D. Rowe, Oakland	Date Sampled: 09/06/05
		Date Received: 09/07/05
	Client Contact: Wilhelm Welzenbach	Date Extracted: 09/07/05
	Client P.O.:	Date Analyzed: 09/08/05

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*

Extraction method: SW5030B Analytical methods: SW8015Cm Work Order: 0509156

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS
001A	B8a-4.5	S	ND	1	84
002A	B9a-4.5	S	ND	1	93
003A	B10a-4.5	S	ND	1	92
004A	B11a-4.5	S	5.6,b,m	1	85
005A	B11a-7.2	S	95,g,m	20	103

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

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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P & D Environmental 55 Santa Clara, Ste.240 Oakland, CA 94610	Client Project ID: #0363; T.D. Rowe, Oakland	Date Sampled: 09/06/05
		Date Received: 09/07/05
	Client Contact: Wilhelm Welzenbach	Date Extracted: 09/07/05
	Client P.O.:	Date Analyzed: 09/08/05-09/10/05

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

Extraction method: SW3550C Analytical methods: SW8015C Work Order: 0509156

Lab ID	Client ID	Matrix	TPH(d)	TPH(mo)	DF	% SS
0509156-001A	B8a-4.5	S	ND	ND	1	103
0509156-002A	B9a-4.5	S	ND	ND	1	105
0509156-003A	B10a-4.5	S	ND	ND	1	105
0509156-004A	B11a-4.5	S	1.0,b	ND	1	103
0509156-005A	B11a-7.2	S	89,g,d,b	310	20	96

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 McCampbell 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; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.

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P & D Environmental 55 Santa Clara, Ste.240 Oakland, CA 94610	Client Project ID: #0363; T.D. Rowe, Oakland	Date Sampled: 09/06/05
		Date Received: 09/07/05
	Client Contact: Wilhelm Welzenbach	Date Extracted: 09/07/05
	Client P.O.:	Date Analyzed: 09/10/05

Oxygenates and BTEX by GC/MS*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0509156

Lab ID	0509156-001A	0509156-002A	0509156-003A	0509156-004A	Reporting Limit for DF =1	
Client ID	B8a-4.5	B9a-4.5	B10a-4.5	B11a-4.5		
Matrix	S	S	S	S		
DF	1	1	1	1	S	W
Compound	**Concentration**				mg/kg	ug/L
tert-Amyl methyl ether (TAME)	ND	ND	ND	ND	0.005	NA
Benzene	ND	ND	ND	ND	0.005	NA
t-Butyl alcohol (TBA)	ND	ND	ND	ND	0.05	NA
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	0.005	NA
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND	ND	0.005	NA
Diisopropyl ether (DIPE)	ND	ND	ND	ND	0.005	NA
Ethylbenzene	ND	ND	ND	0.026	0.005	NA
Ethyl tert-butyl ether (ETBE)	ND	ND	ND	ND	0.005	NA
Methyl-t-butyl ether (MTBE)	ND	ND	ND	ND	0.005	NA
Toluene	ND	ND	ND	ND	0.005	NA
Xylenes	ND	ND	ND	ND	0.005	NA
Surrogate Recoveries (%)						
%SS:	105	104	104	99.2		
%SS1:	87.4	83.2	86.2	82.4		
%SS2:	101	101	99	96		
Comments						

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

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

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P & D Environmental 55 Santa Clara, Ste.240 Oakland, CA 94610	Client Project ID: #0363; T.D. Rowe, Oakland	Date Sampled: 09/06/05
		Date Received: 09/07/05
	Client Contact: Wilhelm Welzenbach	Date Extracted: 09/07/05
	Client P.O.:	Date Analyzed: 09/10/05

Oxygenates and BTEX by GC/MS*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0509156

					Reporting Limit for DF =1	
Lab ID	0509156-005A					
Client ID	B11a-7.2					
Matrix	S					
DF	2				S	W
Compound	**Concentration**				mg/kg	ug/L
tert-Amyl methyl ether (TAME)	ND<0.010				0.005	NA
Benzene	ND<0.010				0.005	NA
t-Butyl alcohol (TBA)	ND<0.10				0.05	NA
1,2-Dibromoethane (EDB)	ND<0.010				0.005	NA
1,2-Dichloroethane (1,2-DCA)	ND<0.010				0.005	NA
Diisopropyl ether (DIPE)	ND<0.010				0.005	NA
Ethylbenzene	0.12				0.005	NA
Ethyl tert-butyl ether (ETBE)	ND<0.010				0.005	NA
Methyl-t-butyl ether (MTBE)	ND<0.010				0.005	NA
Toluene	ND<0.010				0.005	NA
Xylenes	ND<0.010				0.005	NA
Surrogate Recoveries (%)						
%SS:	103					
%SS1:	80.1					
%SS2:	96.4					
Comments						

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

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder: 0509156

EPA Method: SW8021B/8015Cm **Extraction: SW5030B** **BatchID: 17905** **Spiked Sample ID: 0509169-003A**

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	LCS / LCSD
TPH(btex)£	ND	0.60	111	112	1.35	111	111	0	70 - 130	70 - 130
MTBE	ND	0.10	93.5	95.7	2.41	102	103	1.24	70 - 130	70 - 130
Benzene	ND	0.10	94.4	97.6	3.43	99.2	99.4	0.230	70 - 130	70 - 130
Toluene	ND	0.10	94.5	97.8	3.38	99.5	100	0.694	70 - 130	70 - 130
Ethylbenzene	ND	0.10	99.3	102	2.91	103	103	0	70 - 130	70 - 130
Xylenes	ND	0.30	100	103	3.28	103	103	0	70 - 130	70 - 130
%SS:	97	0.10	105	107	1.89	110	112	1.80	70 - 130	70 - 130

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

NONE

BATCH 17905 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0509156-001A	9/06/05	9/07/05	9/08/05 4:37 AM	0509156-002A	9/06/05	9/07/05	9/08/05 6:36 AM
0509156-003A	9/06/05	9/07/05	9/08/05 4:07 AM	0509156-004A	9/06/05	9/07/05	9/08/05 5:57 PM
0509156-005A	9/06/05	9/07/05	9/08/05 2:08 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.

