



# ENVIRONMENTAL AUDIT, INC.

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

714/632-8521 • FAX: 714/632-6754

① discont. MTBE analysis

② discont purging of wells w/OPC

April 22, 1996

Project No. 1233

Ms. Eva Chu  
Alameda County Health Care Services  
Department of Environmental Health  
Environmental Protection Division  
1131 Harbor Bay Parkway, #250  
Alameda, CA 94502-6577

ENVIRONMENTAL  
PROTECTION

96 APR 24 PM 3:42

**RE: GROUND WATER MONITORING REPORT  
FIRST QUARTER 1996  
Montgomery Ward Auto Service Center  
7575 Dublin Boulevard, Dublin, California**

Dear Ms. Chu:

Enclosed herewith are two copies of our report entitled, "Ground Water Monitoring Report, First Quarter 1996, Montgomery Ward Auto Service Center, 7575 Dublin Boulevard, Dublin, California," dated March 29, 1996.

Please call the undersigned if you have any questions or need additional information.

Sincerely,

ENVIRONMENTAL AUDIT, INC.

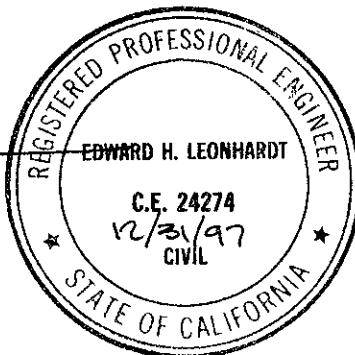
*Edward H. Leonhardt*

Edward H. Leonhardt, R.C.E.  
Manager, Civil Engineering

EHL:SH

enclosure

cc: E. Koberstein, Montgomery Ward (w/enclosure)  
G. Jonas, Montgomery Ward (w/enclosure)  
M. Gilmartin, Straw & Gilmartin (w/enclosure)  
R. Enea, Enea Properties (w/enclosure)  
M.B. DeBord, Altheimer & Gray (w/enclosure)



JRC:WORD:1233M96A

# **GROUND WATER MONITORING REPORT**

## **FIRST QUARTER 1996**

**Montgomery Ward Auto Service Center  
7575 Dublin Boulevard  
Dublin, California**

*Prepared for:*

**MONTGOMERY WARD & CO., INCORPORATED  
1331 South Harbor Boulevard  
Fullerton, CA 92632**

*Submitted to:*

**ALAMEDA COUNTY HEALTH CARE SERVICES  
DEPARTMENT OF ENVIRONMENTAL HEALTH  
ENVIRONMENTAL PROTECTION DIVISION  
1131 Harbor Bay Parkway, #250  
Alameda, CA 94502-6577**

**Project No. 1233**

**March 29, 1995**

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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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LABORATORY REPORTS

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## 1.0 INTRODUCTION

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This document constitutes the First Quarter 1996 ground water monitoring report for the Montgomery Ward Auto Service Center property located at 7575 Dublin Boulevard, Dublin, California (Montgomery Ward site) (see Figure 1). Environmental Audit, Inc. (EAI) was retained by Montgomery Ward to complete the quarterly monitoring. The quarterly ground water monitoring activities are conducted during the first month of each calendar quarter, i.e., in January, April, July, and October.

A ground water extraction and treatment system was formerly operated at the Montgomery Ward site between 1990 and 1995. Pursuant to approval from the Alameda County Health Care Services, Department of Environmental Health (County Health) the ground water extraction and treatment system was deactivated on October 20, 1995, and an oxygen releasing compound (ORC) was placed in Montgomery Ward wells B-5 and B-12. Post remediation monitoring is now being conducted. This report documents the first quarter sampling event after deactivation of the ground water extraction and treatment system.

As requested by County Health, ground water monitoring wells MW-1 through MW-4 associated with the Enea Properties sites located immediately south of the intersection of Amador Plaza Road and Dublin Boulevard (see Figure 1), are included in the quarterly ground water monitoring activities for the Montgomery Ward site.

