

# ENVIRONMENTAL AUDIT, INC.

1000-A ORTEGA WAY • PLACENTIA, CA 92670-7125

714/632-8521 • FAX: 714/632-6754

0.5

*is extraction ongoing? Franks Mercedo x226*

September 12, 1995

Project No. 1233

Ms. Eva Chu  
Hazardous Materials Specialist  
Alameda County Health Care Services  
Department of Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577

SEP 16 PM 1:21  
EVA CHU

**RE: FOCUSED SUBSURFACE INVESTIGATION**  
**Montgomery Ward Auto Service Center**  
**7575 Dublin Boulevard, Dublin, California**

Dear Ms. Chu:

Enclosed herewith is a copy of our report entitled, "Focused Subsurface Investigation, Montgomery Ward Auto Service Center, 7575 Dublin Boulevard, Dublin, California," dated September 8, 1995. Following your review of this document, Montgomery Ward & Co., Incorporated would like to schedule a meeting with you to discuss the results of our investigation and future activities at the site.

Based on the information contained in this and previous documents Environmental Audit, Inc. (EAI) has prepared, EAI has calculated the risk based clean-up levels for TPH (as gasoline) and benzene using a risk of  $1 \times 10^{-4}$ . (We previously presented calculations for TPH and benzene using risks of  $1 \times 10^{-5}$  and  $1 \times 10^{-6}$  [see EAI, 1994; EAI, 1995, EAI, 1995A].) Use of a  $1 \times 10^{-4}$  risk results in a risk based clean-up level of ground water for emissions to indoor air for TPH (as gasoline) of 111,320  $\mu\text{g/l}$  (or 111 mg/l) and for benzene of 6,533  $\mu\text{g/l}$  (or 6.5 mg/l). For outdoor air, the calculated risk based clean-up levels are substantially higher, i.e., less stringent. The risk based clean-up levels are calculated at 3,521,640  $\mu\text{g/l}$  (or 3,521 mg/l) for TPH in ground water and 206,440  $\mu\text{g/l}$  (or 206 mg/l) for benzene in ground water. Comparison of these calculated values to current ground water conditions at the site indicate that none of the TPH (as gasoline) and benzene concentrations in ground water exceed the risk based clean-up level calculated based on use of a  $1 \times 10^{-4}$  risk.

Please call the undersigned or Steven Bright, if you have any questions or need additional information. We look forward to hearing from you soon in regards to the scheduling of this meeting.

*why was  $1 \times 10^{-4}$  risk chosen. should stay w/  $10^{-5}$  or  $10^{-6}$*

Sincerely,

ENVIRONMENTAL AUDIT, INC.

*Frank S. Muramoto*

Frank S. Muramoto, R.G., C.HG.  
Senior Geologist



FSM:SAB:shm

enclosure

cc: C. West, Montgomery Ward (w/enclosure)  
G. Jonas, Montgomery Ward (w/enclosure)  
M. Gilmartin, Straw & Gilmartin (w/enclosure)  
R. Enea, Enea Properties (w/enclosure)  
R. Arulanatham, Bay Area RWQCB

#### REFERENCES CITED

Environmental Audit, Inc., (EAI, 1994), "Risk Based Corrective Actions Analysis, Montgomery Ward Auto Service Center and Enea Properties Sites, Dublin, California," dated October 14, 1994.

\_\_\_\_\_, (EAI, 1995), "Addendum to Risk Based Corrective Actions Analysis, Montgomery Ward Auto Service Center and Enea Properties Sites, Dublin, California," letter dated February 6, 1995 to Ms. Eva Chu, Alameda County Environmental Health Department.

\_\_\_\_\_, (EAI, 1995A), "Responses to Comments, Addendum to Risk Based Corrective Actions Analysis, Montgomery Ward Auto Service Center and Enea Properties Sites, Dublin, California," letter dated February 16, 1995 to Ms. Medula Logan, Alameda County Environmental Health Department.

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**FOCUSED SUBSURFACE INVESTIGATION**  
7575 Dublin Boulevard  
Dublin, California

*Prepared for:*

Montgomery Ward & Co., Incorporated  
39201 Fremont Boulevard  
Fremont, CA 94538

*Submitted to:*

ALAMEDA COUNTY  
Environmental Health Division  
1131 Harbor Bay Parkway, Room 250  
Alameda, CA 94502-6577

September 8, 1995

Project No. 1233

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**ENVIRONMENTAL AUDIT, INC.** ®

Planning, Environmental Analyses and Hazardous  
Substances Management and Remediation

1000-A ORTEGA WAY  
PLACENTIA, CA 92670-7125  
714/632-8521

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## 1.0 INTRODUCTION

This document presents the results of a focused subsurface investigation conducted at the Montgomery Ward Auto Service, 7575 Dublin Boulevard, Dublin, California (Site) (see Figures 1 and 2). The general scope of work relating to this focused subsurface investigation was discussed in a meeting held at the offices of Alameda County, Department of Environmental Health (County) between representatives of the County, the California Regional Water Quality Control Board, Bay Area Region (RWQCB), and Montgomery Ward & Co., Incorporated (Montgomery Ward). A Work Plan providing the details of the proposed work was subsequently submitted to the County for approval. The County approved the Work Plan in its letter dated May 2, 1995.

### 1.1 BACKGROUND

In or about November 1988, it was determined that one of the three 10,000-gallon capacity USTs located at the Montgomery Ward Site did not have integrity (see Figure 2). These USTs were located in a common excavation and stored unleaded, premium and regular gasoline. Montgomery Ward ceased using the USTs in November 1988 and retained A.D. Selditch & Associates, Inc. (ADS) to assist them in assessing the extent of petroleum hydrocarbons in the soil and ground water.

### 1.2 INITIAL SITE ASSESSMENT

Between December 1, 1988 and February 8, 1989, ADS drilled and sampled eight borings on the Montgomery Ward Site, i.e., borings 5, 6, 7, 8, 9, 10, 12 and 13. These borings were converted into ground water monitoring wells B-5, B-6, B-7, B-8, B-9, B-10, B-12 and B-13, respectively. These borings/wells were installed prior to the removal of the USTs; however, there is no drawing in the ADS report which shows the location of all these wells. Figure 2 shows the location of the wells presently situated on the Montgomery Ward Site.

Selected soil samples from each boring were analytically tested for total petroleum hydrocarbons (TPH) using EPA Method 8015, and benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA Method 8020. TPH concentrations ranging from below laboratory detection limits to 2,180 milligrams per kilogram (mg/kg) were detected in the soil samples. Benzene was detected in the soil samples and ranged in concentration from 0.18 to 55 mg/kg. Toluene, xylenes and ethylbenzene also were detected. Water samples collected from the wells contained dissolved concentrations of TPH and BTEX. Lead was detected at 2.6 milligrams per liter (mg/l) in the sample collected from well B-13, and well B-12 reportedly contained free-product (see ADS, 1989).

### 1.3 REMOVAL OF THE USTs

On or about May 18, 1989, the three gasoline USTs and two associated fueling islands were removed from the Montgomery Ward Site. Soils containing petroleum hydrocarbons reportedly were present throughout most of the excavation. The soil excavated in association with removal of the USTs was disposed of off-site and the excavation backfilled with gravel. Wells B-6, B-7, B-8, B-9 and B-13 were destroyed during removal of the USTs (see ADS, 1989).

*that was  
water  
sample*

#### **1.4 ADDITIONAL SITE ASSESSMENT**

In August 1989, ADS supervised the installation of two additional ground water monitoring wells (B-15 and B-16) at the Montgomery Ward Site (see Figure 2). A composite soil sample from each boring (i.e., the soil samples collected from each boring at 5, 10, 15 and 20 feet were composited) was tested for TPH and BTEX. TPH concentrations ranged from 6.3 to 10.2 mg/kg and the BTEX concentrations ranged from 0.26 to 6.5 mg/kg. TPH and BTEX also were detected in ground water samples collected from wells B-15 and B-16 (see ADS, 1989).

#### **1.5 GROUND WATER EXTRACTION/TREATMENT SYSTEM**

In or about the early part of 1990, an ADS designed extraction system began to control the migration of petroleum hydrocarbons in the ground water using a 15-inch diameter ground water extraction well (well B-12) (see Figure 2). The extracted ground water was filtered to remove suspended particles, treated using two 2,500-pound activated carbon canisters connected in series, and discharged to the sanitary sewer system pursuant to a permit issued by the Dublin-San Ramon Services District (see ADS, 1989).

Changes to the ground water extraction and treatment system were made in February 1992. These changes consisted of installing an eight gallon per minute (gpm) rated oil/water separator, product and surge tanks, transfer pump, and filter system.

#### **1.6 GROUND WATER PUMPING TESTS**

Environmental Audit, Inc. (EAI) was retained in 1991 to conduct ground water pumping tests on wells located on the Montgomery Ward Site to determine whether the existing extraction rate was sufficient to capture contaminated ground water located beneath the site. The results of the pumping tests revealed that extraction at a rate of eight gallons per minute from extraction well B-12 should be sufficient to contain ground water beneath the Montgomery Ward Site (see EAI, 1991). However, the hydraulic response of the shallow ground water encountered in the wells on the Montgomery Ward Site was more indicative of a silty sand and sand type lithology rather than the silty clays and clays which were actually encountered during investigation activities.

#### **1.7 QUARTERLY GROUND WATER MONITORING**

Quarterly ground water monitoring activities were initiated by EAI at the Montgomery Ward Site in April 1992. Quarterly ground water monitoring consists of the gauging and sampling of the wells associated with the Montgomery Ward Site, and the analytical testing of the obtained samples (see Table 1).

#### **1.8 SUPPLEMENTAL OFF-SITE ASSESSMENT**

In May 1993, EAI installed three off-site ground water monitoring wells (MW-100, MW-101 and MW-102) and advanced and sampled eight hydropunches (HP-1 through HP-8) (see Figure 3) (see EAI, 1993). Soil and ground water samples were tested for total petroleum hydrocarbons as gasoline (TPH-G) and BTEX. Table 1 shows the results for ground water samples, and Table 2 the results for soil samples.

## 1.9 CONE PENETROMETER TESTING

Cone penetrometer testing (CPT) was conducted on the Montgomery Ward and adjacent Enea Properties sites in July 1994 (see EAI, 1994). On the Montgomery Ward site, six CPT soundings which included pore pressure measurements, pore pressure dissipation tests, and soil vapor and soil sampling were conducted (see Figure 3). The testing showed that the predominant lithologies present to the depth explored (maximum 52 feet below ground surface [bgs]) were clayey silt, silty clays, and clays. These soils were soft and unconsolidated.

Vapor and soil sampling also were conducted as part of this CPT investigation. The vapor sampling was inconclusive at depths of nine and eleven feet bgs. Analytical testing of soil samples obtained at approximately 13 and 15 feet bgs showed that TPH-G and BTEX were detected in the soil samples. The TPH-G ranged from below laboratory detection limits to 290 ppm, and the total BTEX ranged from below laboratory detection limits to 52.2 mg/kg. The samples obtained at about 13 feet bgs were believed to be near the top of the water table; the samples obtained at approximately 15 feet were in the water table.

*should have been done at < 3' bgs also*

## 1.10 EFFICACY OF GROUND WATER EXTRACTION SYSTEM

A ground water extraction system is operating at the Montgomery Ward Site to control the migration of dissolved petroleum hydrocarbons in the ground water. The ground water extraction system pump is currently recovering on average of about four gallons per minute which appears to be the long term yield of the extraction well (see EAI, 1995).

## 1.11 PETROLEUM HYDROCARBON DISTRIBUTION IN SOIL

Cross sections A-A' and B-B' show the geologic interpretation of the shallow soils encountered at the Montgomery Ward Site (see Figures 3 through 5). Also shown on the cross sections are the analytical testing results of soil samples obtained during the drilling of these borings/wells. These data show that petroleum hydrocarbons were detected in unsaturated and saturated zone soils in borings/wells B-10, B-12, B-15, B-16, and SBCP1 through SBCP4 (see Table 2 and Figures 4 and 5).

