

# P & D ENVIRONMENTAL

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

## FAX TRANSMITTAL COVER SHEET

Date: 2/5/96 Job #: \_\_\_\_\_

To: Barney Chan

Company: Alameda County Dept Env. Health

From: Paul H. King  
P&D ENVIRONMENTAL

Number of pages in this transmittal, including this cover sheet: 8

SUBJECT: Merritt Corp Subsurf Invest. Work Plan

MESSAGE: Barney,

Please let me know if this is adequate.

Thanks!

Paul

① ULR report

② overexcavated piles (another 2' deep)

If transmittal is incomplete, please call (510) 658-6916.  
P&D Environmental fax number: (510) 658-9074.

DESTINATION FAX NUMBER: 337-9335

## P & D ENVIRONMENTAL

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

February 5, 1996  
Work Plan 0101.W1

Mr. Barney Chan  
Alameda County Environmental Protection Division  
1131 Harbor Bay Parkway, Room 250  
Oakland, CA 94502

**SUBJECT: SUBSURFACE INVESTIGATION WORK PLAN**  
Merritt Environmental Corporation Facility  
1044 5th Avenue  
Oakland, California

Dear Mr. Chan:

P&D Environmental (P&D) is pleased to present this work plan for subsurface investigation at the subject site. A total of three boreholes will be drilled in the vicinity of the former underground storage tank, and one soil sample and one groundwater sample will be collected from each borehole for laboratory analysis. A Site Location Map is attached as Figure 1, and a Site Plan Detail is attached as Figure 2.

### BACKGROUND

The subject site is located in a developed portion of the City of Oakland approximately 3,000 feet to the south of Lake Merritt. The site and surrounding topography are relatively flat.

It is P&D's understanding that the subject facility was previously used by Merritt Environmental Corporation as a storage yard for equipment and materials. Based upon discussions with Mr. Jeff Hammond of Merritt Environmental Corporation, the underground storage tank was installed some time in the 1950's. The underground storage tank was reported to always have contained gasoline. It is P&D's understanding that the tank was most recently pressure tested in October, 1994 and was reported to have passed the pressure test with no indication of leaks.

Use of the tank was reported to have been discontinued at the end of 1994, at which time the tank was reported to have been emptied of its contents. The tank capacity was 1,000 gallons. The fill port for the gasoline tank was located directly above the tank, at the west end of the tank. One vent line was reported to have been connected to the tank, with one dispenser located adjacent and to the south of the tank. The dispenser line and vent line were also reported to have been connected to the tank at the west end of the tank. The tank was located beneath the sidewalk at the facility on 5th Avenue. The former location of the tank pit at the facility is shown in Figure 2.

On September 14, 1995 Merritt Environmental Corporation uncovered one 1,000 gallon capacity gasoline underground storage tank and prepared the tank for removal. However, because of scheduling difficulties, it was necessary to postpone the removal of the tank from the site.

On October 18, 1995 Merritt Environmental Corporation removed the 1,000-gallon capacity gasoline fuel tank from the tank pit at the subject site. The tank was constructed of single wall steel. Groundwater was not encountered in the tank pit. Two soil samples were collected from beneath the ends of the tank from the bottom of the tank pit. The bottom of the tank was at a depth of approximately eight feet below grade. The samples, designated as T1-10 and T2-10, were collected at a depth of approximately ten feet below grade, approximately two feet into the native material beneath the former ends of the tank. Sample T1-10 was collected from the end of the pit closest to East 11th Street.

February 5, 1996  
Work Plan 0101.W1

The laboratory analytical results of the soil samples T1-10 and T2-10 showed that TPH-G was detected at concentrations of 130 and 64 ppm, respectively, and that lead was detected at concentrations of 4.4 and 5.5 ppm, respectively. Benzene was only detected in sample T1-10.0 at a concentration of 0.059. Review of the laboratory analytical reports indicates that the TPH-G results are aged gasoline. The sample results are summarized in Table 1. Documentation of the sample collection and laboratory reports are presented in P&D's Underground Storage Tank Removal Report 0101.R1 dated January 22, 1996.

#### SCOPE OF WORK

The scope of work proposed by P&D entails the following activities.

- o Regulatory agency coordination and health and safety plan preparation.
- o Collection of soil and groundwater samples from three boreholes.
- o Arrange for analysis of the soil and groundwater samples from the boreholes for Total Petroleum Hydrocarbons as Gasoline (TPH-G), and for Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX).
- o Report preparation.