All wells associated with the Montgomery Ward site and Enea Properties sites are gauged on a quarterly basis. The following lists the wells sampled on a quarterly basis:

January:    Montgomery Ward wells: B-5, B-10, B-12, MW-100 and MW-102  
              Enea wells: MW-1 and MW-3

April:      Montgomery Ward wells: B-5, B-10, B-12, B-16, MW-100 and MW-102  
              Enea wells: MW-1, MW-2, MW-3 and MW-4

July:        Montgomery Ward wells: B-5, B-10, B-12, MW-100 and MW-102  
              Enea wells: MW-1 and MW-3

October:     Montgomery Ward wells: B-5, B-10, B-12, B-16, MW-100 and MW-102  
              Enea wells: MW-1 and MW-3

## 2.0 FIELD INVESTIGATION

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### 2.1 GROUND WATER ELEVATION SURVEY

On January 11, 1996, EAI gauged all wells associated with the Montgomery Ward site and Enea Properties sites using an Oil Recovery System interface probe accurate to 0.01 feet. No free-product was detected in any of the wells. The measured water levels were converted to elevations relative to mean sea level datum by subtracting the measured water level for each

well from the ground level datum (see Table 1). Ground water elevation data obtained from the wells were used to construct a ground water elevation map (see Figure 2).

## 2.2 DISSOLVED OXYGEN READINGS

On January 11, 1996 dissolved oxygen readings were obtained from each well using a YSI Model 50B dissolved oxygen meter. Readings were obtained at the water surface and from one, three, five and seven feet below the water surface (see Table 2).

## 2.3 GROUND WATER SAMPLING

On January 12, 1996, ground water samples were obtained for analytical testing from Montgomery Ward wells B-5, B-10, B-12, MW-100 and MW-102, and from Enea Properties wells MW-1 and MW-3. Prior to sampling, all wells were purged using a Whale Supersub 921 submersible pump. Purging activities continued until the temperature, conductivity and pH of the extracted water had stabilized (see Appendix A).

*Do not purge well  
B5+B12  
infutura*

All wells were sampled in the order that purging activities were completed. The water samples were collected from just below the water surface using Voss Technologies disposable bottom bailers equipped with volatile organic compound samplers. Use of these bailers precludes the potential for cross-contamination. The water samples were sealed in a one-liter plastic bottle and two 40-milliliter Volatile Organic Analysis vials with Teflon septa lined lids. The containers were completely filled so that no head space existed between the samples and the lids. The samples were labeled with the sample point identification, date, time and EAI project number, and immediately placed into an ice chest, chilled using ice. The samples remained chilled until delivered to the laboratory for analytical testing. All samples were logged on a chain of custody record form (see Appendix B).

Ground water samples from wells B-5, B-10 and B-12 also were collected for physicochemical and microbiological analyses.

## 2.4 SAMPLING EQUIPMENT CLEANING PROTOCOL

The submersible pump and hose system (Equipment) used to purge the wells prior to sampling was decontaminated between each purging activity using the following procedure:

- the Equipment was flushed in a solution of Alconox detergent and tap water; and
- the Equipment was flushed with tap water.

## 2.5 EFFLUENT HANDLING

All effluent generated during purging, sampling and equipment decontamination activities was sealed in labeled 55-gallon drums. The drums remain on the Montgomery Ward site pending proper disposal. Documentation regarding disposal of the effluent will be submitted at a later date.

### 3.0 ANALYTICAL TESTING

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All samples were delivered for analytical testing to BC Analytical, a state certified hazardous waste testing laboratory (Certificate No. 1353) located in Concord, California. The samples were tested for total petroleum hydrocarbons as gasoline (TPH-G) by modified EPA Method 8015, benzene, toluene, ethylbenzene and xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8020, and total lead using EPA Method 7421. The results of the testing are shown in Table 3 along with the results from previous testing periods. The laboratory reports are contained in Appendix B. Figure 3 shows the testing results for TPH-G, BTEX and MTBE.

Physicochemical and/or microbiological analyses were conducted on ground water samples obtained from wells B-5, B-10 and B-12. Physicochemical analyses were conducted only on sample B-12, utilizing a HACH Spectrophotometric and ion-specific procedures. Microbiological analyses were performed on all samples utilizing standard plate count procedures on Trypticase Soy Agar (TSA, general/heterotrophic enumeration), and Minimal Salts Agar supplemented with 500 parts per million (ppm) gasoline as the sole carbon source (MS, selective degrader enumeration). Plates were incubated under aerobic conditions for four days at room temperature prior to enumeration. The results of these analyses are shown on Table 4.