## 1.12 RISK BASED CORRECTIVE ACTIONS ANALYSIS

A risk based corrective actions analysis (RBCA) was completed in order to determine clean-up levels for BTEX and TPH-G in ground water at the Montgomery Ward and Enea Properties sites (see EAI, 1994B; EAI, 1995; and EAI, 1995A). The results of these analyses showed that depending on risk used ( $1 \times 10^{-6}$  or  $1 \times 10^{-5}$ ), the risk based clean-up levels (RBCL) for TPH in ground water for emissions into indoor air ranges from 1,113  $\mu\text{g}/\text{l}$  to 11,132  $\mu\text{g}/\text{l}$ , respectively. For benzene in ground water, the RBCL for indoor air ranges from 65.3  $\mu\text{g}/\text{l}$  ( $1 \times 10^{-6}$  risk) to 653  $\mu\text{g}/\text{l}$  ( $1 \times 10^{-5}$  risk). For outdoor air, the RBCLs for TPH ranged from 35,216  $\mu\text{g}/\text{l}$  ( $1 \times 10^{-6}$  risk) to 11,132  $\mu\text{g}/\text{l}$  ( $1 \times 10^{-5}$  risk) and for benzene from 2,604  $\mu\text{g}/\text{l}$  ( $1 \times 10^{-6}$  risk) to 20,644  $\mu\text{g}/\text{l}$  ( $1 \times 10^{-5}$  risk).

## 2.0 FIELD WORK

### 2.1 DRILLING AND SOIL SAMPLING

Ten borings (GP-1 through GP-10) were drilled and sampled at the Montgomery Ward site on June 22, 1995 as approximately shown on Figure 2. The borings were advanced using direct push technology by Transglobal Environmental Geochemistry (TEG) Strataprobe System, under the supervision of Environmental Audit, Inc. (EAI) staff. Direct push technology uses hydraulics to force a probe-drive sampler into the soil. Unlike split-spoon samplers used in hollow stem auger drilling, the probe-drive sampler containing two six-inch by 1.5-inch brass sample liners remain sealed while it is pushed into the soil to the desired sampling depth. A piston stop-pin at the trailing end of the probe-drive sampler is removed by means of extension rods inserted down the inside diameter of the probe rods after the sampler has been driven to depth. This enables the piston tip to retract into the sample tube and liner as it is displaced by soil while the sample is being pushed into the sampler. The probe rods are then retracted from the hole in order to recover soils contained in the sample liner. One benefit of this sampling technique is that no soil cuttings are generated. All borings were logged in accordance with the Unified Soil Classification System (see Appendix A).

Soil samples were collected at approximately 9-10 feet, 13-14 feet, and 15-16 feet bgs. The samples were collected from each boring using brass rings mounted within the probe-drive sampler. After sample recovery, the lowermost brass ring was retained for delivery to an Alameda County, Department of Environmental Health mobile analytical laboratory which was on-site for testing (see Section 3.0). The upper brass sampling ring was used for determination of lithology and vapor sampling. The ends of the sample liner containing the sample for analytical testing were covered with plastic caps. The samples were labeled with the sample point identification, EAI project number, depth interval, time and date, and immediately placed into an ice chest chilled using frozen blue ice. The samples were kept chilled until delivered to the mobile laboratory for analytical testing. All samples were logged on a chain-of-custody record form (see Appendix B).

A Photovac MicroTIP MP-1000 Photoionizer (PID) calibrated against an isobutylene gas standard and a Bacharach TLV Sniffer (TLV Sniffer) calibrated against a hexane standard were used on the soil contained in the second sampling tube against the sampler cutting shoe, at each sampling interval within the borings, to determine if volatile hydrocarbon vapors were emanating from the soil. Each sample was placed in an air tight "Ziploc" plastic bag. The soil samples were allowed to sit in the sun and then the head space in the bags were analyzed using the PID and the TLV Sniffer. The results of the field testing were recorded on the boring logs (see Appendix A).

All borings were backfilled from termination depth to approximately four inches bgs using 1/4-inch bentonite pellets which were then hydrated with tap water, and the remaining annular space sealed to the surface using asphalt.

### 2.2 SAMPLING EQUIPMENT CLEANING PROTOCOL

The drive sampler was disassembled and decontaminated prior to each sampling using the following procedure:



- All excess soil was scraped off the sampler parts;
- The sampler was washed in a solution of Alconox detergent and tap water; and
- The sampler was rinsed with distilled water.

### 3.0 ANALYTICAL TESTING

All samples for analytical testing were delivered to the County's mobile analytical laboratory, a state of California certified mobile hazardous waste testing laboratory (certificate no. 1944). The mobile laboratory is certified for all tests proposed as part of this investigation.

All soil samples were tested for TPH-G using modified EPA Method 8015 and benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA Method 8020. Table 3 summarizes the results of the testing. Appendix C contains the laboratory reports.

### 4.0 DISCUSSION

The results of the analytical testing indicate that maximum detected TPH-G concentration was 44.9 mg/kg in sample GP-9 at 12.5-13'. No benzene was detected in any of the soil samples tested. Toluene was detected in concentrations ranging from not detected (only one sample GP-1 @ 15-15.5') to a maximum of 1.4 mg/kg (GP-4 at 12.5-13'). Xylenes were detected in every sample tested in concentrations ranging from 0.562 to 5.41 mg/kg. Ethylbenzene was detected in seven of the samples tested at a maximum concentration of 1.040 mg/kg (sample GP-1 at 12.5-13').

### 5.0 LIMITATION

Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities. No other warranty or representation, expressed or implied, is made as to the professional advice contained in this report.

## 6.0 REFERENCES

A.D. Selditch & Associates, Inc., (ADS, 1989), "Proposed Plan Groundwater Cleanup, Montgomery Ward, 7575 Dublin Blvd., Dublin, CA 94568", dated 1989.

Environmental Audit, Inc., (EAI, 1991), "Ground Water Pumping Tests and a Review of Ground Water Treatment System, 7575 Dublin Boulevard, Dublin, California," dated November 1, 1991.

\_\_\_\_\_, (EAI, 1993), "Phase II Soil and Ground Water Investigation, Montgomery Ward Auto Service Center, 7575 Dublin Boulevard, Dublin, California," dated June 16, 1993.

\_\_\_\_\_, (EAI, 1994), "Phase III Subsurface Investigation, Montgomery Ward Auto Service Center and Enea Properties Sites, Dublin, California," dated October 14, 1994 (EAI, 1994).

\_\_\_\_\_, (EAI, 1994A), "Risk Based Corrective Actions Analysis, Montgomery Ward Auto Service Center and Enea Properties Sites, Dublin, California," dated October 14, 1994.

\_\_\_\_\_, (EAI, 1995), "Responses to Comments, Addendum to Risk Based Corrective Actions Analysis, Montgomery Ward Auto Service Center and Enea Properties Sites, Dublin, California," letter dated February 16, 1995 to Ms. Medula Logan, Alameda County Environmental Health Department.

\_\_\_\_\_, (EAI, 1995A), "Quarterly Ground Water Monitoring Report, Third Quarter 1995, Montgomery Ward Auto Service Center , 7575 Dublin Boulevard, Dublin, California," in press.

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**TABLES**

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**TABLE 1**

**ANALYTICAL TESTING RESULTS**

Parts per billion (ppb)

Compounds	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Lead	
<b>Well B-5</b>							
04-16-92	4400	670	160	280	320	ND	
07-24-92	31000	5400	2600	2200	5800	ND	
10-22-92	9100	1100	190	520	740	ND	
01-15-93	2300	530	160	300	470	7.9	
04-15-93	4900	600	160	470	390	ND	
07-14-93	8800	590	210	840	1100	9.9	
10-14-93	4500	530	46	490	350	ND	
01-13-94	120	15	1.9	12	11	ND	
04-04-94	5700	450	39	350	400	ND	
07-05-94	4	2200	69	13	95	ND	
10-03-94	4700	190	38	510	570	ND	
01-18-95	2200	53	27	120	280	ND	
04-21-95	5800	90	74	300	910	4.0	
07-28-95	2600	57	26	190	570	2.5	
<b>Well B-10</b>							
04-16-92	7300	1400	640	880	1100	ND	
07-24-92	27000	3800	1600	2000	4000	ND	
10-22-92	16000	2300	340	1100	1200	ND	
01-15-93	10000	1400	310	730	1100	13	
04-15-93	8100	580	270	810	580	19	
07-14-93	6400	840	120	750	800	7.1	
10-14-93	100000	720	120	930	1100	ND	
01-13-94	18000	990	180	1300	2400	ND	
04-04-94	4	12000	370	96	900	1800	ND
07-05-94	7800	170	50	550	810	ND	
10-03-94	6300	120	33	480	630	ND	
01-18-95	3300	38	28	160	450	2.9	
04-21-95	4200	39	8.6	220	310	ND	
07-28-95	2900	22	4.3	140	330	2.0	
<b>Well B-12</b>							
04-16-92	12000	1300	1100	510	1200	ND	
07-24-92	12000	1000	630	520	1000	ND	
10-22-92	11000	370	230	400	940	ND	
01-15-93	120	2.8	ND	1.6	3.6	11	
04-15-93	7100	730	240	350	570	ND	
07-14-93	4500	540	97	380	610	ND	
10-14-93	4	11000	710	170	650	1600	ND
01-13-94	6000	330	100	330	620	24	
04-04-94	8700	350	58	350	660	ND	
07-05-94	8800	250	340	370	920	ND	
10-03-94	1300	63	42	110	140	ND	
01-18-95	5000	93	65	190	510	ND	

**TABLE 1**

**ANALYTICAL TESTING RESULTS**

Parts per billion (ppb)

Compounds	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Lead
04-21-95	14000	190	320	420	1500	ND
07-28-95	10000	110	120	490	1500	ND

**Well B-15**

04-16-92	65	4.4	2.4	6.1	2.8	ND
07-24-92	ND	3.6	1.5	3.1	1.6	ND
10-22-92	ND	1.7	0.89	0.78	0.88	ND
01-15-93	ND	ND	ND	ND	ND	13
04-15-93	ND	2.8	ND	3.0	1.5	ND
07-14-93	ND	ND	ND	0.57	0.74	7.8
10-14-93	ND	0.96	2.6	1.3	3.6	25
01-13-94	ND	ND	0.92	0.70	2	ND
04-04-94	ND	ND	ND	0.56	1	ND
07-05-94	ND	ND	ND	ND	ND	ND
10-03-94	ND	ND	ND	ND	ND	ND
01-18-95	ND	ND	0.69	ND	2.2	ND
04-21-95	ND	ND	1.0	ND	2.5	ND
07-28-95	ND	ND	ND	ND	ND	ND

**Well B-16**

04-16-92	1300	390	1.7	35	9.3	ND
07-24-92	1600	120	5.7	120	410	ND
10-22-92	1000	76	ND	55	130	ND
01-15-93	160	6.5	0.86	2.3	2.6	5.5
04-15-93	300	65	ND	13	2	ND
07-14-93	170	5.9	ND	4.6	12	ND
10-14-93	390	11	2.4	16	45	21
01-13-94	350	8.7	0.62	25	68	ND
04-04-94	550	8.7	ND	35	81	ND
07-05-94	850	14	5.6	52	130	ND
10-03-94	210	5.3	ND	26	5.8	ND
01-18-95	ND	ND	0.94	ND	1.3	2.7
04-21-95	ND	ND	0.66	ND	ND	ND
07-28-95	57	0.71	ND	1.6	2.6	ND

**Well MW-100**

05-13-93	13000	83	ND	960	820	NA
07-14-93	13000	32	ND	1400	790	8
10-14-93	7500	48	16	900	520	22
01-13-94	7000	51	ND	590	330	ND
04-04-94	9800	69	ND	540	410	ND
07-05-94	5900	31	8.7	190	190	ND
10-03-94	3900	ND	ND	220	200	ND
01-18-95	3700	48	31	190	120	2.8
04-21-95	3100	10	ND	130	44	ND

**TABLE 1**

**ANALYTICAL TESTING RESULTS**

Parts per billion (ppb)

