

# P & D ENVIRONMENTAL

4020 Panama Court  
Oakland, CA 94611  
Telephone (510) 658-6916

September 20, 1995  
Report 0063.R1

Mr. Melvin Kauffman  
True Fit Manufacturing  
3515 West Yosemite Avenue  
Lathrop, CA 95330

SUBJECT: SUBSURFACE INVESTIGATION REPORT  
Former East Bay Scaffolding Facility  
2552 San Carlos Avenue  
Castro Valley, California

Dear Mr. Kauffman:

P&D Environmental (P&D) is pleased to present this report documenting the drilling of one soil boring, designated as B1, and the hand auguring of six exploratory boreholes, designated as B2 through B7, for the investigation of subsurface conditions in the vicinity of the former gasoline tank and dispenser at the subject site.

The drilling of borehole B1 was performed in accordance with P&D's proposal 081294.P1 dated August 12, 1994, P&D's work plan 0063.W1 dated March 13, 1995, and Mr. Seery's written approval of the work plan dated March 27, 1995. This initial phase of work was for the installation of one groundwater monitoring well in a location downgradient from the former tank pit and dispenser, and for the quarterly monitoring and sampling of the well for one year. However, groundwater was not encountered in the borehole, and a groundwater monitoring well was not constructed.

To further investigate subsurface conditions at the subject site, an additional six soil borings were hand augured. This work was performed in accordance with P&D's proposal 071795.P1 dated July 17, 1995 and P&D's Work Plan 0063.W2 dated August 21, 1995. The work plan was approved by Mr. Scott Seery of the Alameda County Department of Environmental Health (ACDEH) in a letter dated August 23, 1995. A Site Location Map (Figure 1) and a Site Plan showing the locations of the exploratory boreholes (Figure 2) are attached with this report.

All work was performed under the direct supervision of an appropriately registered professional. This report is prepared 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

The site is presently not active. A Site Location Map showing the location of the site in Castro Valley is attached as Figure 1. A Site Plan is attached as Figure 2. A Site Plan Detail showing soil sample collection locations associated with the underground storage tank removal activities is attached as Figure 3. A Site Plan Detail showing soil gas vapor survey probe locations is attached as Figure 4.

The site is occupied by three buildings. Large portions of the open spaces at the site are partially or fully covered with asphaltic concrete or concrete. A retaining wall is present at the northern edge of the property which is approximately one foot in height at the northeastern corner of the property and increases in height to approximately three feet at the northwestern corner of the property.

It is P&D's understanding that on October 30, 1990 SEMCO removed a 550 gallon capacity gasoline tank. Three soil samples, designated as Soil-3'-W, Soil-4'-N, and Soil-Bottom were collected from the fuel tank pit following removal of the tank. The sample results are summarized in Table 1.

Review of a field report documenting tank removal prepared by Mr. Scott Seery of the Alameda County Department of Environmental Health (ACDEH) dated 8/30/90 shows that, "Groundwater was welling into the pit. Upon removal of the pea gravel backfill, substantial product-impacted H2O was evident, ie. floating brown product. A distinct high water mark was noted about 3' B.G. around the inside perimeter of the hole." Following removal of the tank, the tank pit was over-excavated. Mr. Seery's field report indicates that, "No H2O collected - hole dry @ 8.5'."

On November 20, 1990 Certified Environmental Consulting, Inc. (CEC) conducted a soil vapor survey at the site to investigate the lateral extent of petroleum hydrocarbons detected in the fuel tank pit by SEMCO. A total of seven probes, designated as 1 through 7, were reported to have been driven to a depth of approximately three feet. Soil conditions at the site as, "...a very heavy silty clay which is saturated with water at a shallow depth (4-6 feet)." A vacuum was applied to each probe and vapors extracted from the probes were reported to have been analyzed with an organic vapor meter (OVM). In addition, one groundwater sample, designated as W-1, was reported to have been collected by CEC on November 20, 1990 from probe location 4. The soil gas survey probe locations are shown in Figure 4. The groundwater sample results are summarized in Table 2 and the soil gas sample results are summarized in Table 3.