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

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

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder: 0509156

EPA Method: SW8015C	Extraction: SW3550C			BatchID: 17904		Spiked Sample ID: 0509157-001A				
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	LCS / LCSD
TPH(d)	ND	20	104	105	1.07	102	102	0	70 - 130	70 - 130
%SS:	98	50	93	94	0.993	93	93	0	70 - 130	70 - 130

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

NONE

BATCH 17904 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0509156-001A	9/06/05	9/07/05	9/09/05 1:02 AM	0509156-002A	9/06/05	9/07/05	9/08/05 11:54 PM
0509156-003A	9/06/05	9/07/05	9/09/05 6:44 AM	0509156-004A	9/06/05	9/07/05	9/09/05 7:52 AM
0509156-005A	9/06/05	9/07/05	9/10/05 7:27 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.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder: 0509156

EPA Method: SW8260B	Extraction: SW5030B	BatchID: 17906	Spiked Sample ID: 0509154-001A

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	LCS / LCSD
tert-Amyl methyl ether (TAME)	ND	0.050	81.9	82.9	1.25	95	94.5	0.602	70 - 130	70 - 130
Benzene	ND	0.050	108	110	2.10	112	113	0.488	70 - 130	70 - 130
t-Butyl alcohol (TBA)	ND	0.25	103	105	1.83	94.4	99.4	5.16	70 - 130	70 - 130
Diisopropyl ether (DIPE)	ND	0.050	113	116	2.89	117	118	0.466	70 - 130	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	0.050	85.9	88.3	2.83	103	101	2.35	70 - 130	70 - 130
Methyl-t-butyl ether (MTBE)	ND	0.050	88.2	87.2	1.17	105	103	2.49	70 - 130	70 - 130
Toluene	ND	0.050	99.8	102	2.51	102	104	2.31	70 - 130	70 - 130
%SS1:	102	0.050	105	103	1.53	108	107	1.33	70 - 130	70 - 130
%SS2:	102	0.050	96	97	0.898	101	100	1.07	70 - 130	70 - 130
%SS3:	106	0.050	101	101	0	102	104	1.91	70 - 130	70 - 130

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

NONE

BATCH 17906 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0509156-001A	9/06/05	9/07/05	9/10/05 5:40 AM	0509156-002A	9/06/05	9/07/05	9/10/05 6:23 AM
0509156-003A	9/06/05	9/07/05	9/10/05 7:05 AM	0509156-004A	9/06/05	9/07/05	9/10/05 7:47 AM
0509156-005A	9/06/05	9/07/05	9/10/05 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.

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

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS Certification No. 1644

QA/QC Officer

McCampbell Analytical, Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0509156 **ClientID: PDEO** **EDF: NO**

Report to:
Wilhelm Welzenbach
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610
TEL: (510) 658-6916
FAX: 510-834-0152
ProjectNo: #0363; T.D. Rowe, Oakland
PO:

Bill to:
Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT: 5 days
Date Received: 09/07/2005
Date Printed: 09/07/2005

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0509156-001	B8a-4.5	Soil	9/6/05	☐	A	A													
0509156-002	B9a-4.5	Soil	9/6/05	☐	A	A													
0509156-003	B10a-4.5	Soil	9/6/05	☐	A	A													
0509156-004	B11a-4.5	Soil	9/6/05	☐	A	A													
0509156-005	B11a-7.2	Soil	9/6/05	☐	A	A													

Test Legend:

1	G-MBTEX_S	2	MBTEXOXY-8260B_S	3		4		5	
6		7		8		9		10	
11		12		13		14		15	

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.

P & D ENVIRONMENTAL
A Division of Paul H. King, Inc.
55 Santa Clara Ave, Suite 240
Oakland, CA 94610
(510) 658-6916

pdeo 0509156

CHAIN OF CUSTODY RECORD

Lead Scavenged by 8260

PAGE 1 OF 1

PROJECT NUMBER:	PROJECT NAME:
0363	T.D. Rowe, Oakland

SAMPLED BY: (PRINTED AND SIGNATURE)
Wilhelm Welzenbach Wilhelm Welzenbach

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-Multirange	BTEX + fuel oxys	PRESERVATIVE	REMARKS
B8a-4.5	9/6/05		Soil		1	X	X	ICE	Normal Turnaround
B9a-4.5	"		"		"	X	X	"	"
B10a-4.5	"		"		"	X	X	"	"
B11a-4.5	"		"		"	X	X	"	"
B11a-7.2	"		"		"	X	X	"	"

ICE/°C ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

PRESERVATION	VOAS	O&G	METALS	OTHER

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
Wilhelm Welzenbach	9/6/05	1339	
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
	9/7/05	0950	
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)

REMARKS:

TOTAL NO. OF SAMPLES (THIS SHIPMENT)	5
TOTAL NO. OF CONTAINERS (THIS SHIPMENT)	5

LABORATORY: McCampbell Analytical
LABORATORY CONTACT: Angela Rydelius
LABORATORY PHONE NUMBER: (925) 798-1620
SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( )YES (X)NO

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

P & D Environmental 55 Santa Clara, Ste.240 Oakland, CA 94610	Client Project ID: #0363; T.D. Rowe, Oakland	Date Sampled: 09/06/05
		Date Received: 09/07/05
	Client Contact: Wilhelm Welzenbach	Date Extracted: 09/10/05-09/11/05
	Client P.O.:	Date Analyzed: 09/10/05-09/11/05

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*

Extraction method: SW5030B Analytical methods: SW8015Cm Work Order: 0509160

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS
001A	B8a-8.0, Water	W	ND	1	112
002A	B9a-8.0, Water	W	ND	1	94
003A	B10a-8.0, Water	W	ND	1	94
004A	B11a-8.0, Water	W	170,b	1	108