Compounds	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Lead
07-28-95	3300	ND	ND	100	42	ND
<b>Well MW-101</b>						
05-13-93	ND	ND	ND	ND	ND	NA
07-14-93	ND	ND	ND	ND	ND	11
10-14-93	ND	0.65	0.89	ND	1.1	ND
01-13-94	ND	ND	ND	ND	ND	28
04-04-94	ND	ND	ND	ND	ND	ND
07-05-94	ND	ND	ND	ND	ND	ND
10-03-94	ND	ND	ND	ND	ND	ND
01-18-95	ND	ND	ND	ND	ND	2.6
04-21-95	ND	ND	ND	ND	ND	ND
07-28-95	ND	ND	ND	ND	ND	ND
<b>Well MW-102</b>						
05-13-93	3600	17	ND	130	63	NA
07-14-93	1500	13	ND	64	4.9	ND
10-14-93	24000	9.6	5.2	60	60	ND
01-13-94	2000	22	ND	26	55	ND
04-04-94	2100	16	2.5	15	35	ND
07-05-94	1300	7	2.9	10	23	ND
10-03-94	620	5.1	ND	5.2	11	ND
01-18-95	440	ND	ND	3.0	5.3	3.7
04-21-95	250	ND	0.78	0.96	0.63	ND
07-28-95	140	ND	ND	ND	0.70	ND
<b>EFFLUENT</b>						
04-15-93	ND	ND	ND	ND	ND	ND
07-14-93	ND	ND	ND	ND	ND	ND
10-14-93	ND	ND	ND	ND	0.97	48
01-13-94	ND	ND	ND	ND	ND	ND
04-04-94	ND	ND	ND	ND	ND	33
07-05-94	ND	ND	ND	ND	ND	ND
10-03-94	ND	ND	ND	ND	ND	ND
01-18-95	ND	ND	ND	ND	ND	ND
04-21-95	ND	1.0	ND	ND	ND	ND
07-28-95	ND	ND	ND	ND	1.5	ND
<b>ENEA MW-1</b>						
10-14-93	5700	76	19	160	460	ND
04-04-94	7000	27	ND	260	49	ND
07-05-94	5100	23	ND	260	50	ND
10-03-94	4400	8.1	ND	170	50	ND
01-18-95	2000	7.1	2.4	47	5.5	2.2

**TABLE 1**

**ANALYTICAL TESTING RESULTS**

Parts per billion (ppb)

Page 4 of 4

Compounds	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Lead
04-21-95	1400	2.9	9.0	22	1.2	5.8
07-28-95	1100	ND	ND	14	1.4	ND

**ENE A MW-2**

10-14-93	ND	ND	ND	1.1	0.71	21
04-04-94	ND	ND	ND	ND	ND	21
07-05-94	ND	ND	ND	ND	ND	ND
10-03-94	590	1.1	ND	22	6.5	ND
01-18-95 <i>lx</i>	ND	ND	ND	ND	ND	2.4
04-21-95	ND	ND	ND	ND	ND	ND
07-28-95	ND	ND	ND	ND	0.57	ND

**ENE A MW-3**

10-14-93	2600	26	30	100	130	ND
04-04-94	2600	13	3.4	90	140	ND
07-05-94	3400	15	5	31	48	ND
10-03-94	1400	6.3	ND	31	36	ND
01-18-95 <i>4</i>	2300	5.1	1.6	2.9	18	2.1
04-21-95	1900	5.3	ND	7.5	4.2	ND
07-28-95	1400	ND	ND	5.5	1.5	ND

**ENE A MW-4**

04-04-94	ND	ND	ND	ND	ND	23
07-05-94	ND	ND	0.5	ND	0.62	ND
10-03-94	ND	ND	ND	ND	ND	ND
01-18-95	ND	ND	0.87	ND	ND	7.2
04-21-95 <i>lx</i>	ND	ND	1.7	ND	ND	2.8
07-28-95	ND	ND	ND	ND	ND	2.9

**NOTE:**

In July 28, 1995 sampling, the Methyl-tert-butylether level was 55 ppb in Well B-10, 10 ppb in Well ENE A MW-1, 11 ppb in Well ENE A MW-3 and not detected in other wells.

ND Not Detected  
 NA Not Analyzed

DTP.1233-ANALYTIC.DOC

TABLE 2

ANALYTICAL TESTING RESULTS FOR SOIL SAMPLES  
 COLLECTED BY EAI THROUGH 1994

Parts per Million (ppm)

Page 1 of 1

Sample Number	TPH-G	Benzene	Toluene	Ethyl-Benzene	Total Xylenes
B-100 @ 5'	ND	ND	ND	ND	ND
B-100 @ 9'	ND	ND	0.007	ND	ND
B-101 @ 5'	ND	ND	0.68	ND	ND
B-101 @ 9'	ND	ND	0.048	ND	ND
B-102 @ 5'	ND	ND	0.0078	ND	0.006
B-102 @ 9'	ND	ND	ND	ND	ND
SBCP-1 @ 9-9.5'	ND	ND	ND	ND	ND
SBCP-1 @ 13-13.5'	290	2.0	6.2	7.0	37
SBCP-2 @ 13-13.5'	230	1.7	1.1	4.4	23
SBCP-2 @ 15-15.5'	5.3	0.065	0.030	0.19	0.41
SBCP-3 @ 13-13.5'	71	0.68	4.8	1.7	8.9
SBCP-3 @ 15-15.5'	1.9	0.012	0.037	0.027	0.11
SBCP-4 @ 12'	81	0.29	0.20	0.91	4.3

ND Not Detected

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TABLE 3

CONCENTRATIONS OF TPH-G AND BTEX IN SOIL SAMPLES

(in parts per million)

Page 1 of 1

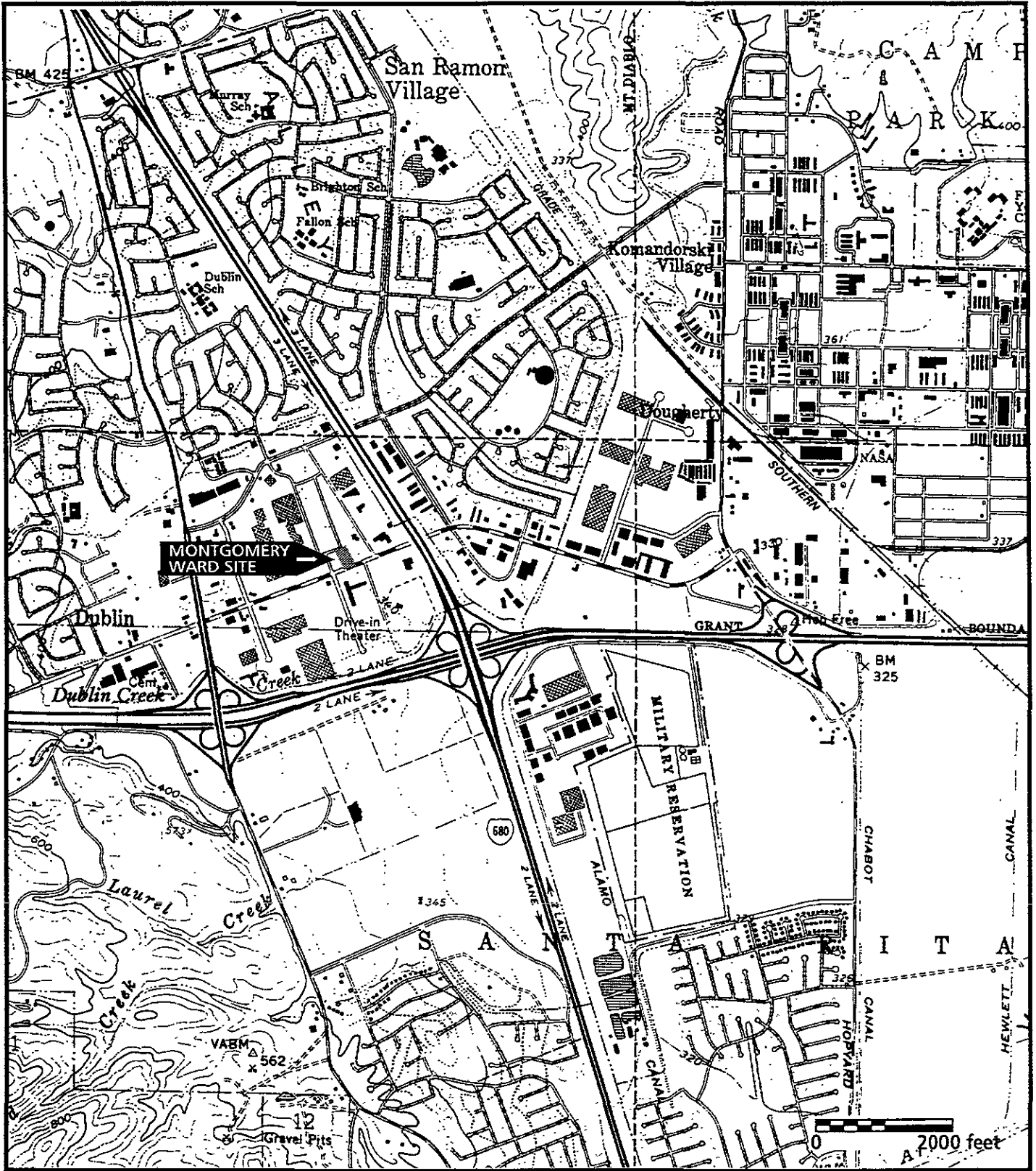
Sample ID #	TPH-G	Benzene	Toluene	Ethylbenzene	Total Xylenes
GP-1 @ 9.5-10'	ND	ND	0.439	ND	0.607
GP-1 @ 12.5-13'	ND	ND	0.156	1.040	5.410
GP-1 @ 15.5-16'	ND	ND	ND	ND	0.162
GP-2 @ 9.5-10'	ND	ND	0.435	ND	0.579
GP-2 @ 12.5-13'	10.5	ND	0.111	ND	1.040
GP-2 @ 15.5-16'	ND	ND	0.389	ND	0.578
GP-3 @ 9.5-10'	ND	ND	0.482	ND	0.629
GP-3 @ 12.5-13'	36.7	ND	0.713	ND	1.350
GP-3 @ 15.5-16'	11.5	ND	0.978	ND	1.250
GP-4 @ 9.5-10'	14.3	ND	0.444	ND	0.608
GP-4 @ 12.5-13'	21.8	ND	1.400	0.480	1.970
GP-4 @ 15.5-16'	ND	ND	0.456	ND	0.559
GP-5 @ 9.5-10'	ND	ND	0.437	ND	0.562
GP-5 @ 12.5-13'	10.6	ND	0.734	ND	1.050
GP-5 @ 15.5-16'	ND	ND	0.663	ND	0.923
GP-6 @ 9.5-10'	ND	ND	0.445	ND	0.612
GP-6 @ 12.5-13'	19.8	ND	0.079	0.492	1.980
GP-6 @ 15.5-16'	18.0	ND	0.392	ND	0.617
GP-7 @ 9.5-10'	ND	ND	0.406	0.423	1.580
GP-7 @ 12.5-13'	35.5	ND	0.837	0.681	4.260
GP-7 @ 15.5-16'	12.9	ND	0.428	0.338	1.450
GP-8 @ 9.5-10'	ND	ND	0.553	ND	0.876
GP-8 @ 12.5-13'	15.6	ND	0.460	0.236	1.660
GP-8 @ 15.5-16'	ND	ND	0.397	ND	0.619
GP-9 @ 9.5-10'	ND	ND	0.389	ND	0.616
GP-9 @ 12.5-13'	44.9	ND	0.962	ND	1.790
GP-9 @ 15.5-16'	ND	ND	0.444	ND	0.722
GP-10 @ 9.5-10'	ND	ND	0.442	ND	0.659

(1) ND = Not Detected above detection limits. Detection limits: TPH-G=10 ppm and BTEX=0.005 ppm.