Based upon conversations with the site owner, Mr. Mel Kauffman, it is P&D's understanding that Mr. Kauffman was present at the site when the probes were driven into the ground for the soil gas survey. Mr. Kauffman stated that the probes for the soil gas survey were not driven beyond a depth of approximately 3 to 4 feet below the ground surface.

A Work Plan dated March, 1992 was prepared by CEC for the excavation of petroleum hydrocarbon-impacted soil and for the installation of one groundwater monitoring well. The CEC Work Plan was subsequently approved by Mr. Scott Seery of the ACDEH in a letter dated March 20, 1992 addressed to Mr. Mel Kauffman at True Fit Manufacturing.

#### FIELD ACTIVITIES

Prior to performing field work, permits were obtained from the Alameda County Zone 7 Water Agency; notification was provided to the ACDEH of the scheduled hand-auguring dates; Underground Safety Alert was notified for buried utility location; and a site health and safety plan was prepared.

#### Soil Boring and Soil Sample Collection

On June 16, 1995 P&D personnel oversaw the drilling of one borehole designated as B1 at the subject site, in accordance with P&D's work plan 0063.W1 dated March 13, 1995. The borehole was drilled by Exploration Geoservices, Inc. of San Jose using a truck-mounted eight-inch diameter hollow stem auger drill rig. The objective of the drilling was to install one groundwater monitoring well downgradient (to the southeast) from the former tank pit and dispenser, and to evaluate groundwater quality in the monitoring well on a quarterly basis for one year. However, bedrock was encountered in the borehole beginning at a depth of approximately three feet, and groundwater was not encountered to the total depth explored in the borehole of 15 feet. No petroleum hydrocarbon odors, staining, discoloration, or evidence of petroleum hydrocarbons were detected in the borehole. No samples were collected from the borehole for laboratory analysis. Because of the shallow depth to bedrock and the absence of evidence

of the presence of groundwater, a groundwater monitoring well was not constructed in the borehole.

On August 28 through August 31, 1995, P&D personnel hand augured boreholes B2 through B7 at the subject site. Borehole B3 is located between the former tank pit and the former dispenser island locations, immediately adjacent to the former dispenser location. Borehole B4 is located immediately to the east of the former tank pit. Borehole B5 is located approximately 20 feet to the northeast of the former tank pit. Borehole B6 is located approximately 10 feet to the ~~southwest~~ of the former tank pit, and boreholes B7 and B2 are located approximately 10 feet to the south of the tank pit.

Boreholes B2 through B7 were hand augured using a 3.5-inch outside diameter hand auger to a total depth of 3.5 feet, except for B3 and B4, which were hand augured to total depths of 5.5 and 8.0 feet, respectively. One soil sample was collected from the bottom of each borehole, except for borehole B3, where one soil sample was collected at a depth of 3.5, in addition to one soil sample which was collected at the bottom of the borehole at a depth of 5.5 feet. The soil samples were collected using a 2.5-inch outside diameter percussion sampler lined with one 2-inch diameter, 6-inch long brass tube. Groundwater was not encountered in any of the boreholes.

All of the boreholes were continuously logged. The soil encountered in the boreholes was classified lithologically in the field in accordance with the Unified Soil Classification System and standard geologic field techniques.

The soil encountered in all of the boreholes was evaluated in the field using a Model 580B OVM Photoionization Detector (PID) equipped with a 10.0 eV bulb and calibrated with a 100 part per million (ppm) isobutylene standard. Organic vapors were not detected with the PID in any of the boreholes with the exception borehole B3, where PID values ranged from 0 to 80 ppm. Similarly, petroleum hydrocarbon odors were not detected in any of the boreholes with the exception of borehole B3, where petroleum hydrocarbon odors were encountered which were qualitatively identified in the field as resembling gasoline.

The soil samples collected from the boreholes were retained for laboratory analysis in the following manner. After sample collection, the ends of the brass tubes were sealed in aluminum foil and covered with plastic endcaps. The brass tubes were then labeled, placed in ziplock baggies and stored in a cooler with ice pending delivery to McCampbell Analytical Laboratory in Pacheco, California. McCampbell Analytical Laboratory is a State-certified hazardous waste testing laboratory. Chain of custody procedures were followed for all sample handling. All of the boreholes were backfilled with neat cement on August 31, 1995. The soil removed from the boreholes during hand auguring was placed into a DOT-approved 55-gallon drum and stored onsite pending appropriate disposal.