#### Regulatory Agency Coordination

Following approval of this work plan, a permit application will be submitted to the Zone 7 Water Agency for the drilling of the three boreholes. It is P&D's understanding that permits from the City of Oakland have been obtained by Merritt Environmental Corporation.

After the permits have been approved, Underground Service Alert will be notified for underground utility location and a date scheduled for the drilling of the soil borings. The date for field work will be set for the earliest possible date available, and the Alameda County Department of Environmental Health (ACDEH) will be notified of the date by telephone as soon as it has been set. Prior to the beginning of field work, a health and safety plan will be prepared.

#### Soil Boring and Sample Collection

To evaluate the vertical and horizontal extent of petroleum hydrocarbons in soil in the vicinity of the tank pit, three exploratory soil borings, designated as B1 through B3, will be installed using geoprobe technology. The proposed locations of the soil borings are shown in Figure 2.

The boreholes will be drilled using a 1.5-inch outside diameter geoprobe. The geoprobe sampler will be washed with an Alconox solution followed by a clean water rinse prior to use in each borehole. Soil samples will be collected from the boreholes into brass tubes at a maximum of five foot intervals, at changes in lithology and at any areas of obvious contamination using a geoprobe soil sampler lined with brass tubes. The soil samples will be logged in the field in accordance with standard geologic field techniques and the Unified Soil Classification System.

The boreholes will be advanced to first encountered groundwater, which is anticipated at a depth of approximately 15 to 20 feet. Soil samples collected from above the water table beginning at a depth of ten feet will be evaluated using a model 580B OVM photoionization detector (PID) equipped with a 10.3 eV bulb and retained in the brass tubes pending selection for laboratory analytical purposes. The PID will be calibrated prior to use at the site using a 100 ppm

February 5, 1996  
Work Plan 0101.W1

3

isobutylene standard. The soil sample from each borehole exhibiting the highest PID reading will be retained for laboratory analysis. The ends of the brass tubes for these samples will be successively sealed with aluminum foil and plastic endcaps. The brass tubes will then be labeled, placed into ziplock baggies, and stored in a cooler with ice pending delivery to McCampbell Analytical, Inc. in Pacheco, California. McCampbell Analytical, Inc. is a State-accredited hazardous waste testing laboratory. Chain of custody procedures will be observed for all sample handling.

Once groundwater is encountered, groundwater samples will be collected from the boreholes using the Geoprobe's screen point groundwater sampler. The sampler will be washed with an Alconox solution and clean water rinse prior to use in each borehole. The groundwater samples will be transferred from the sampler to 40-milliliter Volatile Organic Analysis (VOA) vials and capped with Teflon-lined screw caps. The VOAs will be overturned and tapped to assure that no air bubbles are present. The VOAs will then be labeled and stored in a cooler with ice pending delivery to McCampbell Analytical, Inc. in Pacheco, California.

Following completion of exploratory soil boring activities, the boreholes will be filled with neat cement grout. Any soil generated during the subsurface investigation will be stored onsite and covered with visqueen pending characterization and appropriate disposal.

#### Laboratory Analysis

The soil and groundwater samples will be analyzed for Total Petroleum Hydrocarbons as Gasoline (TPH-G) using EPA Method 5030 and Modified EPA Method 8015; and for Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX), using EPA Method 8020.

#### Report Preparation

Following receipt of the laboratory analytical results for the soil and groundwater samples, a report will be prepared documenting soil and groundwater field activities and the sample results. The report will include a site plan showing the drilling locations, descriptions of the equipment and methods used for sample collection, tabulated summaries of the sample results, copies of the laboratory analytical reports and chain of custody documentation, and the stamp of an appropriately registered professional.

#### SCHEDULE

The following schedule addresses elements identified in this work plan.

<u>Activity</u>	<u>Calendar Days</u>
Work plan submittal.....	Day 0
Work plan approval.....	Day 1
Permit application approval.....	Day 1
Set Geoprobe drilling date.....	Day 1
Collection of soil and groundwater samples.....	Day 3
Receipt of sample results from laboratory.....	Day 10
Submittal of draft report to Merritt Corp for review.....	Day 17
Submittal of final report to ACDEH.....	Day 24

Sincerely,

P&D Environmental

*Paul H. King*

Paul H. King  
Hydrogeologist



*Don R. Braun*

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

cc: Mr. Jeff Hammond, Merritt Environmental Corporation

Attachments: Tables 1  
Site Location Map (Figure 1)  
Site Plan Detail (Figure 2)