FSM:WORD:1233T571.DOC

**FIGURES**

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Environmental Audit, Inc.®

**LOCATION MAP**  
**Montgomery Ward Auto Service Center**  
**Dublin, California**



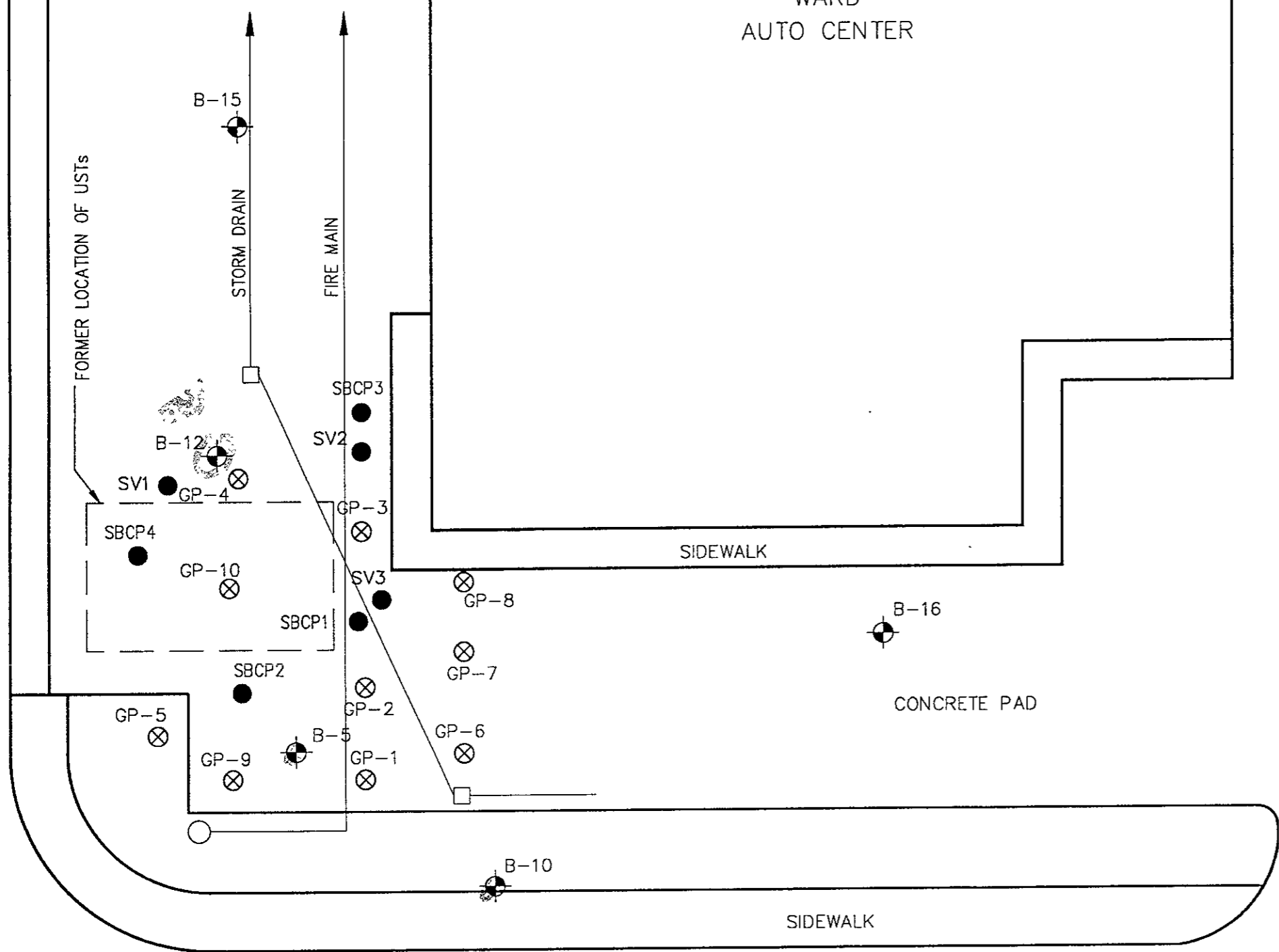
SOURCE: USGS TOPOGRAPHIC 7.5 MINUTE SERIES  
 DUBLIN, CALIFORNIA QUADRANGLE

Figure 1

Project No. 1233  
 KA1233\1233-LM1.CDR

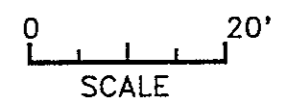


MONTGOMERY  
WARD  
AUTO CENTER



EXPLANATION:

- ADS GROUND WATER MONITORING WELL LOCATION
- EAI CPT LOCATION
- STRATAPROBE BORING LOCATION



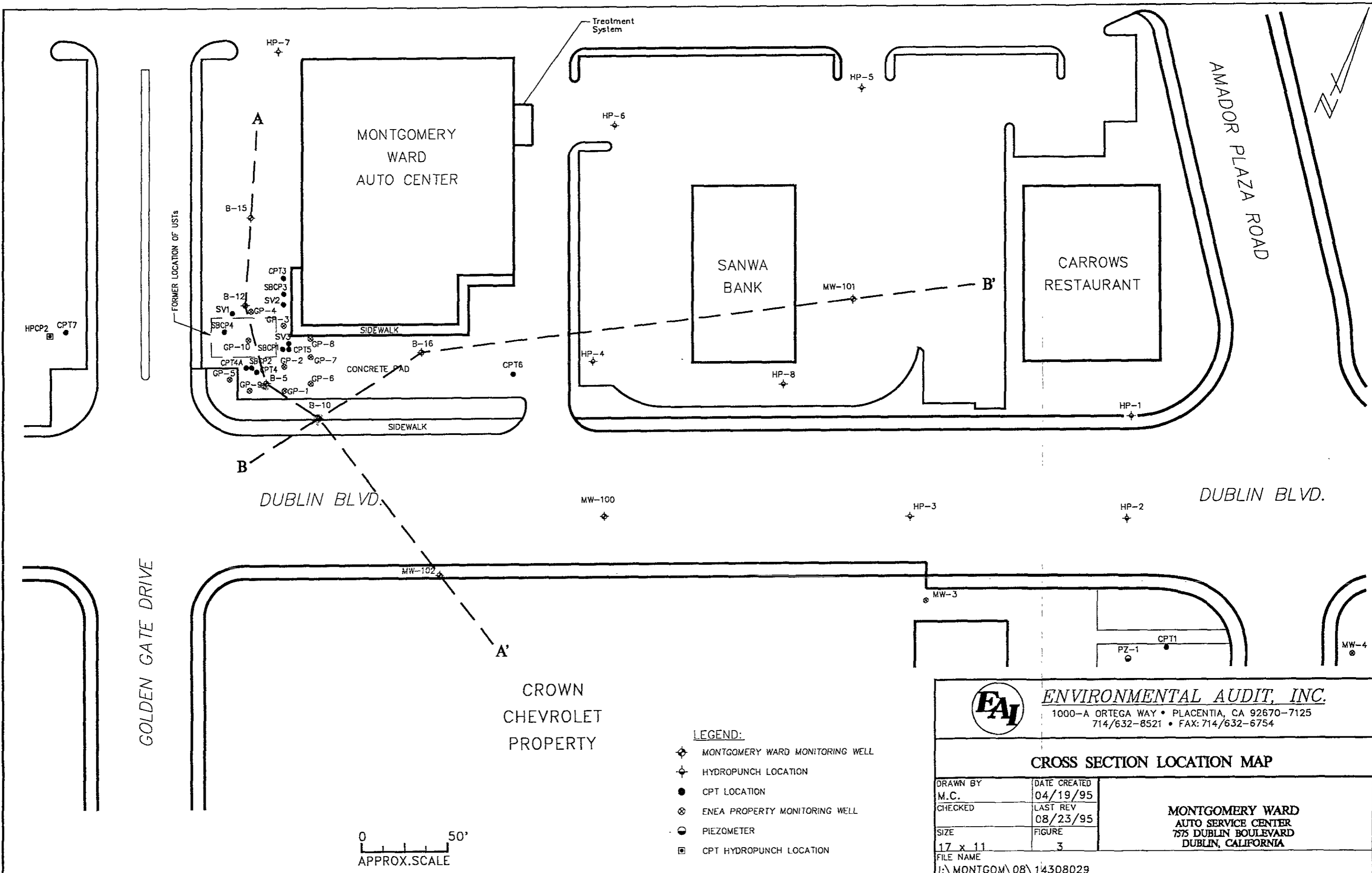
**ENVIRONMENTAL AUDIT, INC.**  
1000-A ORTEGA WAY • PLACENTIA, CA 92670-7125  
714/632-8521 • FAX: 714/632-6754

**SITE PLAN**


DRAWN BY	DATE CREATED
M.C.	04/18/95
CHECKED	LAST REV
	08/22/95
SIZE	FIGURE
17 x 11	2
FILE NAME	
I:\MONTGOM\08\14308011	

**MONTGOMERY WARD**  
AUTO SERVICE CENTER  
7575 DUBLIN BOULEVARD  
DUBLIN, CALIFORNIA

DUBLIN BLVD.



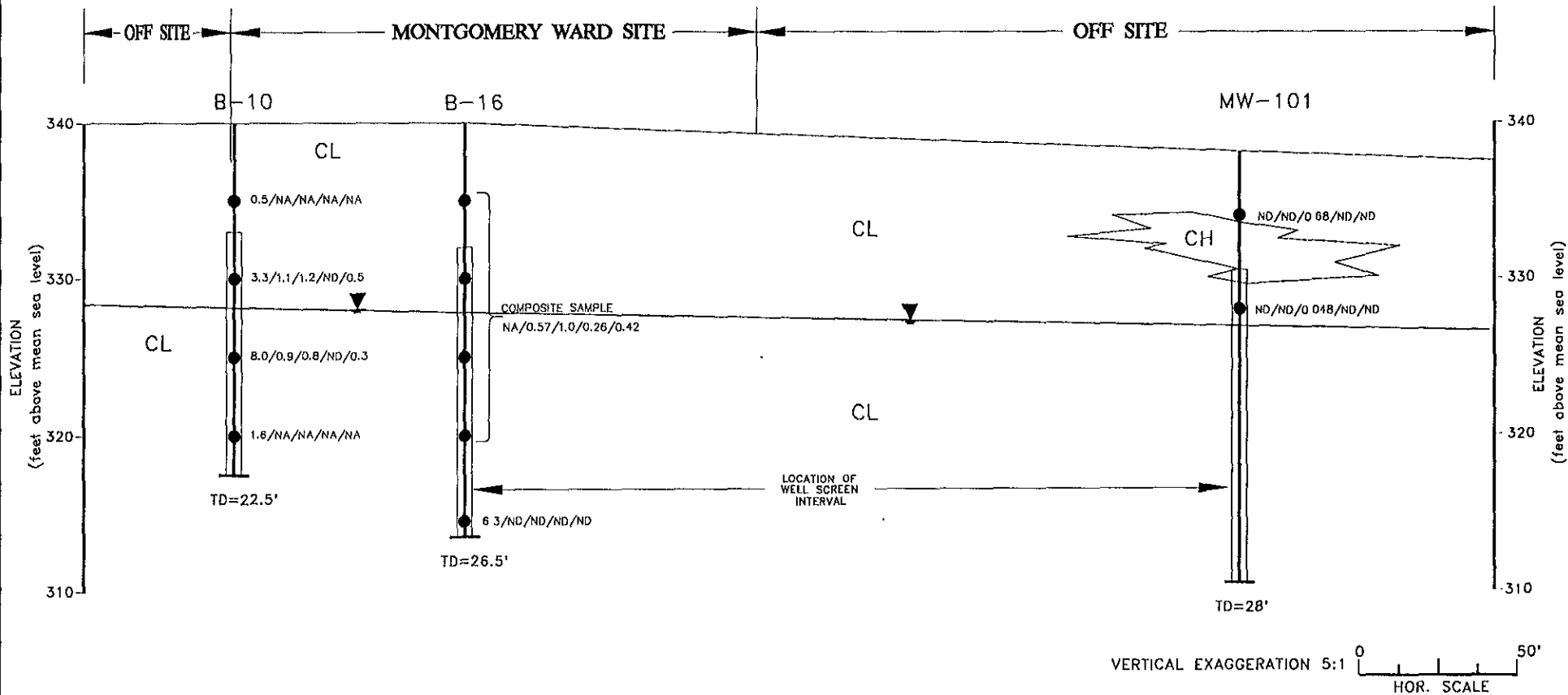
- LEGEND:**
- ⊕ MONTGOMERY WARD MONITORING WELL
  - ⊕ HYDROPUNCH LOCATION
  - CPT LOCATION
  - ⊗ ENEA PROPERTY MONITORING WELL
  - ⊙ PIEZOMETER
  - ⊠ CPT HYDROPUNCH LOCATION

 <b>ENVIRONMENTAL AUDIT, INC.</b> 1000-A ORTEGA WAY • PLACENTIA, CA 92670-7125 714/632-8521 • FAX: 714/632-6754		<b>CROSS SECTION LOCATION MAP</b>
DRAWN BY M.C.	DATE CREATED 04/19/95	
CHECKED	LAST REV 08/23/95	
SIZE 17 x 11	FIGURE 3	
FILE NAME I:\MONTGOM\08\14308029		