In addition to boreholes B1 through B7, several preliminary boreholes were hand augured at the location of the former tank pit. However, pea gravel was encountered in the former tank pit, and further exploration was not possible because the pea gravel continuously caved into the preliminary boreholes. The approximate location of the former tank pit shown on Figure 2 is based in part upon the locations where pea gravel was encountered in these preliminary boreholes.

#### 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 borders on subsurface materials identified on the geologic maps as Late Pleistocene alluvium (Qpa). The alluvium is described

as typically consisting of weakly consolidated slightly weathered poorly sorted irregularly interbedded clay, silt, sand and gravel and directly borders on bedrock.

Based on review of the regional geologic map from U.S. Geological Survey Miscellaneous Field Studies Map MF-2196, "Map of Recently Active Traces of the Hayward Fault, Alameda and Contra Costa Counties, California," by J.J. Lienkaemper, 1992 the subject site is located approximately 3,700 feet to the west-southwest of the active Hayward Fault.

The subsurface materials encountered in the boreholes consisted of moist black silty clay with fine to coarse sand to the depth at which bedrock was encountered. Based on the bedrock encountered in borehole B1, the bedrock is highly fractured and deeply weathered to the total depth explored of 15 feet below grade, with the bedrock overburden contact appearing to be gradational from distinguishable bedrock to overlying unconsolidated silty clay. Bedrock was encountered in boreholes B2, B5, B6, and B7 at a depth of approximately 3.5 feet, and in boreholes B3 and B4 at depths of approximately 5.5 and 8.0 feet, respectively. In addition, bedrock was encountered in borehole B1 on June 16, 1995 at a depth of approximately 3 feet. The bedrock is described as consisting of brown decomposed siltstone which is highly fractured and very dry.

On February 6, 1995 Mr. Paul King of P&D met with Mr. Scott Seery of the ACDEH to review available information for depth to groundwater and groundwater flow direction at sites located in the vicinity of the subject site. Review of the files revealed three sites with groundwater monitoring wells at the following locations.

<u>Site</u>	<u>Site</u>	<u>Site</u>
<u>Location</u>	<u>Name</u>	<u>Address</u>
<u>Number</u>		
1	Thrifty Oil Co.	2504 Castro Valley Blvd.
2	Castro Valley Autohaus	20697 Park Way
3	Former Shell Service Station	2724 Castro Valley Blvd.

Based upon review of reports for the different sites, the distance and direction of each site from the subject site, the depth to groundwater and the groundwater flow direction at the different sites are presented below.

<u>Site</u>	<u>Distance From</u>	<u>Depth to</u>	<u>Groundwater</u>
<u>Location</u>	<u>Subject Site (Ft.)</u>	<u>Groundwater (Ft.)</u>	<u>Flow Direction</u>
<u>Number</u>			
1	500 Southwest	Unknown	Easterly
2	400 East	7.0	Unknown (1 well at site)
3	600 Southeast	6.0 to 10.0	South to Southwesterly

Lake Chabot Creek is a north-south trending creek located approximately 500 feet to the east of the subject site. The Thrifty Oil Company and Castro Valley Autohaus sites are located to the west of the creek, and the former Shell station is located to the east of the creek. The easterly groundwater flow direction at the Thrifty Oil Company site and the south to southwesterly groundwater flow direction at the former Shell Service Station indicate that groundwater flow in the vicinity of the creek is towards the creek. Based upon the information obtained from the files for the sites in the vicinity of the subject site, the anticipated depth to water at the subject site is 6 to 10 feet, and the anticipated groundwater flow direction is to the southeast, towards Lake Chabot Creek.

Based on the absence of groundwater at the subject site to the total depth explored of 15 feet, the depth to groundwater and groundwater flow direction at the subject site is unknown.

### LABORATORY ANALYTICAL RESULTS

The soil samples collected from boreholes B2 through B7 were analyzed for Total Petroleum Hydrocarbons as Gasoline (TPH-G) using EPA Method 5030 in conjunction with Modified EPA Method 8015 (GC/FID), and for Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) using EPA Method 8020.