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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Website: www.mccampbell.com E-mail: main@mccampbell.com

P & D Environmental 55 Santa Clara, Ste.240 Oakland, CA 94610	Client Project ID: #0363; T.D. Rowe, Oakland	Date Sampled: 09/06/05
		Date Received: 09/07/05
	Client Contact: Wilhelm Welzenbach	Date Extracted: 09/07/05
	Client P.O.:	Date Analyzed: 09/10/05

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

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0509160

Lab ID	Client ID	Matrix	TPH(d)	TPH(mo)	DF	% SS
0509160-001A	B8a-8.0, Water	W	480,g,b	6000	5	98
0509160-002A	B9a-8.0, Water	W	89,g,b	410	1	103
0509160-003A	B10a-8.0, Water	W	530,g,b	4700	10	102
0509160-004A	B11a-8.0, Water	W	810,g,b	4900	10	93

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	250		µg/L
	S	NA	NA		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 McCampbell 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; 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; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirits; p) see Case Narrative.

DHS Certification No. 1644

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Website: www.mccampbell.com E-mail: main@mccampbell.com

P & D Environmental 55 Santa Clara, Ste.240 Oakland, CA 94610	Client Project ID: #0363; T.D. Rowe, Oakland	Date Sampled: 09/06/05
		Date Received: 09/07/05
	Client Contact: Wilhelm Welzenbach	Date Extracted: 09/10/05-09/13/05
	Client P.O.:	Date Analyzed: 09/10/05-09/13/05

Oxygenates and BTEX by GC/MS*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0509160

Lab ID	0509160-001B	0509160-002B	0509160-003B	0509160-004B	Reporting Limit for DF =1	
Client ID	B8a-8.0, Water	B9a-8.0, Water	B10a-8.0, Water	B11a-8.0, Water		
Matrix	W	W	W	W		
DF	1	1	1	1	S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND	ND	ND	NA	0.5
Benzene	ND	ND	ND	ND	NA	0.5
t-Butyl alcohol (TBA)	ND	ND	ND	ND	NA	5.0
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND	ND	NA	0.5
Diisopropyl ether (DIPE)	ND	ND	ND	ND	NA	0.5
Ethylbenzene	ND	ND	ND	13	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND	ND	ND	NA	0.5
Methyl-t-butyl ether (MTBE)	ND	0.67	ND	0.68	NA	0.5
Toluene	ND	ND	ND	0.70	NA	0.5
Xylenes	ND	ND	ND	ND	NA	0.5
Surrogate Recoveries (%)						
%SS1:	101	94	94	94		
%SS2:	90	94	93	88		
%SS3:	92	88	89	90		
Comments						

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

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0509160

EPA Method: SW8021B/8015Cm **Extraction: SW5030B** **BatchID: 17908** **Spiked Sample ID: 0509158-012A**

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	LCS / LCSD
TPH(btex)£	ND	60	107	109	2.29	109	118	7.54	70 - 130	70 - 130
MTBE	ND	10	88.5	90.7	2.46	90.7	96.4	6.07	70 - 130	70 - 130
Benzene	ND	10	90.9	93.3	2.63	92.3	91.6	0.775	70 - 130	70 - 130
Toluene	ND	10	91.4	94.5	3.30	93.4	94.3	1.03	70 - 130	70 - 130
Ethylbenzene	ND	10	93.8	97.1	3.54	96.9	96	0.911	70 - 130	70 - 130
Xylenes	ND	30	95	99.3	4.46	99.3	96	3.41	70 - 130	70 - 130
%SS:	98	10	99	98	0.768	97	99	2.15	70 - 130	70 - 130

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

NONE

BATCH 17908 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0509160-001A	9/06/05	9/11/05	9/11/05 6:24 AM	0509160-002A	9/06/05	9/10/05	9/10/05 2:49 PM
0509160-003A	9/06/05	9/10/05	9/10/05 3:23 PM	0509160-004A	9/06/05	9/10/05	9/10/05 3:56 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 fail 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.

cluttered chromatogram; sample peak coelutes with surrogate peak.

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

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

QA/QC Officer

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0509160

EPA Method: SW8015C	Extraction: SW3510C	BatchID: 17903	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	LCS / LCSD
TPH(d)	N/A	1000	N/A	N/A	N/A	103	106	3.05	N/A	70 - 130
%SS:	N/A	2500	N/A	N/A	N/A	113	118	5.06	N/A	70 - 130

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

NONE

BATCH 17903 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0509160-001A	9/06/05	9/07/05	9/10/05 7:27 AM	0509160-002A	9/06/05	9/07/05	9/10/05 5:10 AM
0509160-003A	9/06/05	9/07/05	9/10/05 12:05 PM	0509160-004A	9/06/05	9/07/05	9/10/05 9:45 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.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

QA/QC Officer

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0509160

EPA Method: SW8260B	Extraction: SW5030B	BatchID: 17909	Spiked Sample ID: 0509158-003C

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	LCS / LCSD
tert-Amyl methyl ether (TAME)	ND	10	83.4	83.1	0.304	85.2	83.7	1.76	70 - 130	70 - 130
Benzene	ND	10	111	114	2.39	109	111	1.76	70 - 130	70 - 130
t-Butyl alcohol (TBA)	ND	50	102	103	1.42	105	101	3.67	70 - 130	70 - 130
Diisopropyl ether (DIPE)	ND	10	115	114	0.674	116	114	1.78	70 - 130	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	86.3	88.4	2.40	91.4	87.9	3.86	70 - 130	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	86.7	87.8	1.21	90.2	85.3	5.55	70 - 130	70 - 130
Toluene	ND	10	104	102	2.14	102	102	0	70 - 130	70 - 130
%SS1:	110	10	102	104	2.11	105	103	1.83	70 - 130	70 - 130
%SS2:	99	10	97	94	3.42	98	99	0.816	70 - 130	70 - 130
%SS3:	103	10	101	100	0.525	102	103	1.05	70 - 130	70 - 130