**B**  
WEST

**B'**  
EAST



**EXPLANATION:**

- CH - CLAY, HIGH PLASTICITY
- CL - SILTY CLAY, LOW PLASTICITY
- ND - NOT DETECTED
- NA - NOT ANALYZED
- ▼ - WATER TABLE (01-13-94)
- - SOIL SAMPLE LOCATION

**CONSTITUENTS SHOWN: TPH/B/T/E/X (mg/kg)**

- TPH = TOTAL PETROLEUM HYDROCARBONS
- B = BENZENE
- T = TOLUENE
- E = ETHYL.BENZENE
- X = XYLENES



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**CROSS SECTION B-B'**

DRAWN BY M.C.	DATE CREATED 03/14/94
CHECKED B.H.M.	LAST REV 08/22/95
SIZE 11 x 8.5	FIGURE 5

**MONTGOMERY WARD**  
AUTO SERVICE CENTER  
DUBLIN, CALIFORNIA

FILE NAME  
I:\MONTGOM\08\14308010

**APPENDICES**

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**APPENDIX A: Boring Logs**

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# GRAPHIC GEOTECHNICAL BORING LOG

CLIENT: Montgomery Ward Auto Service Center PROJECT NO.: 1233 DRILL HOLE: GP-1  
 SITE LOCATION: 7575 Dublin Boulevard, Dublin, California  
 DRILLING CO: TEG TYPE OF RIG: Strataprobe SP-1  
 DRILLING METHOD/EQUIPMENT: Direct Push HOLE DIAMETER: 2"  
 DRIVE WEIGHT/HEIGHT OF DROP: 95# percuss. REFERENCE OR DATUM: Ground Level  
 START DATE: 6/22/95 COMPLETION DATE: 6/22/95

DEPTH IN FEET	GRAPHIC BORING LOG	SAMPLE SIZE & LOCATION	BLOW COUNTS PER FEET	TIME IN HOURS	SOIL VAPOR READING (PPM)	UNIFIED SOIL CLASSIFICATION SYSTEM (U.S.C.S.)	DESCRIPTION
0						CL	0.4 0-3" ASPHALT
5							
10		N/A		08:20	1/2	CL	10.0 <i>SILTY CLAY. Brown with slight red brown mottling. Plastic. Root holes present. Appears dry.</i>
15		N/A		08:32	10/66	CL	13.0 <i>SILTY CLAY. Brown mottled with grey. Soil more brittle than at 9-10'. Appears dry. HC odor.</i>
20		N/A		08:45	88/54		16.0 <i>SLIGHTLY SANDY SILTY CLAY. Brown. Soft. Pliable. Moist. HC odor. Free water encountered. Boring GP-1 backfilled with bentonite and hydrated with tap water. Boring capped with asphalt to match existing pavement.</i>
25							
30							
35							
40							
45							

In Following Order: LIGHT/DARK, color, grain size, sorting, angularity, fossils, consistency, wetness

**NOTES:**  
 GW measured well B-10 @ 10.3' below ground surface (i.e., from top of CGS). Vapor measurements: TLV/PID. TLV measured using a Bacharach TLV sniffer; PID measurement obtained using a Photovac photoionization detector.



ENVIRONMENTAL AUDIT, INC.

NOTE: This Boring Log Represents Conditions Only at Time and Location Indicated. Subsurface Conditions May Differ at Other Locations and Times.

LOGGED BY: FSM DATE: 6/22/95 APPROVED BY: FSM RCE #: 4248

# GRAPHIC GEOTECHNICAL BORING LOG

CLIENT: Montgomery Ward Auto Service Center PROJECT NO.: 1233 DRILL HOLE: GP-2

SITE LOCATION: 7575 Dublin Boulevard, Dublin, California

DRILLING CO: TEG

TYPE OF RIG: Strataprobe SP-1

DRILLING METHOD/EQUIPMENT: Direct Push

HOLE DIAMETER: 2"

DRIVE WEIGHT/HEIGHT OF DROP: 95# percuss.

REFERENCE OR DATUM: Ground Level

START DATE: 6/22/95

COMPLETION DATE: 6/22/95

DEPTH IN FEET	GRAPHIC BORING LOG	SAMPLE SIZE & LOCATION	BLOW COUNTS PER 0.5 FT	TIME IN HOURS	SOIL VAPOR READING, PPM	UNIFIED SOIL CLASSIFICATION SYSTEM U.S.C.S.	DESCRIPTION
0						CL	0.3 0-3" ASPHALT
5							
10						CL	10.0 SILTY CLAY. Brown. Slightly moist. Pliable. No HC odor.
13						CL	13.0 SILTY CLAY. Brown. Rootlets present. Slightly moist. Thin streaks of gypsum present in sample. Slightly moist. HC odor present.
15							16.0 SILTY CLAY. Green mottled with grey. Slightly crumbly. Moist to saturated. HC odor present. Boring GP-2 backfilled with bentonite and hydrated with tap water. Boring capped with asphalt to match existing pavement.
20							
25							
30							
35							
40							
45							

**NOTES:**  
 Vapor measurements: TLV/PID measurements. TLV measured using a Bacharach TLV sniffer; PID measurement obtained using a Photovac photoionization detector.



ENVIRONMENTAL AUDIT, INC.

NOTE: This Boring Log Represents Conditions Only at Time and Location Indicated. Subsurface Conditions May Differ at Other Locations and Times.

LOGGED BY: FSM DATE: 6/22/95 APPROVED BY: FSM RCE #: 4248

# GRAPHIC GEOTECHNICAL BORING LOG

CLIENT: Montgomery Ward Auto Service Center PROJECT NO.: 1233 DRILL HOLE: GP-3  
 SITE LOCATION: 7575 Dublin Boulevard, Dublin, California  
 DRILLING CO: TEG TYPE OF RIG: Strataprobe SP-1  
 DRILLING METHOD/EQUIPMENT: Direct/Push HOLE DIAMETER: 2"  
 DRIVE WEIGHT/HEIGHT OF DROP: 95# percuss. REFERENCE OR DATUM: Ground Level  
 START DATE: 6/22/95 COMPLETION DATE: 6/22/95

DEPTH IN FEET	CASING BORING LOG	SAMPLE TYPE & LOCATION	BLOW COUNTS PER 0.5 FT	TIME IN HOURS	SOIL VAPOR READINGS PPM	UNIFIED SOIL CLASSIFICATION SYSTEM U.S.C.S.	DESCRIPTION
0						CL	0.3 0-3" Asphalt
5							
10		N/A		09:47	77/0	CL	10.0 SILTY CLAY. Brown. Root holes present. Soft. Pliable. Slightly plastic. Slightly moist.
13		N/A		09:55	280/213	CL	13.0 SILTY CLAY. Greenish brown mottling. Gypsum streaks present. Very moist to saturated. Slight HC odor.
16		N/A		10:00	610/442		16.0 SILTY CLAY. Mottled green brown with grey. Root holes present. Plastic. Very moist to saturated. HC odor. TD 16'. Boring backfilled with bentonite and hydrated with tap water. Boring capped with asphalt to match existing pavement. Ground water was measured in well B-10 at 10.3' below top of casing.
20							
25							
30							
35							
40							
45							

**NOTES:**  
 Vapor measurements: TLV/PID measurements. TLV measured using a Bacharach TLV sniffer. PID measurement obtained using a Photovac photoionization detector.



ENVIRONMENTAL AUDIT, INC.

NOTE: This Boring Log Represents Conditions Only at Time and Location Indicated. Subsurface Conditions May Differ at Other Locations and Times.

LOGGED BY: FSM DATE: 6/22/95 APPROVED BY: FSM RCE #: 4248

# GRAPHIC GEOTECHNICAL BORING LOG

CLIENT: Montgomery Ward Auto Service Center PROJECT NO.: 1233 DRILL HOLE: GP-4  
 SITE LOCATION: 7575 Dublin Boulevard, Dublin, California  
 DRILLING CO: \_\_\_\_\_ TYPE OF RIG: Strataprobe SP  
 DRILLING METHOD/EQUIPMENT: Direct Push HOLE DIAMETER: 2"  
 DRIVE WEIGHT/HEIGHT OF DROP: 95# percuss. REFERENCE OR DATUM: Ground Level  
 START DATE: 6/22/95 COMPLETION DATE: 6/22/95

DEPTH IN FEET	GRAPHIC BORING LOG	SAMPLE SIZE & LOCATION	ALPHA COUNTS PER 0.5 FT	TIME IN HOURS	SOIL VAPOR READINGS PPM	UNIFIED SOIL CLASSIFICATION SYSTEM U.S.C.S.	CORRELATION	DESCRIPTION
0						CL	0.3	0-3" ASPHALT
5								
10		N/A		10:20	0/1	CL	10.0	SILTY CLAY. Brown. Slight Fe oxide staining. Gypsum streaks present. Slightly hard and plastic. Moderately moist to moist. No HC odor.
13		N/A		10:35	380/495	CL	13.0	SILTY CLAY. Red brown with grey streaks. Moist to slightly moist crumbly. Plastic with gypsum streaks.
15		N/A		10:45	26/8		16.0	SLIGHTLY SANDY SILTY CLAY. Green brown mottling. Fine to v. fine sand present. Very moist to saturated. Slight HC odor. Boring GP-4 backfilled with bentonite and hydrated with tap water. Boring capped with asphalt to match existing pavement.
20								
25								
30								
35								
40								
45								

**NOTES:**  
 Vapor measurements: TLV/PID measurements. TLV measured using a Bacharach TLV sniffer. PID measurement obtained using a Photovac photoionization detector.



ENVIRONMENTAL AUDIT, INC.

NOTE: This Boring Log Represents Conditions Only at Time and Location Indicated. Subsurface Conditions May Differ at Other Locations and Times.

LOGGED BY: FSM DATE: 6/22/95 APPROVED BY: FSM RCE #: 4248

# GRAPHIC GEOTECHNICAL BORING LOG

CLIENT: Montgomery Ward Auto Service Center PROJECT NO.: 1233 DRILL HOLE: GP-5  
 SITE LOCATION: 7575 Dublin Boulevard, Dublin, California  
 DRILLING CO: TEG TYPE OF RIG: Strataprobe SP-1  
 DRILLING METHOD/EQUIPMENT: Direct Push HOLE DIAMETER: 2"  
 DRIVE WEIGHT/HEIGHT OF DROP: 95# percuss. REFERENCE OR DATUM: Ground Level  
 START DATE: 6/22/95 COMPLETION DATE: 6/22/95

DEPTH IN FEET	GRAPHIC BORING LOG	SAMPLE SIZE & LOCATION	BLOW COUNTS PER 6.5 FT	TIME IN HOURS	SOIL VAPOR READINGS PPM	UNIFIED SOIL CLASSIFICATION SYSTEM U.S.C.S.	DESCRIPTION
0						CL	Ground surface is comprised of fill
10			N/A	10:55	100/0.4	CL	SILTY CLAY. Light brown. Slightly plastic. Dense. No HC odor.
13			N/A	11:05	110/129	CL	SILTY CLAY. Mottled light red brown with grey. Some gypsum streaks present. Moist. Slight HC odor.
16			N/A	11:14	900/168		SILTY CLAY with grey silt lenses. Mottled brown with grey. Saturated in more permeable silt lenses. Strong HC odor. Boring GP-5 backfilled with bentonite and hydrated with tap water. Total depth of boring is 16 feet.

**NOTES:**

Vapor measurements: TLV/PID. TLV measured using a Bacharach TLV sniffer; PID measurement obtained using a Photovac photoionization detector.

NOTE: This Boring Log Represents Conditions Only at Time and Location Indicated. Subsurface Conditions May Differ at Other Locations and Times.



ENVIRONMENTAL AUDIT, INC.