### 4.0 DISCUSSION AND CONCLUSIONS

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The water level in wells sampled this quarter, excluding Montgomery Ward well B-12, rose on average about 0.5 feet. The water rise in Montgomery Ward well B-12 (this well was formerly used for ground water extraction purposes) was higher given its diameter and construction standards. Generally, there was a slight increase in the BTEX concentrations detected in the water samples obtained from the Montgomery Ward wells. This is expected given that the source of contamination was from underground tanks formerly located on the site and that residual contamination (below levels at which County Health requires remediation) is present in capillary fringe soils. Under these circumstances, a rise in the water table of 0.5 feet will result in higher dissolved BTEX concentrations.

Conversely, on the Enea Properties sites where contamination is confined to the saturated zone, a rise in the water table typically results in lower BTEX concentrations. This is in fact what occurred at the Enea Properties sites.

The results of the physicochemical and microbiological analyses conducted on ground water samples obtained from Montgomery Ward wells B-5, B-10 and B-12 prior to and after installation of the ORC, show that installation of the ORC has not appreciably increased the indigenous microorganisms present in the subsurface capable of degrading the hydrocarbons. Therefore, it appears that continued use of the ORC may not be warranted. A recommendation regarding the continued use of ORC will be made after the results of the Second Quarter 1996 sampling event are available.

## 5.0 LIMITATION

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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. This report has been prepared for Montgomery Ward Auto Service Center. The conclusions and recommendations included in this report are based on information contained or referenced herein, and our best judgment. No other warranty, expressed or implied, is made as to the professional advice contained in this report.

## 6.0 MONTGOMERY WARD CERTIFICATION

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I certify under penalty of perjury that, based upon the professional reputation of and the information supplied by the environmental consultant and laboratory who prepared or who participated in the preparation of this report, the information contained in this report and all attachments is, to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Montgomery Ward & Co., Incorporated

Ed Koberstein  
Field Engineer  
Montgomery Ward  
1331 South Harbor Boulevard  
Fullerton, CA 92632

Ed Koberstein 3/29/96  
Signature Date

JRC:EHL:SAB:sh

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## **TABLES**

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**TABLE 1**  
**GROUND WATER ELEVATIONS**  
Montgomery Ward Auto Service Center  
Enea Properties  
Dublin, California

Page 1 of 5

Date Measured	Elevation of top surface of PVC well casing (feet MSL)	Measured depth to ground water (feet bgs)	Measured depth to Product	Product Thickness	Ground water elevation (feet MSL)
B-5					
	340.05				
04/16/92		10.62	-	0.00	329.43
07/24/92		11.91	-	0.00	328.14
10/22/92		12.97	-	0.00	327.08
01/15/93		12.97	-	0.00	327.08
04/15/93		09.75	-	0.00	330.30
05/14/93		10.07	-	0.00	329.98
07/14/93		10.80	-	0.00	329.25
10/14/93		12.08	-	0.00	327.97
01/13/94		12.23	-	0.00	327.82
04/04/94		11.30	-	0.00	328.75
07/05/94		12.37	-	0.00	327.68
10/04/94		13.04	-	0.00	327.01
01/18/95		10.43	-	0.00	329.62
04/20/95		09.70	-	0.00	330.35
07/27/95		10.85	-	0.00	329.20
10/19/95		12.08	-	0.00	327.97
01/11/96		11.50	-	0.00	328.55
B-10					
	339.70				
04/16/92			-	0.00	329.38
07/24/92		11.69	-	0.00	328.01
10/22/92		12.67	-	0.00	327.03
01/15/93		09.48	-	0.00	330.22
04/15/93		09.49	-	0.00	330.21
05/14/93		09.87	-	0.00	329.83
07/14/93		10.64	-	0.00	329.06
10/14/93		11.80	-	0.00	327.90
01/13/94		11.94	-	0.00	327.76
04/04/94		11.00	-	0.00	328.70
07/05/94		12.08	-	0.00	327.62
10/04/94		12.69	-	0.00	327.01
01/18/95		09.89	-	0.00	329.81
04/20/95		09.40	-	0.00	330.30
07/27/95		10.55	-	0.00	329.15
10/19/95		11.76	-	0.00	327.94
01/11/96		11.19	-	0.00	328.51
B-12					
	339.10				
04/16/92		09.95	-	0.00	329.15
07/24/92		11.57	-	0.00	327.53
10/22/92		12.82	-	0.00	326.28