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

NONE

BATCH 17909 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0509160-001B	9/06/05	9/13/05	9/13/05 12:43 AM	0509160-002B	9/06/05	9/10/05	9/10/05 5:39 AM
0509160-003B	9/06/05	9/10/05	9/10/05 6:23 AM	0509160-004B	9/06/05	9/10/05	9/10/05 7:08 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.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS Certification No. 1644

QA/QC Officer

McCampbell Analytical, Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0509160 **ClientID: PDEO** **EDF: NO**

Report to:
Wilhelm Welzenbach
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

TEL: (510) 658-6916
FAX: 510-834-0152
ProjectNo: #0363; T.D. Rowe, Oakland
PO:

Bill to:
Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT: 5 days

Date Received: 09/07/2005
Date Printed: 09/07/2005

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0509160-001	B8a-8.0, Water	Water	9/6/05	☐	A	B													
0509160-002	B9a-8.0, Water	Water	9/6/05	☐	A	B													
0509160-003	B10a-8.0, Water	Water	9/6/05	☐	A	B													
0509160-004	B11a-8.0, Water	Water	9/6/05	☐	A	B													

Test Legend:

1	G-MBTEX_W	2	MBTEXOXY-8260B_W	3		4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Rosa Venegas

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.

P & D ENVIRONMENTAL
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0509160

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB ___
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB ___
PRESERVATION VOAS | O&G | METALS | OTHER

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NUMBER: 0363

PROJECT NAME: T.D. Rowe, Oakland

SAMPLED BY: (PRINTED AND SIGNATURE) Wilhelm Welzenbach [signature]

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-Multirange	BTEX+fuel oxygenates+lead scavengers by 8260					PRESERVATIVE	REMARKS
B8a-8.0, water	9/6/05		Water		7	X	X					ICE	Normal Turnaround
B9a-8.0, water	↓		↓		7	X	X					↓	↓
B10a-8.0, water	↓		↓		6	X	X					↓	↓
B11a-8.0, water	↓		↓		6	X	X					↓	↓

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
[signature]	9/7/05	1220	[signature, struck through]
[struck through]	9/7	330	[signature]
[struck through]			RECEIVED FOR LABORATORY BY: (SIGNATURE)

TOTAL NO. OF SAMPLES (THIS SHIPMENT): 4
TOTAL NO. OF CONTAINERS (THIS SHIPMENT): 26

LABORATORY: McCampbell Analytical
LABORATORY CONTACT: Angela Rydelius
LABORATORY PHONE NUMBER: (925) 798-1620

SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO

REMARKS: VOAs preserved w HCl.

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
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Website: www.mccampbell.com E-mail: main@mccampbell.com

P & D Environmental 55 Santa Clara, Ste.240 Oakland, CA 94610	Client Project ID: #0363; T.D. Rowe, Oakland	Date Sampled: 09/06/05
		Date Received: 09/07/05
	Client Contact: Wilhelm Welzenbach	Date Extracted: 09/19/05
	Client P.O.:	Date Analyzed: 09/19/05

Diesel (C10-23) and Oil (C18+) Range Extractable Hydrocarbons with Silica Gel Clean-Up*

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0509160

Lab ID	Client ID	Matrix	TPH(d)	TPH(mo)	DF	% SS
0509160-001B	B8a-8.0, Water	W	230,g,b	2900	1	100
0509160-003B	B10a-8.0, Water	W	270,g,b	2100	1	99
0509160-004B	B11a-8.0, Water	W	570,g,d,b	4100	1	98

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	250	µg/L
	S	NA	NA	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; &) low or no surrogate due to matrix interference.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell 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; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0509160

EPA Method: SW8015C **Extraction: SW3510C** **BatchID: 18082** **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	LCS / LCSD
TPH(d)	N/A	1000	N/A	N/A	N/A	90.6	91.2	0.677	N/A	70 - 130
%SS:	N/A	2500	N/A	N/A	N/A	106	108	1.03	N/A	70 - 130

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

NONE

BATCH 18082 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0509160-001B	9/06/05	9/19/05	9/19/05 3:41 PM	0509160-003B	9/06/05	9/19/05	9/19/05 3:41 PM
0509160-004B	9/06/05	9/19/05	9/19/05 3:54 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.

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

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

QA/QC Officer

0509160

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB ____
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB ____
PRESERVATION | VOAS | O&G | METALS | OTHER

P & D ENVIRONMENTAL
A Division of Paul H. King, Inc.
55 Santa Clara Ave, Suite 240
Oakland, CA 94610
(510) 658-6916

CHAIN OF CUSTODY RECORD

PROJECT NUMBER: 0363

PROJECT NAME: T.D. Rowe, Oakland

SAMPLED BY: (PRINTED AND SIGNATURE) Wilhelm Welzenbach [signature]

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-Multirange	BTEX + fuel oxys + lead scavengers by 8260	TPHd,mo w/SG 9/16/05			PRESERVATIVE	REMARKS
B8a-8.0 water	9/6/05		Water		7	X	X	X			ICE	Normal Turnaround
B9a-8.0, water	↓		↓		7	X	X				↓	↓
B10a-8.0, water	↓		↓		6	X	X	X			↓	↓
B11a-8.0, water	↓		↓		6	X	X	X			↓	↓

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
Wilhelm Welzenbach [signature]	9/6/05	1230	[signature]
[signature]	9/7	330	[signature]
			RECEIVED FOR LABORATORY BY: (SIGNATURE)

TOTAL NO. OF SAMPLES (THIS SHIPMENT): 4
TOTAL NO. OF CONTAINERS (THIS SHIPMENT): 26

LABORATORY: McCampbell Analytical
LABORATORY CONTACT: Angela Rydelius
LABORATORY PHONE NUMBER: (925) 798-1620

SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO

REMARKS: VOAs preserved w HCl.