LOGGED BY: FSM DATE: 6/22/95 APPROVED BY: FSM RCE #: 4248

# GRAPHIC GEOTECHNICAL BORING LOG

CLIENT: Montgomery Ward Auto Service Center PROJECT NO.: 1233 DRILL HOLE: GP-6  
 SITE LOCATION: 7575 Dublin Boulevard, Dublin, California  
 DRILLING CO: TEG TYPE OF RIG: Strataprobe SP-1  
 DRILLING METHOD/EQUIPMENT: Direct Push HOLE DIAMETER: 2"  
 DRIVE WEIGHT/HEIGHT OF DROP: 95# percuss. REFERENCE OR DATUM: Ground Level  
 START DATE: 6/22/95 COMPLETION DATE: 6/22/95

DEPTH IN FEET	GRAPHIC BORING LOG	SAMPLE SIZE & LOCATION	BLOW COUNTS PER 0.5 FT	TIME IN HOURS	SOIL VAPOR READINGS PPM	UNIFIED SOIL CLASSIFICATION SYSTEM U.S.C.S.	DESCRIPTION
0							0.8 0-9" CONCRETE AND BASE.
5							
10		N/A		11:35	105/6.7	CL	10.0 SILTY CLAY. Brown. Rootlet holes present. Pinpoint porosity lined with FE oxide staining. Rare gypsum streaks present. Crumbly to moderately plastic. Moist. No Hc odor.
15		N/A		11:42	500/117	CL	13.0 SILTY CLAY. Mottled grey brown. Moderately plastic. Moist. No HC odor.
20		N/A		11:55	190/17		16.0 SILTY CLAY. Mottled grey brown. Soft. Saturated. HC odor present. More silt content than at the 12' sampling interval. Boring GP-6 was backfilled with bentonite and then hydrated with tap water. Boring capped with concrete to match existing pavement.
25							
30							
35							
40							
45							

**NOTES:**  
 Vapor measurements: TLV/PID measurements. TLV measured using a Bacharach TLV sniffer. PID measurements obtained using a Photovac photoionization detector.



ENVIRONMENTAL AUDIT, INC.

NOTE: This Boring Log Represents Conditions Only at Time and Location Indicated. Subsurface Conditions May Differ at Other Locations and Times.

LOGGED BY: FSM DATE: 6/22/95 APPROVED BY: FSM RCE #: 4248

# GRAPHIC GEOTECHNICAL BORING LOG

CLIENT: Montgomery Ward Auto Service Center PROJECT NO.: 1233 DRILL HOLE: GP-7  
 SITE LOCATION: 7575 Dublin Boulevard, Dublin, California  
 DRILLING CO: TEG TYPE OF RIG: Strataprobe SP-1  
 DRILLING METHOD/EQUIPMENT: Direct Push HOLE DIAMETER: 2"  
 DRIVE WEIGHT/HEIGHT OF DROP: 95# percuss. REFERENCE OR DATUM: Ground Level  
 START DATE: 6/22/95 COMPLETION DATE: 6/22/95

DEPTH (IN FEET)	GRAPHIC BORING LOG	SAMPLE SIZE & LOCATION	BLOW COUNTS PER 6 IN	TIME IN HOURS	SOIL VAPOR READING, PPM	UNIFIED SOIL CLASSIFICATION SYSTEM U.S.C.S.	DESCRIPTION
0						CL	0.8 0-9" CONCRETE WITH BASE
5							
10		N/A		12:04	120/21	CL	10.0 SILTY CLAY. Slightly mottled red brown. Plastic. Dense. Moist. No HC odor.
15		N/A		12:11	190/236	CL	13.0 SILTY CLAY. Mottled brown and grey green with streaks of gypsum. Dense. Moist. HC odor.
20		N/A		12:20	360/234		16.0 SILTY CLAY. Mottled green brown with grey. Moderately plastic. Dense. More silt content than 12'. Saturated. Boring GP-7 backfilled with bentonite and hydrated with tap water. Boring capped with concrete to match existing pavement.
25							
30							
35							
40							
45							

In following order: LITHOLOGY, color, grain size, sorting, angularity, fossil consistency, wetness

**NOTES:**  
 Vapor measurements: TLV/PID readings. TLV measured using a Bacharach TLV sniffer; PID measurements obtained using a Photovac photoionization detector.

ENVIRONMENTAL AUDIT, INC.
NOTE: This Boring Log Represents Conditions Only at Time and Location Indicated. Subsurface Conditions May Differ at Other Locations and Times.

LOGGED BY: FSM DATE: 6/22/95 APPROVED BY: FSM RCE #: 4248



# GRAPHIC GEOTECHNICAL BORING LOG

CLIENT: Montgomery Ward Auto Service Center PROJECT NO.: 1233 DRILL HOLE: GP-8  
 SITE LOCATION: 7575 Dublin Boulevard, Dublin, California  
 DRILLING CO: TEG TYPE OF RIG: Strataprobe SP-1  
 DRILLING METHOD/EQUIPMENT: Direct Push HOLE DIAMETER: 2"  
 DRIVE WEIGHT/HEIGHT OF DROP: 95# percuss. REFERENCE OR DATUM: Ground Level  
 START DATE: 6/22/95 COMPLETION DATE: 6/22/95

DEPTH IN FEET	BORING LOG	SAMPLE SIZE & LOCATION	BLOW COUNTS PER FOOT	TIME IN HOURS	SOIL VAPOR READING PART	UNITED SOIL CLASSIFICATION SYSTEM U.S.C.S.	DESCRIPTION
0						CL	0-9" CONCRETE AND BASE.
5							
10		N/A		12:36 110/14.7		CL	10.0 SILTY CLAY. Brown. Streaks of gypsum present. Rootlets present. Dense. Moderately plastic. No HC odor.
15		N/A		12:45 800/167		CL	13.0 SILTY CLAY. Mottled red brown and grey green. Gypsum nodules and streaks present. Moist. Dense. HC odor.
20		N/A		12:54 245/80.8			16.0 SILTY CLAY. Mottled grey-green and brown. Pinpoint porosity. Some parts more silty other more clayey in interval. Plastic. Very moist to saturated. HC odor. Boring GP-8 backfilled with bentonite and hydrated with tap water. Boring capped with concrete to match existing pavement. Ground water was measured in well B-10 at 10.3' below ground surface.
25							
30							
35							
40							
45							

**NOTES:**  
 Vapor measurements: TLV/PID readings. TLV measured using a Bacharach TLV Sniffer; PID measurements obtained using a Photovac photoionization detector.



ENVIRONMENTAL AUDIT, INC.

NOTE: This Boring Log Represents Conditions Only at Time and Location Indicated. Subsurface Conditions May Differ at Other Locations and Times.

LOGGED BY: FSM DATE: 6/22/95 APPROVED BY: FSM RCE #: 4248

# GRAPHIC GEOTECHNICAL BORING LOG

CLIENT: Montgomery Ward Auto Service Center PROJECT NO.: 1233 DRILL HOLE: GP-9  
 SITE LOCATION: 7575 Dublin Boulevard, Dublin, California  
 DRILLING CO: TEG TYPE OF RIG: Strataprobe SP-1  
 DRILLING METHOD/EQUIPMENT: Direct Push HOLE DIAMETER: 2"  
 DRIVE WEIGHT/HEIGHT OF DROP: 95# percuss. REFERENCE OR DATUM: Ground Level  
 START DATE: 6/22/95 COMPLETION DATE: 6/22/95

DEPTH IN FEET	GRAPHIC BORING LOG	SAMPLE SIZE & LOCATION	BLOW COUNTS PER 0.5 FT	TIME IN HOURS	SOIL VAPOR READING, PPM	UNIFIED SOIL CLASSIFICATION SYSTEM U.S.C.S.	DESCRIPTION
0						CL	0.8 0-9" CONCRETE AND BASE.
5							
10		N/A		14:02	95/12.5	CL	10.0 SILTY CLAY. Brown. Moderately plastic. Moist. No HC odor.
15		N/A		14:10	160/110	CL	13.0 SILTY CLAY. Mottled Brown with grey green. Minor gypsum. Root holes present. Some with free water. Moderately plastic. Saturated.
20		N/A		14:16	980/520		16.0 SILTY CLAY. Mottled grey green/brown. Moderately plastic. Saturated. HC odor. Boring backfilled with bentonite and hydrated with tap water. Boring capped with asphalt to match existing pavement. Ground water was measured in well B-10 at 10.3' below ground surface.
25							
30							
35							
40							
45							

**NOTES:**  
 Vapor measurements: TLV/PID reading. TLV measured using a Bacharach TLV sniffer. PID measurement obtained using a Photovac photoionization detector.



ENVIRONMENTAL AUDIT, INC.

NOTE: This Boring Log Represents Conditions Only at Time and Location Indicated. Subsurface Conditions May Differ at Other Locations and Times.

LOGGED BY: FSM DATE: 6/22/95 APPROVED BY: FSM RCE #: 4248

# GRAPHIC GEOTECHNICAL BORING LOG

CLIENT: Montgomery Ward Auto Service Center PROJECT NO.: 1233 DRILL HOLE: GP-10  
 SITE LOCATION: 7575 Dublin Boulevard, Dublin, California  
 DRILLING CO: TEG TYPE OF RIG: Strataprobe SP-1  
 DRILLING METHOD/EQUIPMENT: Direct Push HOLE DIAMETER: 2"  
 DRIVE WEIGHT/HEIGHT OF DROP: 95# percuss. REFERENCE OR DATUM: Ground Level  
 START DATE: 6/22/95 COMPLETION DATE: 6/22/95

DEPTH IN FEET	GRAPHIC BORING LOG	SAMPLE SIZE & LOCATION	BLOW COUNTS PER 0.5 FT	TIME IN HOURS	SOIL VAPOR READING, PPM	UNIFIED SOIL CLASSIFICATION SYSTEM U.S.C.S.	DESCRIPTION
0	0.4						0-3" Asphalt
5	10.0	N/A	14:40	NR			FILL. Gravelly sand material. Grey. Medium to coarse fine. No odor. Dry. Boring backfilled with bentonite and hydrated with tap water. Boring capped with asphalt to match surrounding pavement. Ground water encountered at 10.3 feet in well B-10. @ 13.5' Encountered concrete anchor pad for former UST excavation. Attempted to drive through concrete. Unsuccessful.
10							
15							
20							
25							
30							
35							
40							
45							

**NOTES:**  
 Vapor measurements: TLV/PID readings. TLV measured using a Bacharach TLV Sniffer. PID measurements obtained using a Photovac photoionization detector.

**APPENDIX B: Chain-of-Custody Records**

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# ENVIRONMENTAL AUDIT, INC.®

Planning, Environmental Analyses and Hazardous Substances Management and Remediation

1000 ORTEGA WAY, SUITE A PLACENTIA, CA 92670-7125 ☎ (714) 632 - 8521 ☒ (714) 632 - 6754

## Chain of Custody Record

SAMPLING REQUIREMENTS: RORA  NPDES  SDWA  \_\_\_\_\_

WRITTEN CC REPORT \_\_\_\_\_  
 ROUTINE OCC   
 RWOCB OCC

TURNAROUND TIME:  
 SAME DAY  24hr  48hr  NORMAL

PROJECT NO.		PROJECT NAME		CONTR. TYPE		ANALYSES REQUESTED											REMARKS		
1233		Montgomery Ward Dublin																	
SAMPLER (Signature with Printed Name) F. Muramoto F.S. Muramoto				PROJECT MANAGER F. Muramoto															
SAMPLE NUMBER	DATE	TIME	COMP. GRAVE	SAMPLE DESCRIPTION	GLASS	PLASTIC	BRASS SS TUBE	TELUR. BOLLIM	TELUR. G. BOLLIM	TELUR. 4.1B.1	BITEX 8020	VOC 8240	EOC 8270	OIL & GREASE	CAM METALS TOT WET	LEAD	HVOC 8010	NUMBER OF CONTAINERS	REMARKS
GP-1025-0	6/24/95	0920 hrs	✓	Soil 1.5x6'		✓		✓	✓	✓	✓							1	
GP-1025-13	"	0632 hrs	✓	Soil		✓		✓	✓	✓	✓							1	
GP-1025-16	"	0845 hrs	✓	Soil		✓		✓	✓	✓	✓							1	
GP-2025-10	"	0901 hrs	✓	Soil		✓		✓	✓	✓	✓							1	
GP-2025-13	"	0907 hrs	✓	Soil		✓		✓	✓	✓	✓							1	
GP-2025-16	"	0918 hrs	✓	Soil		✓		✓	✓	✓	✓							1	
GP-3025-16	"	0947 hrs	✓	Soil		✓		✓	✓	✓	✓							1	
TOTAL NUMBER OF CONTAINERS																	7		