The laboratory analytical results of the soil samples collected from the boreholes shows that TPH-G and BTEX were not detected with the exception of borehole B3, where TPH-G was detected at the depths of 3.5 and 5.5 feet at concentrations of 31 and 56 ppm, respectively. The laboratory analytical results of the soil samples are summarized in Table 4.

Copies of the laboratory analytical reports and chain of custody documentation are attached with this report.

### DISCUSSION AND RECOMMENDATIONS

A total of one borehole (B1) was drilled and six boreholes (B2 through B7) were hand augured to evaluate subsurface conditions in the vicinity of the former tank pit and associated dispenser at the subject site. Bedrock was encountered in all of the boreholes at depths of approximately 3.0 to 3.5 feet below the ground surface, with the exception of two boreholes where bedrock was encountered at depths of approximately 5.5 and 8.0 feet below the ground surface. No groundwater was encountered in any of the boreholes.

The shallow depth at which bedrock was encountered in boreholes B1, B2, B5, B6 and B7 (3.0 to 3.5 feet), in conjunction with the slightly greater depth to bedrock in boreholes B3 and B4 (5.5 and 8.0 feet, respectively) adjacent to the former tank pit indicates that the tank pit may have been excavated into the weathered bedrock at the time of construction. The nature of the shallow depth to bedrock at the site is further supported by Mr. Kauffman's observations of the depth to which the probes were driven at the time of the CEC soil gas survey. Additional evidence of the shallow nature of bedrock at the site is the retaining wall at the northern edge of the property, which indicates that the site may have been leveled by excavation.

The observation of water in the tank pit at the time of tank removal, in conjunction with the absence of water in the tank pit following over-excavation of the tank pit, and the absence of groundwater in all of the boreholes indicates that the water observed in the tank pit at the time of tank removal was a limited amount of water which had accumulated in the tank pit cavity in the bedrock which was created at the time of tank installation.

Based on the presence of pea gravel in the former tank pit, it was not possible to evaluate conditions inside the tank pit. However, the results of soil samples collected on the bedrock surface at a depth of 3.5 feet within a horizontal distance of approximately 10 feet of the former tank pit (boreholes B2, B6 and B7) and at a depth of 8.0 feet immediately adjacent to the tank pit (borehole B4) indicate that petroleum hydrocarbons do not appear to be associated with the former tank pit.

The results of soil samples collected from the bottom of the boreholes in the vicinity of the former tank pit and dispenser did not show any detectable concentrations of petroleum hydrocarbons, with the exception of borehole B3 which is located adjacent to the former dispenser, where TPH-G was detected at the 3.5 and 5.5 foot depths at concentrations of 31 and 56 ppm, respectively. A soil gas survey was performed by CEC which showed elevated petroleum hydrocarbon vapors only in the vicinity of the former dispenser. The CEC soil gas survey, in conjunction with the soil sample results from the soil borings indicates that the

extent of petroleum hydrocarbons is limited to what appears to be the immediate vicinity of the former dispenser.

Based upon the shallow depth to bedrock at the site, in conjunction with the absence of groundwater and the limited extent of petroleum hydrocarbons encountered in the immediate vicinity of the former dispenser, P&D recommends that no further investigatory action be performed. In addition, P&D recommends that case closure be requested from the regulatory agencies.

#### DISTRIBUTION

Copies of this report should be distributed to Mr. Scott Seery at the Alameda County Department of Environmental Health and to Mr. Richard Hiatt at the San Francisco Bay Regional Water Quality Control Board. Copies of the report should be accompanied by a transmittal letter signed by the principal executive officer of the former east bay scaffolding facility.

#### LIMITATIONS

This report was prepared solely for the use of Mr. Melvin Kauffman. 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 judgement based on said information at the time of preparation of this document. Any subsurface sample results and observations presented herein are considered to be representative of the area of investigation; however, geological conditions may vary between borings and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which vary from these findings, the newly-revealed conditions must be evaluated and may invalidate the findings of this report.