McCampbell Analytical, Inc.
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Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0509160 **ClientID: PDEO** **EDF: NO**

Report to:
Wilhelm Welzenbach
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

TEL: (510) 658-6916
FAX: 510-834-0152
ProjectNo: #0363; T.D. Rowe, Oakland
PO:

Bill to:
Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT: 5 days
Date Received: 09/07/2005
Date Add-On: 09/16/2005
Date Printed: 09/19/2005

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0509160-001	B8a-8.0, Water	Water	9/6/05	☐	B														
0509160-003	B10a-8.0, Water	Water	9/6/05	☐	B														
0509160-004	B11a-8.0, Water	Water	9/6/05	☐	B														

Test Legend:

1	TPH(DMO)WSG_W	2		3		4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Rosa Venegas

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.

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P & D Environmental	Client Project ID: #0363; T.D. Rowe	Date Sampled: 09/07/05
55 Santa Clara, Ste.240		Date Received: 09/08/05
Oakland, CA 94610	Client Contact: Wilhelm Welzenbach	Date Extracted: 09/11/05
	Client P.O.:	Date Analyzed: 09/11/05

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*

Extraction method: SW5030B Analytical methods: SW8015Cm Work Order: 0509189

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS
001A	B8b-28.0, Water	W	ND,i	1	97
002A	B9b-26.0, Water	W	ND,i	1	95
003A	B10b-27.0, Water	W	ND,i	1	98
004A	B11b-48.0, Water	W	ND,i	1	96

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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P & D Environmental	Client Project ID: #0363; T.D. Rowe	Date Sampled: 09/07/05
55 Santa Clara, Ste.240		Date Received: 09/08/05
Oakland, CA 94610	Client Contact: Wilhelm Welzenbach	Date Extracted: 09/08/05
	Client P.O.:	Date Analyzed: 09/10/05-09/13/05

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

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0509189

Lab ID	Client ID	Matrix	TPH(d)	TPH(mo)	DF	% SS
0509189-001A	B8b-28.0, Water	W	ND,i	ND	1	117
0509189-002A	B9b-26.0, Water	W	ND,i	ND	1	103
0509189-003A	B10b-27.0, Water	W	92,g,b,i	390	1	106
0509189-004A	B11b-48.0, Water	W	77,b,i	ND	1	115

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	250	µg/L
	S	NA	NA	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 McCampbell 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; 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; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirits; p) see Case Narrative.

DHS Certification No. 1644

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P & D Environmental 55 Santa Clara, Ste.240 Oakland, CA 94610	Client Project ID: #0363; T.D. Rowe	Date Sampled: 09/07/05
		Date Received: 09/08/05
	Client Contact: Wilhelm Welzenbach	Date Extracted: 09/12/05
	Client P.O.:	Date Analyzed: 09/12/05

Oxygenates and BTEX by GC/MS*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0509189

Lab ID	0509189-001B	0509189-002B	0509189-003B	0509189-004B	Reporting Limit for DF =1	
Client ID	B8b-28.0, Water	B9b-26.0, Water	B10b-27.0, Water	B11b-48.0, Water		
Matrix	W	W	W	W		
DF	1	1	1	1	S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND	ND	ND	NA	0.5
Benzene	ND	ND	ND	ND	NA	0.5
t-Butyl alcohol (TBA)	ND	ND	ND	ND	NA	5.0
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND	ND	NA	0.5
Diisopropyl ether (DIPE)	ND	ND	ND	ND	NA	0.5
Ethylbenzene	ND	ND	ND	ND	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND	ND	ND	NA	0.5
Methyl-t-butyl ether (MTBE)	ND	ND	ND	ND	NA	0.5
Toluene	ND	ND	1.1	0.86	NA	0.5
Xylenes	ND	ND	0.54	ND	NA	0.5
Surrogate Recoveries (%)						
%SS1:	100	108	---#	106		
%SS2:	101	98.9	98.9	98.7		
%SS3:	103	107	106	105		
Comments	i	i	i	i		

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

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0509189

EPA Method: SW8015Cm	Extraction: SW5030B			BatchID: 17924		Spiked Sample ID: 0509192-002A				
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	LCS / LCSD
TPH(btex)£	ND	60	105	106	0.588	108	106	1.36	70 - 130	70 - 130
MTBE	ND	10	88.7	97.2	9.13	93	95.4	2.56	70 - 130	70 - 130
Benzene	ND	10	90.1	92.3	2.42	92.5	95.8	3.52	70 - 130	70 - 130
Toluene	ND	10	91.8	93.5	1.92	93.8	96.5	2.86	70 - 130	70 - 130
Ethylbenzene	ND	10	92.3	94.5	2.37	94.9	96	1.16	70 - 130	70 - 130
Xylenes	ND	30	94.7	94.7	0	95.3	99.3	4.11	70 - 130	70 - 130
%SS:	112	10	97	96	1.26	96	96	0	70 - 130	70 - 130

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

NONE

BATCH 17924 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0509189-001A	9/07/05	9/11/05	9/11/05 3:05 AM	0509189-002A	9/07/05	9/11/05	9/11/05 5:17 AM
0509189-003A	9/07/05	9/11/05	9/11/05 6:22 AM	0509189-004A	9/07/05	9/11/05	9/11/05 6:55 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.

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

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

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

QA/QC Officer

McCampbell Analytical, Inc.

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Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0509189

EPA Method: SW8015C **Extraction: SW3510C** **BatchID: 17911** **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	LCS / LCSD
TPH(d)	N/A	1000	N/A	N/A	N/A	102	102	0	N/A	70 - 130
%SS:	N/A	2500	N/A	N/A	N/A	103	103	0	N/A	70 - 130

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

NONE

BATCH 17911 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0509189-001A	9/07/05	9/08/05	9/10/05 8:51 AM	0509189-002A	9/07/05	9/08/05	9/10/05 9:59 AM
0509189-003A	9/07/05	9/08/05	9/13/05 8:05 AM	0509189-004A	9/07/05	9/08/05	9/10/05 12:16 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.