RELINQUISHED BY: (Signature/Name) F.S. Muramoto	DATE/TIME 6/20/95 1645 hrs	RECEIVED BY: (Signature/Name)	RELINQUISHED BY: (Signature/Name)	DATE/TIME	RECEIVED BY: (Signature/Name)
RELINQUISHED BY: (Signature/Name)	DATE/TIME	RECEIVED BY: (Signature/Name)	RELINQUISHED BY: (Signature/Name)	DATE/TIME	RECEIVED BY: (Signature/Name)
SAMPLES SHIPPED VIA: FEDEX <input type="checkbox"/> UPS <input type="checkbox"/> AIRBORNE <input type="checkbox"/> HAND <input checked="" type="checkbox"/> AIRFREIGHT <input type="checkbox"/> <b>Mobile Lab</b>		SHIPPED BY: (Signature/Name)	CARRIER: (Signature/Name)	RECEIVED BY: (Signature/Name)	DATE/TIME
		ARRIVAL #:	LAB: <b>Alameda City Envir Lab</b>		



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Planning, Environmental Analyses and Hazardous Substances Management and Remediation

1000 ORTEGA WAY, SUITE A PLACENTIA, CA 92670-7125  
 (714) 632-8521 (714) 632-6754

## Chain of Custody Record

SAMPLING REQUIREMENTS: RCRA  NPDDES  SDWA

WRITTEN QC REPORT  TURNAROUND TIME:

ROUTINE QC  SAME DAY  24hr  48hr  NORMAL

RAWOCB

PROJECT NO.		PROJECT NAME		CONTR. TYPE	ANALYSES REQUESTED												REMARKS	
1233		Montgomery Ward Dublin			GLASS	PLASTIC	BRASS/SS TUBE	TELUR. 801.5M	TELUR. 801.5M	TRPH 418.1	LRTEX 8020	VOC 8290	EOC 8270	COIL & GREASE	CAM METALS TOT WET	LEAD		HYOC 8010
SAMPLES (Signature with Printed Name)				PROJECT MANAGER														
F.S. Muramoto				F. Muramoto														
SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION													
GP-30125-13	4/26/85	10:26 AM			Soil												1	
GP-30125-16	4/26/85	10:26 AM			Soil												1	
GP-40125-10	4/26/85	10:26 AM			Soil												1	
GP-40125-17	4/26/85	10:25 AM			Soil												1	
GP-40125-16	4/26/85	10:25 AM			Soil												1	
GP-50125-00	4/26/85	10:25 AM			Soil												1	
GP-50125-13	4/26/85	10:25 AM			Soil												1	
												TOTAL NUMBER OF CONTAINERS	7					
RELINQUISHED BY: (Signature/Name)				DATE/TIME		RECEIVED BY: (Signature/Name)				DATE/TIME				RECEIVED BY: (Signature/Name)				
F.S. Muramoto				4/26/85														
RELINQUISHED BY: (Signature/Name)				DATE/TIME		RECEIVED BY: (Signature/Name)				DATE/TIME				RECEIVED BY: (Signature/Name)				
SAMPLES SHIPPED VIA:				DATE/TIME		RECEIVED BY: (Signature/Name)				DATE/TIME				RECEIVED BY: (Signature/Name)				
FEDEX <input type="checkbox"/> UPS <input type="checkbox"/> AIRBORNE <input type="checkbox"/> HAND <input checked="" type="checkbox"/> AIRFREIGHT <input type="checkbox"/> <i>Mobile Lab RD</i>																		
						CARRIER: (Signature/Name)				RECEIVED FOR USE: (Signature/Name)				DATE/TIME				
										LAB: <i>Alameda, CA, Enviro Lab</i>								



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Planning, Environmental Analyses and Hazardous Substances Management and Remediation

1000 ORTEGA WAY, SUITE A PLACENTIA, CA 92670-7125  
 ☎ (714) 632 - 8521  
 ☎ (714) 632 - 6754

## Chain of Custody Record

SAMPLING REQUIREMENTS: RCRA  NPDES  SDWA  \_\_\_\_\_

WRITTEN QC REPORT \_\_\_\_\_  
 ROUTINE QC   
 RWOCB QC

TURNAROUND TIME:  
 SAME DAY  24hr  48hr  NORMAL

PROJECT NO.		PROJECT NAME		CONTR TYPE	ANALYSES REQUESTED												REMARKS								
1233		Montgomery Ward Dublin			GLASS	PLASTIC	BRASS TUBE	TELUR	BOISM	TELUR	BOISM	TELUR	BOISM	BTX	8020	VOC		8240	EOC	8270	OIL & GREASE	CAM METALS TOT WET	LEAD	HYD	8010
SAMPLER (signature with printed name) F. S. Muramoto				PROJECT MANAGER F. Muramoto																					
SAMPLE NUMBER	DATE	TIME	COMP GRAB	SAMPLE DESCRIPTION																					
GP-5052-16	6/22/85	114 hrs	✓	Soil				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1
GP-6095-10	"	1135 hrs	✓	Soil				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1
GP-6095-13	"	1142 hrs	✓	Soil				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1
GP-6095-16	"	1155 hrs	✓	Soil				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1
GP-7095-10	"	1204 hrs	✓	Soil				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1
GP-7095-13	"	1211 hrs	✓	Soil				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1
GP-7095-16	"	1220 hrs	✓	Soil				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1
												TOTAL NUMBER OF CONTAINERS		7											
RELINQUISHED BY: (Signature/Name) F. S. Muramoto				DATE/TIME 6/22/85 1625				RECEIVED BY: (Signature/Name)				DATE/TIME				RECEIVED BY: (Signature/Name)									
RELINQUISHED BY: (Signature/Name)				DATE/TIME				RECEIVED BY: (Signature/Name)				DATE/TIME				RECEIVED BY: (Signature/Name)									
SAMPLES SHIPPED VIA: FEDEX <input type="checkbox"/> UPS <input type="checkbox"/> AIRBORNE <input type="checkbox"/> HAND <input checked="" type="checkbox"/> AIRFREIGHT <input type="checkbox"/> Mobile Lab <input checked="" type="checkbox"/>				SHIPPED BY: (Signature/Name)				CARRIER: (Signature/Name)				RECEIVED FOR BY: (Signature/Name)				DATE/TIME									
				ARBILL #:								LAB: Alameda Co. Envir. Lab													



# ENVIRONMENTAL AUDIT, INC.

Planning, Environmental Analyses and Hazardous Substances Management and Remediation

1000 ORTEGA WAY, SUITE A PLACENTIA, CA 92670-7125  
 (714) 632-8521  
 (714) 632-6754

## Chain of Custody Record

SAMPLING REQUIREMENTS: RCRA  NPDES  SDWA  \_\_\_\_\_   
 WRITTEN OC REPORT \_\_\_\_\_  
 ROUTINE OC   
 RSD/OCB OC   
 TURNAROUND TIME:  
 SAME DAY  24hr  48hr  NORMAL

PROJECT NO.		PROJECT NAME		CONTR. TYPE	ANALYSES REQUESTED										REMARKS									
1233		Montgomery Ward Dublin			GLASS	PLASTIC	BRASS/SS TUBE	TPH-D 8015M	TPH-G 8075M	TPH-L 818	ATEX 8020	VOC B240	EOC B270	OIL & GREASE		CAM METALS TOT WET	LEAD	HYOC B010	NUMBER OF CONTAINERS					
SAMPLER (Name with Print and Handwritten)			PROJECT MANAGER																					
J.S. Muramata			F.S. Muramata			F. Muramata																		
SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION																			
GP-80 95-10	4/24/85	2:36 hrs	✓		Soil																			
GP-80 125-13	"	12:45 hrs	✓		Soil																			
GP-80 155-14	"	12:54 hrs	✓		Soil																			
GP-90 95-10	"	1402 hrs	✓		Soil																			
GP-90 125-13	"	1410 hrs	✓		Soil																			
GP-90 155-16	"	1416 hrs	✓		Soil																			
GP-100 95-8	"	1440 hrs	✓		Soil																			
												TOTAL NUMBER OF CONTAINERS	7											
RELINQUISHED BY: (Signature/Name)			DATE/TIME			RECEIVED BY: (Signature/Name)			DATE/TIME			RELINQUISHED BY: (Signature/Name)			DATE/TIME			RECEIVED BY: (Signature/Name)						
J.S. Muramata			6/24/85																					
RELINQUISHED BY: (Signature/Name)			DATE/TIME			RECEIVED BY: (Signature/Name)			DATE/TIME			RELINQUISHED BY: (Signature/Name)			DATE/TIME			RECEIVED BY: (Signature/Name)						
SAMPLES SHIPPED VIA:					SHIPPED BY: (Signature/Name)					CARRIER: (Signature/Name)					RECEIVED FOR BY: (Signature/Name)					DATE/TIME				
FEDEX <input type="checkbox"/> UPS <input type="checkbox"/> AIRBORNE <input type="checkbox"/>															Luis Muramata									
HAND <input checked="" type="checkbox"/> AIRFREIGHT <input type="checkbox"/> <i>Motak Lab</i>																								



**APPENDIX C:      Laboratory Reports**

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Alameda County Health Care Service Agency  
Department of Environmental Health  
Environmental Health Laboratory

ANALYTICAL REQUEST

Certification No. 1944

Laboratory No: 95-062

Sample Identification: Montgomery Word Dublin CA

Analysis Requested By: Frank Muramoto

Date Collected: 6/22/95

Collected By: Frank Muramoto

Date Received: 6/22/95

Received By: N. Leung

Analysis Requested: Benzene, Ethylbenzene, Toluene, Xylenes, TPH (Gas).

Background Information: Twenty eight soil samples submitted  
for analysis.

ANALYTICAL RESULTS

Parameter

Observation or Results

Parameter	GP-1 @ 9.5-10	GP-1 @12.5-13	GP 1 @ 15.5-16
Sample #	GP-1 @ 9.5-10	GP-1 @12.5-13	GP 1 @ 15.5-16
Laboratory #	95-062-1	95-062-2	95-062-3
Benzene	ND < 5 ppb	ND < 5 ppb	ND < 5 ppb
Ethylbenzene	ND < 5 ppb	1040 ppb (ug/Kg)	ND < 5 ppb
Toluene	439 ppb (ug/Kg)	156 ppb (ug/Kg)	ND < 5 ppb
O,M,P Xylenes	607 ppb (ug/kg)	5410 ppb (ug/Kg)	162 ppb (ug/Kg)
TPH (Gas)	< 10 ppm (mg/Kg)	59 ppm (mg/Kg)	< 10 ppm (mg/Kg)

Conclusion:

Date Analysis Completed: 06/15/95

Chemist: N. Leung, R. Mankarious

Approved: *DW*

Distribution: Frank Muramoto, Jun Makishima

Alameda County Health Care Service Agency  
Department of Environmental Health  
Environmental Health Laboratory

ANALYTICAL REQUEST

Certification No. 1944

Laboratory No: 95-062

Sample Identification: Montgomery Word Dublin CA

Analysis Requested By: Frank Muramoto

Date Collected: 6/22/95

Collected By: Frank Muramoto

Date Received: 6/22/95

Received By: N. Leung

Analysis Requested: Benzene, Ethylbenzene, Toluene, Xylenes, TPH (Gas).

Background Information: Twenty eight soil samples submitted  
for analysis.

ANALYTICAL RESULTS

Parameter	Observation or Results		
Sample #	GP-2 @ 9.5-10	GP-2 @ 12.5-13	GP 2 @ 15.5-16
Laboratory #	95-062-4	95-062-5	95-062-6
Benzene	ND < 5 ppb	ND < 5 ppb	ND < 5 ppb
Ethylbenzene	ND < 5 ppb	ND < 5 ppb	ND < 5 ppb
Toluene	435 ppb (ug/Kg)	111 ppb (ug/Kg)	389 ppb (ug/Kg)
O,M,P Xylenes	579 ppb (ug/kg)	1040 ppb (ug/Kg)	578 ppb (ug/Kg)
TPH (Gas)	< 10 ppm (mg/Kg)	10.5 ppm (mg/Kg)	< 10 ppm (mg/Kg)

Conclusion:

Date Analysis Completed: 06/15/95

Chemist: N. Leung, R. Mankarious

Approved: DW

Distribution: Frank Muramoto, Jun Makishima

Alameda County Health Care Service Agency  
Department of Environmental Health  
Environmental Health Laboratory

ANALYTICAL REQUEST

Certification No. 1944

Laboratory No: 95-062

Sample Identification: Montgomery Word Dublin CA

Analysis Requested By: Frank Muramoto

Date Collected: 6/22/95

Collected By: Frank Muramoto

Date Received: 6/22/95

Received By: N. Leung

Analysis Requested: Benzene, Ethylbenzene, Toluene, Xylenes, TPH (Gas).