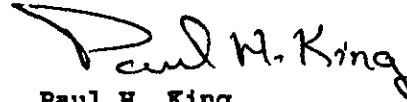
This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the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

This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature. P&D is not responsible for the accuracy or completeness of information provided by other individuals or entities which is used in this report. This report presents our professional judgement 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.

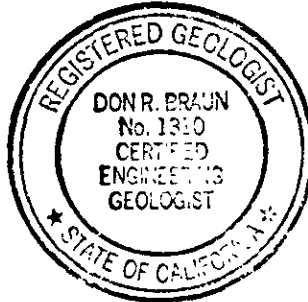
Should you have any questions, please do not hesitate to contact us at  
(510) 658-6916.

Sincerely,

P&D Environmental



Paul H. King  
Hydrogeologist



Don R. Braun  
Certified Engineering Geologist  
Registration No.: 1310  
Expiration Date: 6/30/96

PHK  
0063.R1

Attachments: Tables 1, 2, 3, 4  
Site Location Map (Figure 1)  
Site Plan (Figure 2)  
Site Plan Detail (Figure 3)  
Site Plan Detail (Figure 4)  
Laboratory Analytical Reports  
Chain of Custody Documentation

TABLE 1  
SUMMARY OF SOIL SAMPLE LABORATORY ANALYTICAL RESULTS

(Samples Collected by SEMCO  
On October 30, 1990)

Sample No.	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes
Soil-3'-W	2000	5.4	3.7	2.0	81
Soil-4'-N	140	13	0.090	2.3	3.6
Soil-Bottom	1	0.009	0.015	0.035	0.041

NOTES:

TPH-G = Total Petroleum Hydrocarbons as Gasoline.  
Results in parts per million (ppm), unless otherwise indicated.



TABLE 2  
SUMMARY OF GROUNDWATER SAMPLE LABORATORY ANALYTICAL RESULTS

(Sample Collected by CEC  
On November 30, 1990)

Sample No.	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes
W-1	ND	<del>ND</del> 0.3	ND	ND	<del>ND</del> 1.0

NOTES:

CEC = Certified Environmental Consulting, Inc.  
TPH-G = Total Petroleum Hydrocarbons as Gasoline.  
ND = Not Detected.

TABLE 3  
SUMMARY OF SOIL VAPOR SURVEY RESULTS

(Sample Collected by CEC  
On November 20, 1990)

<u>Probe No.</u>	<u>Sample Depth (feet)</u>	<u>OVM Concentration (ppm)</u>
1	3.0	319
2	3.0	13
3	3.0	3
4*	3.0	2
5	3.0	2
6	2.5	2.2
7	3.0	0

NOTES:

CEC = Certified Environmental Consulting, Inc.

\* Very wet zone reported to have been encountered at a depth of 4-6 feet.

TABLE 4  
SUMMARY OF LABORATORY ANALYTICAL RESULTS  
SOIL BORING SAMPLES

(Samples Collected on August 28-31, 1995)

Sample No.	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes
B2-3.5	ND	ND	ND	ND	ND
B3-3.5	31	0.009	0.060	0.28	0.11
<sup>3</sup> B4-3.5	56	0.074	0.21	1.3	0.18
<sup>34</sup> B4-3.5	ND	ND	ND	ND	ND
B5-3.5	ND	ND	ND	ND	ND
B6-3.5	ND	ND	ND	ND	ND
B7-3.5	ND	ND	ND	ND	ND

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

ND = Not Detected.

Results are in parts per million (ppm), unless otherwise indicated.

# P & D ENVIRONMENTAL

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Base Map From:  
U.S. Geological Survey  
Hayward, Calif.  
7.5 Minute Quadrangle  
Photorevised 1980