**TABLE 1**  
**GROUND WATER ELEVATIONS**  
Montgomery Ward Auto Service Center  
Enea Properties  
Dublin, California

Page 2 of 5

Date Measured	Elevation of top surface of PVC well casing (feet MSL)	Measured depth to ground water (feet bgs)	Measured depth to Product	Product Thickness	Ground water elevation (feet MSL)
01/15/93		08.66	-	0.00	330.44
04/15/93		08.70	-	0.00	330.40
05/14/93		09.32	-	0.00	329.78
07/14/93		09.95	-	0.00	329.15
10/14/93		10.94	-	0.00	328.16
01/13/94		11.28	-	0.00	327.82
04/04/94		10.32	-	0.00	328.78
07/05/94		19.25	-	0.00	319.85
10/04/94		19.27	-	0.00	319.83
01/18/95		10.99	-	0.00	328.11
04/20/95		08.60	-	0.00	330.50
07/27/95		14.62	-	0.00	324.48
10/19/95		20.43	-	0.00	318.67
01/11/96		10.39	-	0.00	328.71
B-15					
		340.62			
04/16/92		11.09	-	0.00	329.53
07/24/92		12.33	-	0.00	328.29
10/22/92		13.25	-	0.00	327.37
01/15/93		10.22	-	0.00	330.40
04/15/93		10.26	-	0.00	330.36
05/14/93		10.64	-	0.00	329.98
07/14/93		11.35	-	0.00	329.27
10/14/93		12.41	-	0.00	328.21
01/13/94		12.59	-	0.00	328.03
04/04/94		11.74	-	0.00	328.88
07/05/94		12.86	-	0.00	327.76
10/04/94		13.35	-	0.00	327.27
01/18/95		10.71	-	0.00	329.91
04/20/95		10.15	-	0.00	330.47
07/27/95		11.30	-	0.00	329.32
10/19/95		12.47	-	0.00	328.15
01/11/96		11.86	-	0.00	328.76
B-16					
		339.82			
04/16/92		10.63	-	0.00	329.19
07/24/92		11.90	-	0.00	327.92
10/22/92		12.88	-	0.00	326.94
01/15/93		09.79	-	0.00	330.03
04/15/93		09.83	-	0.00	329.99
05/14/93		10.20	-	0.00	329.62
07/14/93		10.92	-	0.00	328.90
10/14/93		11.99	-	0.00	327.83

**TABLE 1**  
**GROUND WATER ELEVATIONS**  
Montgomery Ward Auto Service Center  
Enea Properties  
Dublin, California

Page 3 of 5

Date Measured	Elevation of top surface of PVC well casing (feet MSL)	Measured depth to ground water (feet bgs)	Measured depth to Product	Product Thickness	Ground water elevation (feet MSL)
01/13/94		12.16	-	0.00	327.66
04/04/94		11.28	-	0.00	328.54
07/05/94		12.28	-	0.00	327.54
10/04/94		12.89	-	0.00	326.93
01/18/95		10.21	-	0.00	329.61
04/20/95		09.79	-	0.00	330.03
07/27/95		10.85	-	0.00	328.97
10/19/95		11.97	-	0.00	327.85
01/11/96		11.43	-	0.00	328.39
<b>MW-100</b>					
	339.61				
05/14/93		10.34	-	0.00	329.27
07/14/93		11.00	-	0.00	328.61
10/14/93		12.12	-	0.00	327.49
01/13/94		12.25	-	0.00	327.36
04/04/94		11.36	-	0.00	328.25
07/05/94		12.22	-	0.00	327.39
10/04/94		12.88	-	0.00	326.73
01/18/95		10.27	-	0.00	329.34
04/20/95		10.00	-	0.00	329.61
07/27/95		10.91	-	0.00	328.70
10/19/95		11.95	-	0.00	327.66
01/11/96		11.53	-	0.00	328.08
<b>MW-101</b>					
	338.54				
05/14/93		09.91	-	0.00	328.63
07/14/93		10.38	-	0.00	328.16
10/14/93		11.30	-	0.00	327.24
01/13/94		11.21	-	0.00	327.33
04/04/94		10.69	-	0.00	327.85
07/05/94		11.39	-	0.00	327.15
10/04/94		11.98	-	0.00	326.56
01/18/95		09.84	-	0.00	328.70
04/20/95		09.61	-	0.00	328.93
07/27/95		10.27	-	0.00	328.27
10/19/95		11.14	-	0.00	327.40
01/11/96		10.83	-	0.00	327.71
<b>MW-102</b>					
	339.23				
05/14/93		09.60	-	0.00	329.63
07/14/93		10.31	-	0.00	328.92
10/14/93		11.57	-	0.00	327.66