PHK/sog  
0101.W1

P & D ENVIRONMENTAL

February 5, 1996  
Work Plan 0101.W1

5

TABLE 1

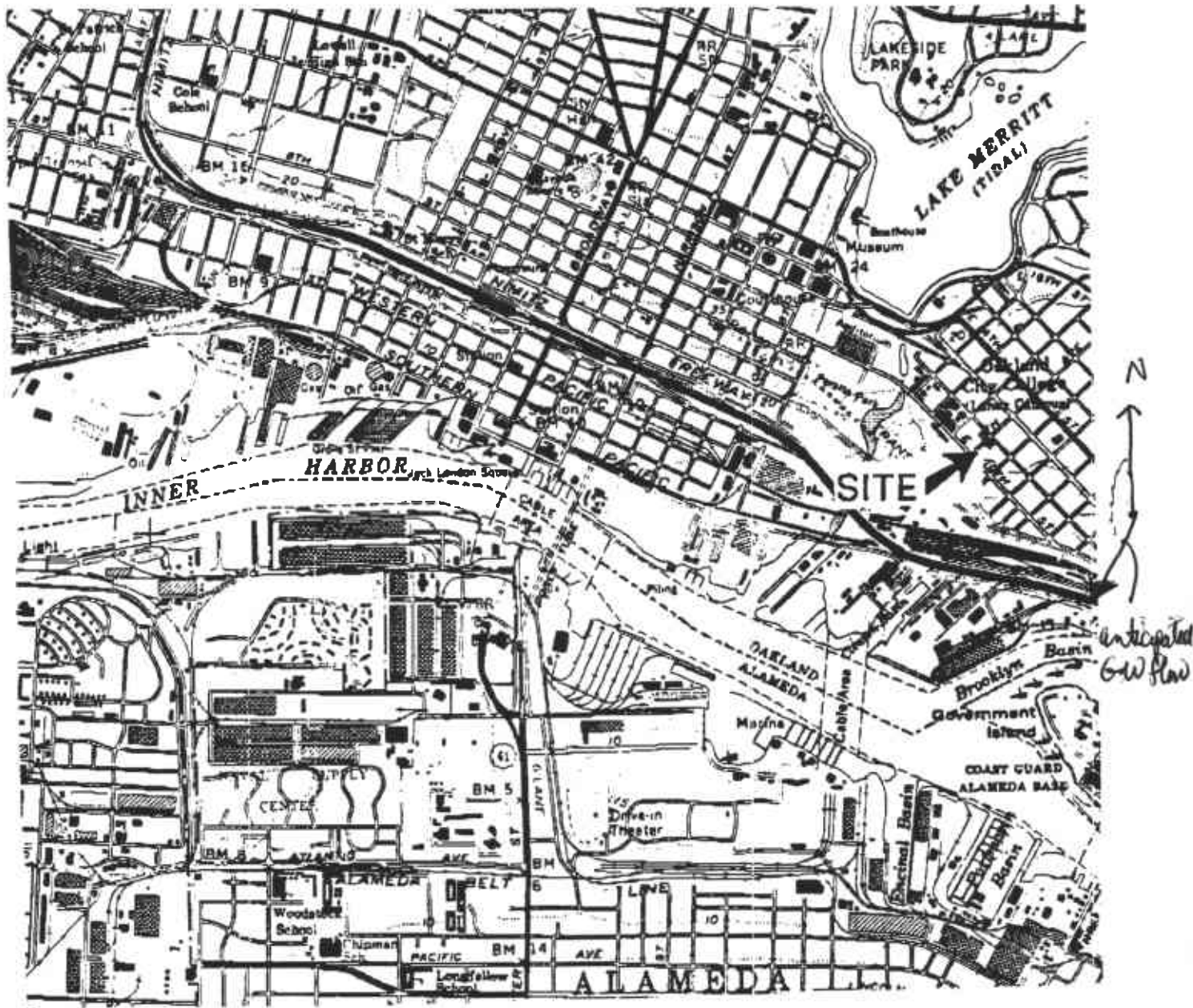
SUMMARY OF LABORATORY ANALYTICAL RESULTS  
TANK PIT SOIL SAMPLES  
(Samples Collected on October 18, 1995)

Sample No.	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total Lead
T1-10	130	0.059	0.19	0.60	3.9	4.4
T2-10	64	ND	0.030	0.21	2.3	5.5

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

ND = Not Detected.