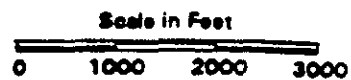
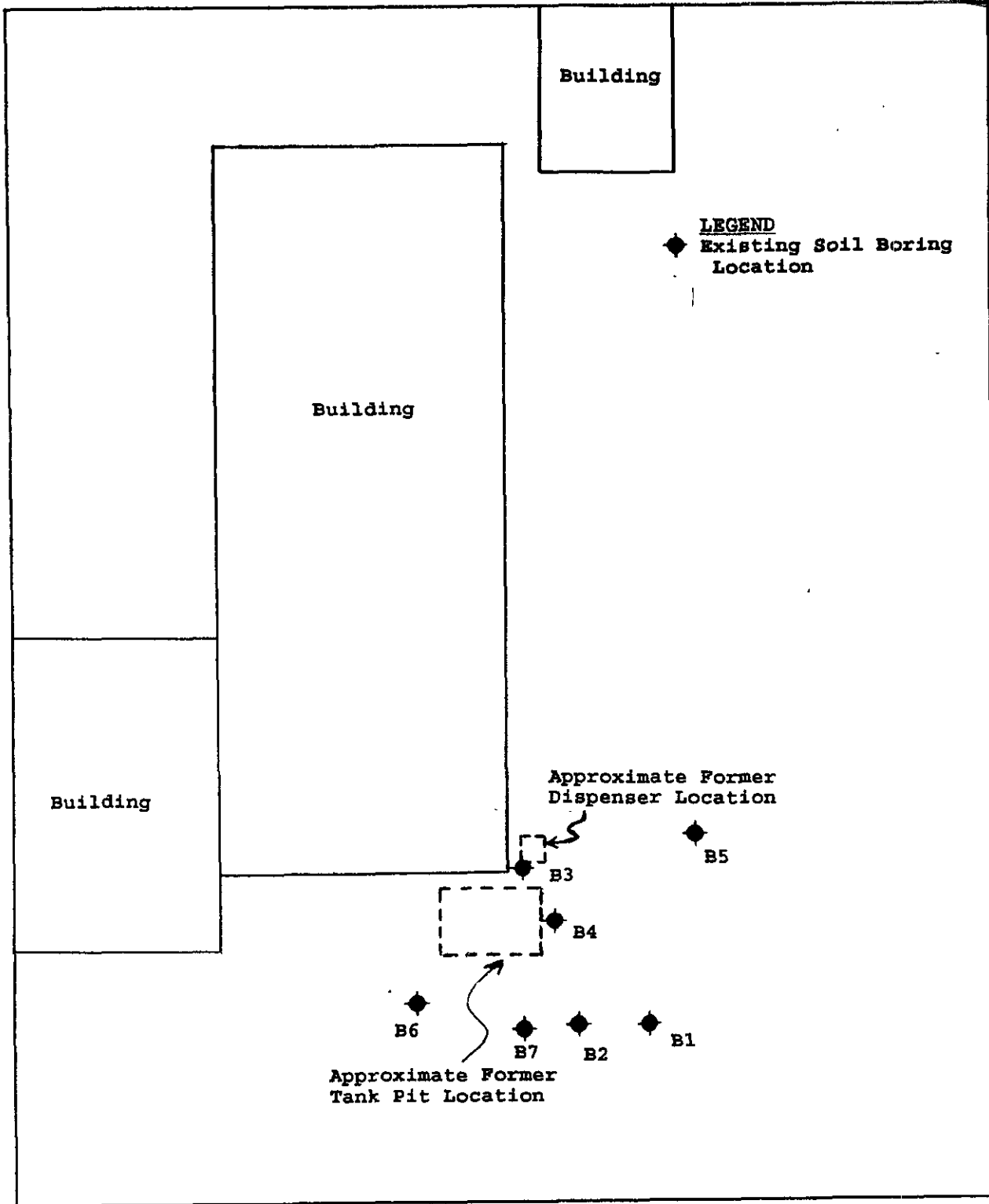


Figure 1  
**SITE LOCATION MAP**  
Former East Bay  
Scaffolding Facility  
2552 San Carlos Avenue  
Castro Valley, California