Background Information: Twenty eight soil samples submitted  
for analysis.

ANALYTICAL RESULTS

Parameter

Observation or Results

Parameter	GP-3 @ 9.5-10	GP-3 @ 12.5-13	GP 3 @ 15.5-16
Sample #	GP-3 @ 9.5-10	GP-3 @ 12.5-13	GP 3 @ 15.5-16
Laboratory #	95-062-7	95-062-8	95-062-9
Benzene	ND < 5 ppb	ND < 5 ppb	ND < 5 ppb
Ethylbenzene	ND < 5 ppb	ND < 5 ppb	ND < 5 ppb
Toluene	482 ppb (ug/Kg)	713 ppb (ug/Kg)	978 ppb (ug/Kg)
O,M,P Xylenes	629 ppb (ug/kg)	1350 ppb (ug/Kg)	1250 ppb (ug/Kg)
TPH (Gas)	< 10 ppm (mg/Kg)	36.7 ppm (mg/Kg)	11.5 ppm (mg/Kg)

Conclusion:

Date Analysis Completed: 06/15/95

Chemist: N. Leung, R. Mankarious

Approved: *DW*

Distribution: Frank Muramoto, Jun Makishima

Alameda County Health Care Service Agency  
Department of Environmental Health  
Environmental Health Laboratory

ANALYTICAL REQUEST

Certification No. 1944

Laboratory No: 95-062

Sample Identification: Montgomery Word Dublin CA

Analysis Requested By: Frank Muramoto

Date Collected: 6/22/95

Collected By: Frank Muramoto

Date Received: 6/22/95

Received By: N. Leung

Analysis Requested: Benzene, Ethylbenzene, Toluene, Xylenes, TPH (Gas).

Background Information: Twenty eight soil samples submitted  
for analysis.

ANALYTICAL RESULTS

Parameter

Observation or Results

Parameter	GP-4 @ 9.5-10	GP-4 @ 12.5-13	GP 4 @ 15.5-16
Sample #	GP-4 @ 9.5-10	GP-4 @ 12.5-13	GP 4 @ 15.5-16
Laboratory #	95-062-10	95-062-11	95-062-12
Benzene	ND < 5 ppb	ND < 5 ppb	ND < 5 ppb
Ethylbenzene	ND < 5 ppb	480 ppb (ug/Kg)	ND < 5 ppb
Toluene	444 ppb (ug/Kg)	1400 ppb (ug/Kg)	456 ppb (ug/Kg)
O,M,P Xylenes	608 ppb (ug/kg)	1970 ppb (ug/Kg)	559 ppb (ug/Kg)
TPH (Gas)	14.3 ppm (mg/Kg)	21.8 ppm (mg/Kg)	< 10 ppm (mg/Kg)

Conclusion:

Date Analysis Completed: 06/15/95

Chemist: R. Mankarious

Approved: DW

Distribution: Frank Muramoto, Jun Makishima

Alameda County Health Care Service Agency  
Department of Environmental Health  
Environmental Health Laboratory

ANALYTICAL REQUEST

Certification No. 1944

Laboratory No: 95-062

Sample Identification: Montgomery Word Dublin CA

Analysis Requested By: Frank Muramoto

Date Collected: 6/22/95

Collected By: Frank Muramoto

Date Received: 6/22/95

Received By: N. Leung

Analysis Requested: Benzene, Ethylbenzene, Toluene, Xylenes, TPH (Gas).

Background Information: Twenty eight soil samples submitted  
for analysis.

ANALYTICAL RESULTS

Parameter

Observation or Results

Parameter	GP-5 @ 9.5-10	GP-5 @ 12.5-13	GP 5 @ 15.5-16
Sample #	GP-5 @ 9.5-10	GP-5 @ 12.5-13	GP 5 @ 15.5-16
Laboratory #	95-062-13	95-062-14	95-062-15
Benzene	ND < 5 ppb	ND < 5 ppb	ND < 5 ppb
Ethylbenzene	ND < 5 ppb	ND < 5 ppb	ND < 5 ppb
Toluene	437 ppb (ug/Kg)	734 ppb (ug/Kg)	663 ppb (ug/Kg)
O,M,P Xylenes	562 ppb (ug/kg)	1050 ppb (ug/Kg)	923 ppb (ug/Kg)
TPH (Gas)	< 10 ppm (mg/Kg)	10.6 ppm (mg/Kg)	< 10 ppm (mg/Kg)

Conclusion:

Date Analysis Completed: 06/15/95

Chemist: R. Mankarious

Approved: *D.W.*

Distribution: Frank Muramoto, Jun Makishima

Alameda County Health Care Service Agency  
Department of Environmental Health  
Environmental Health Laboratory

ANALYTICAL REQUEST

Certification No. 1944

Laboratory No: 95-062

Sample Identification: Montgomery Word Dublin CA

Analysis Requested By: Frank Muramoto

Date Collected: 6/22/95

Collected By: Frank Muramoto

Date Received: 6/22/95

Received By: N. Leung

Analysis Requested: Benzene, Ethylbenzene, Toluene, Xylenes, TPH (Gas).

Background Information: Twenty eight soil samples submitted  
for analysis.

ANALYTICAL RESULTS

Parameter

Observation or Results

Parameter	GP-6 @ 9.5-10	GP-6 @ 12.5-13	GP 6 @ 15.5-16
Sample #	GP-6 @ 9.5-10	GP-6 @ 12.5-13	GP 6 @ 15.5-16
Laboratory #	95-062-16	95-062-17	95-062-18
Benzene	ND < 5 ppb	ND < 5 ppb	ND < 5 ppb
Ethylbenzene	ND < 5 ppb	492 ppb (ug/Kg)	ND < 5 ppb
Toluene	445 ppb (ug/Kg)	79.0 ppb (ug/Kg)	392 ppb (ug/Kg)
O,M,P Xylenes	612 ppb (ug/kg)	1980 ppb (ug/Kg)	617 ppb (ug/Kg)
TPH (Gas)	< 10 ppm (mg/Kg)	19.8 ppm (mg/Kg)	18.0 ppm (mg/Kg)

Conclusion:

Date Analysis Completed: 06/15/95

Chemist: N. Leung, R. Mankarious

Approved: *DW*

Distribution: Frank Muramoto, Jun Makishima

Alameda County Health Care Service Agency  
Department of Environmental Health  
Environmental Health Laboratory

ANALYTICAL REQUEST

Certification No. 1944

Laboratory No: 95-062

Sample Identification: Montgomery Word Dublin CA

Analysis Requested By: Frank Muramoto

Date Collected: 6/22/95

Collected By: Frank Muramoto

Date Received: 6/22/95

Received By: N. Leung

Analysis Requested: Benzene, Ethylbenzene, Toluene, Xylenes, TPH (Gas).

Background Information: Twenty eight soil samples submitted  
for analysis.

ANALYTICAL RESULTS

Parameter

Observation or Results

Parameter	GP-7 @ 9.5-10	GP-7 @ 12.5-13	GP 7 @ 15.5-16
Sample #	GP-7 @ 9.5-10	GP-7 @ 12.5-13	GP 7 @ 15.5-16
Laboratory #	95-062-19	95-062-20	95-062-21
Benzene	ND < 5 ppb	ND < 5 ppb	ND < 5 ppb
Ethylbenzene	423 ppb (ug/Kg)	681 ppb (ug/Kg)	338 ppb (ug/Kg)
Toluene	406 ppb (ug/Kg)	837 ppb (ug/Kg)	428 ppb (ug/Kg)
O,M,P Xylenes	1580 ppb (ug/kg)	4260 ppb (ug/Kg)	1450 ppb (ug/Kg)
TPH (Gas)	< 10 ppm (mg/Kg)	35.5 ppm (mg/Kg)	12.9 ppm (mg/Kg)

Conclusion:

Date Analysis Completed: 06/15/95

Chemist: L. Leung, R. Mankarious

Approved: *DL*

Distribution: Frank Muramoto, Jun Makishima



Alameda County Health Care Service Agency  
Department of Environmental Health  
Environmental Health Laboratory

ANALYTICAL REQUEST

Certification No. 1944

Laboratory No: 95-062

Sample Identification: Montgomery Word Dublin CA

Analysis Requested By: Frank Muramoto

Date Collected: 6/22/95

Collected By: Frank Muramoto

Date Received: 6/22/95

Received By: N. Leung

Analysis Requested: Benzene, Ethylbenzene, Toluene, Xylenes, TPH (Gas).

Background Information: Twenty eight soil samples submitted  
for analysis.

ANALYTICAL RESULTS

Parameter	Observation or Results		
Sample #	GP-8 @ 9.5-10	GP-8 @ 12.5-13	GP 8 @ 15.5-16
Laboratory #	95-062-22	95-062-23	95-062-24
Benzene	ND < 5 ppb	ND < 5 ppb	ND < 5 ppb
Ethylbenzene	ND < 5 ppb	236 ppb (ug/Kg)	ND < 5 ppb
Toluene	553 ppb (ug/Kg)	460 ppb (ug/Kg)	397 ppb (ug/Kg)
O,M,P Xylenes	876 ppb (ug/kg)	1660 ppb (ug/Kg)	619 ppb (ug/Kg)
TPH (Gas)	< 10 ppm (mg/Kg)	15.6 ppm (mg/Kg)	< 10 ppm (mg/Kg)

Conclusion:

Date Analysis Completed: 06/15/95

Chemist: L. Leung, R. Mankarious

Approved: *D.J.*

Distribution: Frank Muramoto, Jun Makishima

Alameda County Health Care Service Agency  
Department of Environmental Health  
Environmental Health Laboratory

ANALYTICAL REQUEST

Certification No. 1944

Laboratory No: 95-062

Sample Identification: Montgomery Word Dublin CA

Analysis Requested By: Frank Muramoto

Date Collected: 6/22/95

Collected By: Frank Muramoto

Date Received: 6/22/95

Received By: N. Leung

Analysis Requested: Benzene, Ethylbenzene, Toluene, Xylenes, TPH (Gas).

Background Information: Twenty eight soil samples submitted  
for analysis.

ANALYTICAL RESULTS

Parameter


Observation or Results

Parameter	GP-9 @ 9.5-10	GP-9 @ 12.5-13	GP 9 @ 15.5-16
Sample #	GP-9 @ 9.5-10	GP-9 @ 12.5-13	GP 9 @ 15.5-16
Laboratory #	95-062-25	95-062-26	95-062-27
Benzene	ND < 5 ppb	ND < 5 ppb	ND < 5 ppb
Ethylbenzene	ND < 5 ppb	ND < 5 ppb	ND < 5 ppb
Toluene	389 ppb (ug/Kg)	962 ppb (ug/Kg)	444 ppb (ug/Kg)
O,M,P Xylenes	616 ppb (ug/kg)	1790 ppb (ug/Kg)	722 ppb (ug/Kg)
TPH (Gas)	< 10 ppm (mg/Kg)	44.9 ppm (mg/Kg)	< 10 ppm (mg/Kg)

Conclusion:

Date Analysis Completed: 06/15/95

Chemist: L. Leung, R. Mankarious

Approved: 

Distribution: Frank Muramoto, Jun Makishima

Alameda County Health Care Service Agency  
Department of Environmental Health  
Environmental Health Laboratory

ANALYTICAL REQUEST

Certification No. 1944

Laboratory No: 95-062

Sample Identification: Montgomery Word Dublin CA

Analysis Requested By: Frank Muramoto

Date Collected: 6/22/95

Collected By: Frank Muramoto

Date Received: 6/22/95

Received By: N. Leung

Analysis Requested: Benzene, Ethylbenzene, Toluene, Xylenes, TPH (Gas).

Background Information: Twenty eight soil samples submitted  
for analysis.

ANALYTICAL RESULTS

Parameter Observation or Results

Sample #	GP-10 @ 9.5-10
Laboratory #	95-062-28
Benzene	ND < 5 ppb
Ethylbenzene	ND < 5 ppb
Toluene	442 ppb (ug/Kg)
O,M,P Xylenes	659 ppb (ug/kg)
TPH (Gas)	< 10 ppm (mg/Kg)

Conclusion:

Date Analysis Completed: 06/15/95

Chemist: R. Mankarious

Approved: *DW*

Distribution: Frank Muramoto, Jun Makishima