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

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0509189

EPA Method: SW8260B	Extraction: SW5030B	BatchID: 17910	Spiked Sample ID: 0509162-005B

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	LCS / LCSD
tert-Amyl methyl ether (TAME)	ND	10	82.6	82.4	0.264	81.4	84.9	4.23	70 - 130	70 - 130
Benzene	ND	10	113	111	1.79	106	107	1.27	70 - 130	70 - 130
t-Butyl alcohol (TBA)	ND	50	103	99.8	3.41	93.3	98.9	5.78	70 - 130	70 - 130
Diisopropyl ether (DIPE)	ND	10	113	114	0.710	108	111	2.61	70 - 130	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	86.3	86.9	0.642	81	84.6	4.28	70 - 130	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	89.1	87.3	2.07	80.9	83	2.57	70 - 130	70 - 130
Toluene	ND	10	102	102	0	100	98.4	1.57	70 - 130	70 - 130
%SS1:	97	10	105	104	1.27	104	103	0.369	70 - 130	70 - 130
%SS2:	94	10	96	97	1.44	100	97	2.42	70 - 130	70 - 130
%SS3:	87	10	99	101	2.60	103	101	2.14	70 - 130	70 - 130

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

NONE

BATCH 17910 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0509189-001B	9/07/05	9/12/05	9/12/05 8:28 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.

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

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS Certification No. 1644

QA/QC Officer

McCampbell Analytical, Inc.

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Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water | QC Matrix: Water | WorkOrder: 0509189

EPA Method: SW8260B	Extraction: SW5030B	BatchID: 17925	Spiked Sample ID: 0509192-003B

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	LCS / LCSD
tert-Amyl methyl ether (TAME)	ND	10	110	113	2.94	84.6	83.6	1.16	70 - 130	70 - 130
Benzene	ND	10	119	112	6.10	105	107	2.80	70 - 130	70 - 130
t-Butyl alcohol (TBA)	ND	50	91.3	83	9.47	97.4	100	2.79	70 - 130	70 - 130
Diisopropyl ether (DIPE)	ND	10	112	115	2.58	111	115	3.74	70 - 130	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	113	106	6.50	87.2	89.1	2.14	70 - 130	70 - 130
Methyl-t-butyl ether (MTBE)	0.63	10	108	100	6.89	87.7	89.3	1.85	70 - 130	70 - 130
Toluene	ND	10	99.8	101	0.854	99.4	100	0.732	70 - 130	70 - 130
%SS1:	108	10	104	100	4.53	102	101	0.902	70 - 130	70 - 130
%SS2:	98	10	100	102	1.37	101	98	2.72	70 - 130	70 - 130
%SS3:	107	10	95	98	2.88	106	102	3.70	70 - 130	70 - 130

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

NONE

BATCH 17925 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0509189-002B	9/07/05	9/12/05	9/12/05 2:02 PM	0509189-003B	9/07/05	9/12/05	9/12/05 2:45 PM
0509189-004B	9/07/05	9/12/05	9/12/05 3:28 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.

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

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS Certification No. 1644

QA/QC Officer

McCampbell Analytical, Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0509189 **ClientID: PDEO** **EDF: NO**

Report to:
Wilhelm Welzenbach
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

TEL: (510) 658-6916
FAX: 510-834-0152
ProjectNo: #0363; T.D. Rowe
PO:

Bill to:
Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT: 5 days

Date Received: 09/08/2005
Date Printed: 09/08/2005

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0509189-001	B8b-28.0, Water	Water	9/7/05	☐	A	B													
0509189-002	B9b-26.0, Water	Water	9/7/05	☐	A	B													
0509189-003	B10b-27.0, Water	Water	9/7/05	☐	A	B													
0509189-004	B11b-48.0, Water	Water	9/7/05	☐	A	B													

Test Legend:

1	G-MBTEX_W	2	MBTEXOXY-8260B_W	3		4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Rosa Venegas

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.

P & D ENVIRONMENTAL
A Division of Paul H. King, Inc.
55 Santa Clara Ave, Suite 240
Oakland, CA 94610
(510) 658-6916

0509184

CHAIN OF CUSTODY RECORD

PROJECT NUMBER: 0363

PROJECT NAME: T.D. Rowe, Oakland

SAMPLED BY: (PRINTED AND SIGNATURE) Wilhelm Welzenbach [signature]

ANALYSIS(ES): TPH-Multirange; BTEX + fuel oxys + lead scavengers by 8260

	SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	TPH-Multirange	BTEX + fuel oxys					PRESERVATIVE	REMARKS
+15	B8b-28.0, water	9/7/05		water		7	X	X					ICE	Normal Turnaround
+20	B9b-26.0, water	↓		↓		7	X	X					↓	↓
+25	B10b-27.0, water	↓		↓		6	X	X					↓	↓
+15	B11b-48.0, water	↓		↓		7	X	X					↓	↓

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB ___
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB ___

PRESERVATION ___ VOAS | O&G | METALS | OTHER

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
[signature]	9/8	1205	[signature]
[signature]	9/8/05	400	[signature]
			RECEIVED FOR LABORATORY BY: (SIGNATURE)

TOTAL NO. OF SAMPLES (THIS SHIPMENT): 4

TOTAL NO. OF CONTAINERS (THIS SHIPMENT): 27

LABORATORY: McCampbell Analytical

LABORATORY CONTACT: Angela Rydelius

LABORATORY PHONE NUMBER: (925) 798-1620

SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO

REMARKS: VOAs preserved w HCl.