# P & D ENVIRONMENTAL

4020 Panama Court  
Oakland, CA 94611  
Telephone (510) 658-6916



Base Map From:  
P&D Environmental  
June, 1995

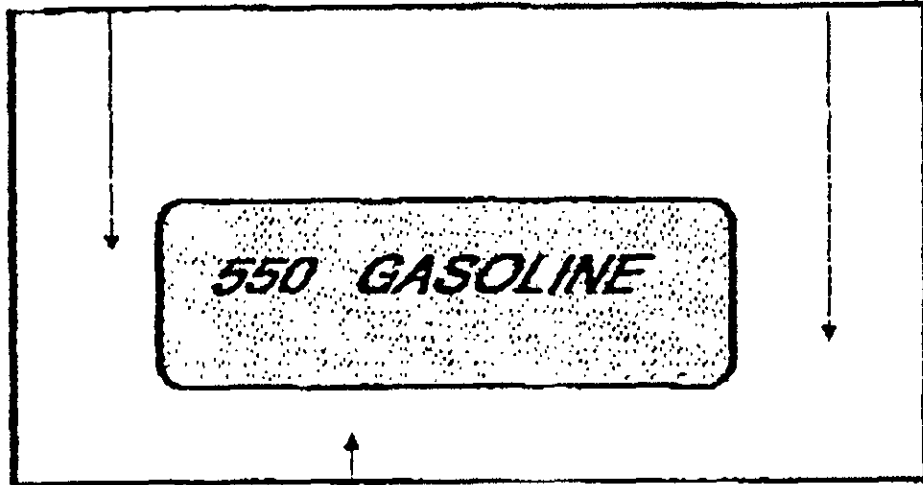
0 10 20  
Scale in Feet

Figure 2  
SITE PLAN  
Former East Bay  
Scaffolding Facility  
2552 San Carlos Avenue  
Castro Valley, California

# TANK AREA

**SAMPLE # 1**  
**#1-550-GW @ 3'**

**SAMPLE # 2**  
**#2-550-GN @ 4'**



**SAMPLE # 9**  
**#9-550 G B.O.P.**

**FIGURE 3**

**S E M C O**

**SITE PLAN DETAIL**  
**2552 S. ... (SAVE**  
**CASTRO VALLEY**



Base Map From  
Certified Environmental  
Consultants, Inc.  
Dated March, 1992

Building

Former Pump Location

Projected contaminant plume

CONCRETE PAD

◆ #5

2 ppm

5'

◆ #1  
315 ppm

◆ #7

2.5 ppm

14'

9'

Tank Excavation

◆ #4

7'

◆ #2  
13 ppm

6'

◆ #6  
2.2 ppm

#3

◆

3 ppm

LEGEND

◆ VAPOR PROBE LOCATION

⊗ WATER SAMPLE LOCATION



Base Map From  
Certified Environmental  
Consultants, Inc.  
Dated March, 1992

NOT TO SCALE

FIGURE 4

SITE PLAN SHOWING

SAMPLING LOCATIONS

11/90





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300 Monte Vista, #101

Oakland, CA 94611

Telephone (510) 658-6916

#4195

## CHAIN OF CUSTODY RECORD

APDX 144

PAGE 1 OF 1

PROJECT NUMBER: 0663		PROJECT NAME: Former-East Bay Scaffolding Facility			NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-Gas & STX					PRESERVATIVE	REMARKS												
SAMPLED BY: (PRINTED AND SIGNATURE) Ahmad (Signature) [Signature]																								
SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION																				
B2-3.5	8/29/95		Soil									1	X										366	Normal Turn Around
B3-3.5	8/29/95		"									1	X										"	" " "
B3-5.5	8/29/95		"									1	X										"	" " "
B4-3.0	8/30/95		"									1	X										"	" " "
B5-3.5	8/31/95		"									1	X										"	" " "
B6-3.5	8/30/95		"									1	X										"	" " "
B7-3.5	8/30/95		"									1	X										"	" " "
																						56005		
																						56006		
																						56007		
																						56008		
																						56010		
RELINQUISHED BY: (SIGNATURE) [Signature]		DATE 9/1/95	TIME 3:25	RECEIVED BY: (SIGNATURE) [Signature]		TOTAL NO. OF SAMPLES (THIS SHIPMENT) 7		LABORATORY: McLambell Analytical																
RELINQUISHED BY: (SIGNATURE) [Signature]		DATE 9/1	TIME 5:43	RECEIVED BY: (SIGNATURE) [Signature]		TOTAL NO. OF CONTAINERS (THIS SHIPMENT) 7		LABORATORY CONTACT: Ed. Hamilton																
RELINQUISHED BY: (SIGNATURE)		DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)		LABORATORY PHONE NUMBER: (510) 793-1620		SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO																
REMARKS:												56011												