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



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

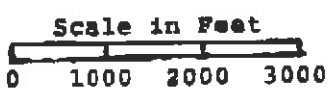
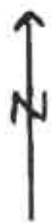


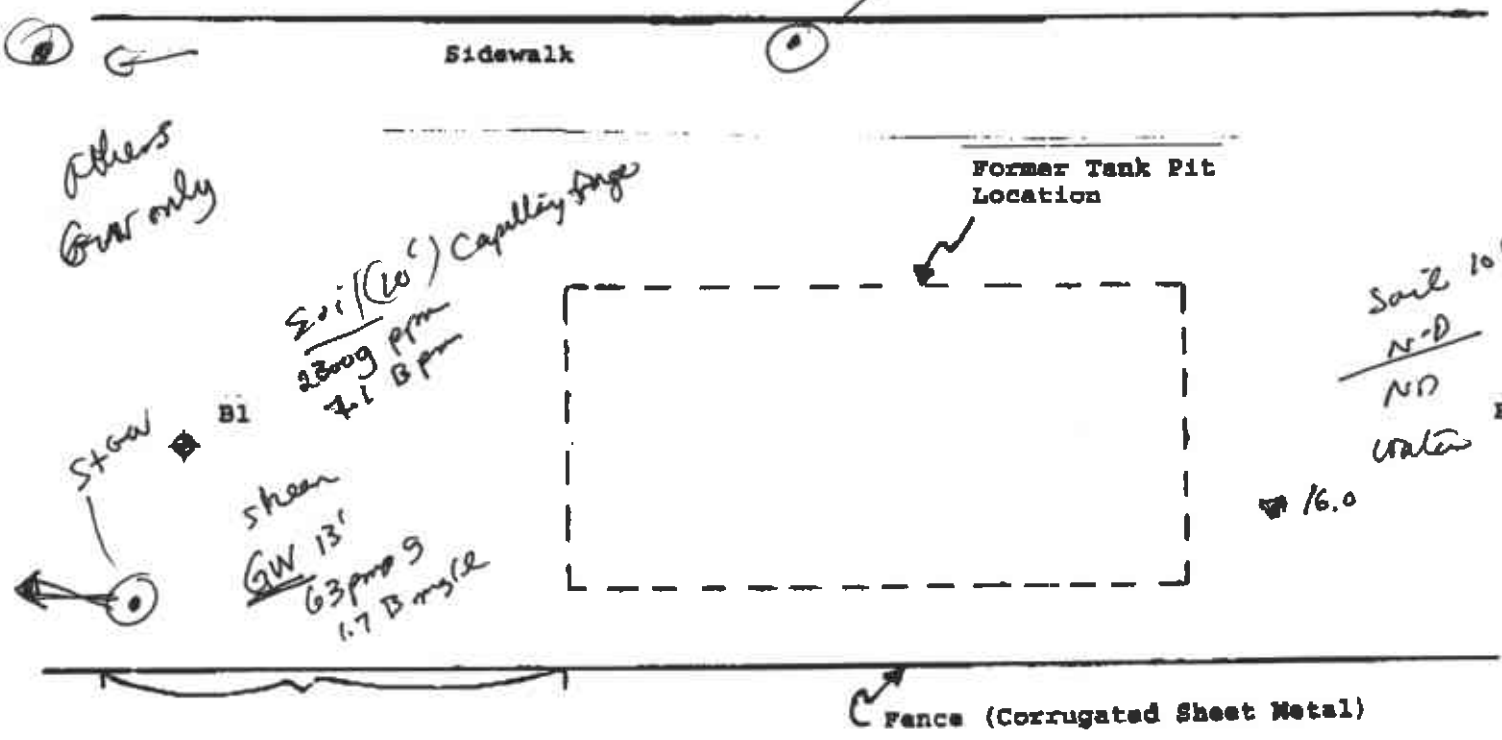
Figure 1  
**SITE LOCATION MAP**  
 Merritt Construction, Inc.  
 1044 5th Avenue  
 Oakland, California

# P & D ENVIRONMENTAL

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

*2/16/92  
Cornwall King*

*Proposed new borings*



*Address  
GWR only*

Yard Entrance

To East 11th Street



B3

12g 0.036 B soil

16.5

Shear GW

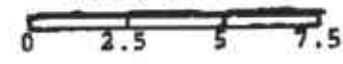
60g

1.2 B mg/l

**LEGEND**  
◆ Proposed Soil Boring Location

North

Scale in Feet



Base Map From:  
P&D Environmental  
October, 1995

Figure 2  
**SITE PLAN DETAIL**  
Merritt Construction, Inc.  
1044 5th Avenue  
Oakland, California