Appendix A
Historical Laboratory
Sample Results

-Soil and Groundwater Investigation Work Plan
(document 0363.W1) March 7, 2005
-Tables 1, 2, 3, 4

-Subsurface Investigation Report
(document 0363.R2) June 17, 2005
-Tables 1, 2, 3, 4, 5, 6

Soil and Groundwater Investigation Work Plan (document 0363.W1) March 7, 2005 Tables 1, 2, 3, 4

March 7, 2005
Work Plan 0363.W1

TABLE 1 - UST PIT SOIL SAMPLE ANALYTICAL RESULTS

Sample ID	TPHg mg/kg	Benzene mg/kg	Toluene mg/kg	Ethyl-Benzene mg/kg	Xylenes mg/kg	Fuel Oxygenates µg/kg					Lead mg/kg
						TBA	MTBE	DIPE	ETBE	TAME	
TDR-Pit-N	5,900	ND<6.2	8.3	66	420	ND<60	ND<60	ND<120	ND<60	ND<60	5.8
TDR-Pit-S	10	ND<0.62	ND<0.62	ND<0.62	ND<0.62	42	ND<36	ND<72	ND<36	ND<36	10
TDR-Pit-E	73	ND<0.62	ND<0.62	ND<0.62	ND<0.62	ND<46	ND<46	ND<92	ND<46	ND<46	ND<5.0
TDR-Pit-W	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	57	32	ND<10	ND<5.0	ND<5.0	6.1
TDR-NWall-1	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<5.0	ND<5.0	ND<10	ND<5.0	ND<5.0	6.7
TDR-NWall-2	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<18	ND<18	ND<35	ND<18	ND<18	5.6
ESL	400	0.38	9.3	13	1.5	110	5,600				750

Notes:

mg/kg = milligrams per kilogram
µg/kg = micrograms per kilogram
ND = Not Detected
TPHg = Gasoline
ESL = Environmental Screening Level established by San Francisco Bay Regional Water Quality Control Board (July 2003, Updated Feb 2004, Table B Shallow Soils (≤ 3m bgs) Groundwater is NOT a Current or Potential Source of Drinking Water.)

Fuel Oxygenates (by EPA 8260)
TBA = Tertiary Butyl Alcohol
MTBE = Methyl Tertiary Butyl Ether
DIPE = Di-Isopropyl Ether
ETBE = Ethyl Tertiary Butyl Ether
TAME = Tertiary Amyl Methyl Ether

March 7, 2005
Work Plan 0363.W1

TABLE 2 - UST PIT WATER SAMPLE ANALYTICAL RESULTS

Sample ID	TPHg µg/L	Benzene µg/L	Toluene µg/L	Ethyl-Benzene µg/L	Xylenes µg/L	Fuel Oxygenates µg/L					Lead mg/L
						TBA	MTBE	DIPE	ETBE	TAME	
TDR-Pit	99,000	220	500	1,500	14,000	ND<500	ND<500	ND<1,000	ND<500	ND<500	0.82
Pit-2	3,200	40	3.1	11	54	NA	ND<5.0	NA	NA	NA	0.037
ESL	500	46	130	290	13	18,000	1,800				0.0025

Notes:

µg/L = micrograms per liter
mg/L = milligrams per liter
ND = Not Detected
NA = Not Analyzed
TPHg = Gasoline

Fuel Oxygenates (by EPA 8260)
TBA = Tertiary Butyl Alcohol
MTBE = Methyl Tertiary Butyl Ether
DIPE = Di-Isopropyl Ether
ETBE = Ethyl Tertiary Butyl Ether
TAME = Tertiary Amyl Methyl Ether

ESL = Environmental Screening Level established by San Bay Francisco Regional Water Quality Control Board (July 2003, Updated Feb 2004, Table B Shallow Soils (≤ 3m bgs) Groundwater is NOT a Current or Potential Source of Drinking Water.)

Analytical results from the pit water sample collected after overexcavation (Pit-2) indicate a significant reduction in concentrations of TPHg and BTEX constituents when compared to the original water sample.

TABLE 3 - SOIL BORING SOIL SAMPLE ANALYTICAL RESULTS

Sample ID	TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylene	MTBE
TDR-B1-4.0	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
TDR-B2-4.0	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	0.0098
ESL	400	0.38	9.3	13	1.5	5,600

Notes:

ND = Not Detected
TPHg = Gasoline
Soil sample results are in milligrams per kilogram (mg/kg).

ESL = Environmental Screening Level established by San Francisco Bay Regional Water Quality Control Board (July 2003, Updated Feb 2004, Table B Shallow Soils (≤ 3m bgs) Groundwater is NOT a Current or Potential Source of Drinking Water.)

TABLE 4 - SOIL BORING GROUNDWATER SAMPLE ANALYTICAL RESULTS

Sample ID	TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylene	MTBE
TDR-B1-W	ND<50	ND<50	ND<50	ND<50	ND<1.0	1.5
TDR-B3-W	4,900	3.0	ND<2.5	9.8	ND<5.0	72
TDR-B4-W	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50
ESL	500	46	130	290	13	1,800

Notes:

ND = Not Detected
TPHg = Gasoline
Water sample results are in micrograms per liter(µg/L).

ESL = Environmental Screening Level established by San Francisco Bay Regional Water Quality Control Board (July 2003, Updated Feb 2004, Table B Shallow Soils (≤ 3m bgs) Groundwater is NOT a Current or Potential Source of Drinking Water.)

Subsurface Investigation Report
(document 0363.R2)
June 17, 2005
Tables 1, 2, 3, 4, 5, 6

TABLE 1
GROUNDWATER LEVEL MONITORING DATA
FOR WELLS MW1, MW2, AND MW3

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)	Water Table Elev. (ft.)
MW1	6/6/05	11.27	4.30	6.97
	6/2/05		4.24	7.03
	6/1/05		4.22	7.05
	5/31/05		4.26	7.01
	5/27/05		4.14	7.13
MW2	6/6/05	11.75	4.97	6.78
	6/2/05		4.96	6.79
	6/1/05		4.94	6.81
	5/31/05		4.93	6.82
	5/27/05		4.82	6.93
MW3	6/6/05	11.14	3.48	7.66
	6/2/05		3.43	7.71
	6/1/05		3.37	7.77
	5/31/05		3.39	7.75
	5/27/05		3.33	7.81

TABLE 2
CALCULATED GROUNDWATER FLOW DIRECTION AND GRADIENT
FOR WELLS MW1, MW2, AND MW3

Date Monitored	**Flow Direction**	**Gradient (ft./ft.)**
6/6/05	S56°W	0.013
6/2/05	S54°W	0.013
6/1/05	S54°W	0.014
5/31/05	S57°W	0.014
5/27/05	S54°W	0.013

TABLE 3
GROUNDWATER ELECTRICAL CONDUCTIVITY MONITORING DATA
FOR WELLS MW1, MW2, AND MW3
(Wells Monitored June 2 and 6, 2005)

Well No.	Date	Conductivity Prior to Purge (mS/cm)	Conductivity Following Purge (mS/cm)
MW1	6/6/05	--	11.69
	6/2/05	9.97	NA
MW2	6/6/05	8.06	6.97
	6/2/05	8.39	NA
MW3	6/6/05	5.93	5.24
	6/2/05	6.29	NA

Notes:
-- = Not Monitored.
NA = Not Applicable

June 17, 2005
Report 0363.R2

TABLE 4
SUMMARY OF LABORATORY ANALYTICAL RESULTS - BOREHOLE SOIL SAMPLES
(Samples Collected on April 26, 2005)

Sample Name	TPH-D	TPH-MO	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	Other VOCs By 8260
B5-4.5	2.9,c	ND<5.0	5.9,a,b	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND
B5-10.0	1.4,d	ND<5.0	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND except, MTBE = 0.021
B5-15.0	1.1,d	ND<5.0	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND except, MTBE = 0.0052
B6-5.0	ND<1.0	ND<5.0	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND
B6-10.0	ND<1.0	ND<5.0	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND
B6-15.0	2.0,d	ND<5.0	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND
B7b-5.0	12,c,d	ND<5.0	86	ND<0.005	ND<0.005	0.038	0.014	ND
B7b-10.0	61,c,d	ND<25	160,a,b	ND<0.10	ND<0.10	3.6	5.0	ND
B7b-15.0	2.6,c	ND<5.0	4.5,a,b	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND
B7b-19.5	4.4,c	ND<5.0	2.2,a,b	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND
B7b-23.0	ND<1.0	ND<5.0	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND
B7b-27.5	ND<1.0	ND<5.0	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND
ESL_1	500	1000	400	0.38	9.3	32	11	MTBE = 5.6

NOTES:
TPH-D = Total Petroleum Hydrocarbons as Diesel.
TPH-MO= Total Petroleum Hydrocarbons as Motor Oil.
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
VOCs = Volatile Organic Compounds.
ESL_1 = Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB) updated February 2005, from Table B – Shallow Soils, Groundwater is not a current or potential source of drinking water (commercial/industrial land use only).
a = Laboratory analytical report note: heavier gasoline range compounds are significant, possibly aged gasoline.
b = Laboratory analytical report note: no recognizable pattern.
c = Laboratory analytical report note: gasoline range compounds are significant.
d = Laboratory analytical report note: diesel range compounds are significant; no recognizable pattern.
ND = Not detected.
Results are in mg/kg, unless otherwise indicated.

TABLE 5
SUMMARY OF LABORATORY ANALYTICAL RESULTS -
BOREHOLE GROUNDWATER GRAB SAMPLES
(Samples Collected on April 26, 2005)

Sample Name	TPH-D	TPH-MO	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	Other VOCs By 8260
B5-8.0 Water	1.6,b,c,d	0.43	0.96	0.0021	0.00080	0.0032	0.00086	ND, except MTBE = 0.043
B5-20.0 Water	0.076,c,e	ND<0.25	ND<0.05	ND<0.0005	0.00061	ND<0.0005	ND<0.0005	ND, except MTBE = 0.0024
B6-8.0 Water	0.051,c,e	ND<0.25	ND<0.05	ND<0.0005	0.0030	ND<0.0005	ND<0.0005	ND, except MTBE = 0.00057
B7-8.0 Water	4.4,b,c,d	0.39	3.7	ND<0.0025	ND<0.0025	0.090	0.290	ND, except MTBE = 0.0037
B7-28.0 Water	88,b,c	ND<5.0	3.9,a	0.0045	0.0015	0.067	0.10	ND
ESL_2	0.64	0.64	0.5	0.046	0.13	0.29	0.10	MTBE = 1.8

NOTES:
TPH-D = Total Petroleum Hydrocarbons as Diesel.
TPH-MO= Total Petroleum Hydrocarbons as Motor Oil.
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
VOCs = Volatile Organic Compounds.
ESL_2 = Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB) updated February 2005, from Table B – Shallow Soils, Groundwater is not a current or potential source of drinking water.
a = Laboratory analytical report note: heavier gasoline range compounds are significant, possibly aged gasoline.
b = Laboratory analytical report note: gasoline range compounds are significant.
c = Laboratory analytical report note: diesel range compounds are significant; no recognizable pattern.
d = Laboratory analytical report note: oil range compounds are significant.
e = Laboratory analytical report note: one to a few isolated peaks present.
ND = Not detected.
Results are in mg/L, unless otherwise indicated.

TABLE 6
SUMMARY OF LABORATORY ANALYTICAL RESULTS - MONITORING WELL GROUNDWATER SAMPLES
(Samples Collected June 6, 2005)

Sample Name	TPH-D	TPH-MO	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	Other VOCs By 8260
MW1	ND<0.05	ND<0.25	ND<0.05	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	ND
MW2	0.061,c	ND<0.25	ND<0.05	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	ND
MW3	0.064,c	ND<0.25	ND<0.05	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	ND
ESL_2	0.64	0.64	0.5	0.046	0.13	0.29	0.10	MTBE = 1.8

NOTES:
TPH-D = Total Petroleum Hydrocarbons as Diesel.
TPH-MO= Total Petroleum Hydrocarbons as Motor Oil.
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
VOCs = Volatile Organic Compounds.
ESL_2 = Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB) updated February 2005, from Table B – Shallow Soils, Groundwater is not a current or potential source of drinking water.
c = Laboratory analytical report note: diesel range compounds are significant; no recognizable pattern.
ND = Not detected.
Results are in mg/L, unless otherwise indicated.