**TABLE 1**  
**GROUND WATER ELEVATIONS**  
Montgomery Ward Auto Service Center  
Enea Properties  
Dublin, California

Page 4 of 5

Date Measured	Elevation of top surface of PVC well casing (feet MSL)	Measured depth to ground water (feet bgs)	Measured depth to Product	Product Thickness	Ground water elevation (feet MSL)
01/13/94		11.71	-	0.00	327.52
04/04/94		10.83	-	0.00	328.40
07/05/94		11.65	-	0.00	327.96
10/04/94		12.36	-	0.00	326.87
01/18/95		09.59	-	0.00	329.64
04/20/95		09.27	-	0.00	329.96
07/27/95		10.22	-	0.00	329.01
10/19/1995 <sup>(1)</sup>		NM	-	0.00	NM
01/11/96	338.44	10.13	-	0.00	328.31
ENEA MW-1					
	335.84				
10/14/93		09.05	-	0.00	326.79
01/13/94		NM	-	0.00	NM
04/04/94		08.36	-	0.00	327.48
07/05/94		09.04	-	0.00	326.80
10/04/94		09.66	-	0.00	326.18
01/18/95		07.53	-	0.00	328.31
04/20/95		07.41	-	0.00	328.43
07/27/95		08.03	-	0.00	327.81
10/19/95		08.82	-	0.00	327.02
01/11/96		08.52	-	0.00	327.32
ENEA MW-2					
	335.61				
10/14/93		08.90	-	0.00	326.71
01/13/94		NM	-	0.00	NM
04/04/94		08.05	-	0.00	327.56
07/05/94		08.84	-	0.00	326.77
10/04/94		09.59	-	0.00	326.02
01/18/95		07.01	-	0.00	328.60
04/20/95		06.85	-	0.00	328.76
07/27/95		07.65	-	0.00	327.96
10/19/95		08.63	-	0.00	326.98
01/11/96		08.22	-	0.00	327.39
ENEA MW-3					
	336.93				
10/14/93		09.89	-	0.00	327.84
01/13/94		NM	-	0.00	NM
04/04/94		09.19	-	0.00	327.74
07/05/94		09.92	-	0.00	327.01
10/04/94		10.56	-	0.00	326.37
01/18/95		08.26	-	0.00	328.67
04/20/95		08.09	-	0.00	328.84

**TABLE 1**  
**GROUND WATER ELEVATIONS**  
Montgomery Ward Auto Service Center  
Enea Properties  
Dublin, California

Page 5 of 5

Date Measured	Elevation of top surface of PVC well casing (feet MSL)	Measured depth to ground water (feet bgs)	Measured depth to Product	Product Thickness	Ground water elevation (feet MSL)
07/27/95		08.81	-	0.00	328.12
10/19/95		09.68	-	0.00	327.25
01/11/96		09.32	-	0.00	327.61
ENEA MW-4					
	335.76				
10/14/93		NI	-	0.00	NI
01/13/94		NM	-	0.00	NM
04/04/94		08.55	-	0.00	327.21
07/05/94		09.15	-	0.00	326.61
10/04/94		09.77	-	0.00	325.99
01/18/95		07.79	-	0.00	327.97
04/20/95		07.72	-	0.00	328.04
07/27/95		08.24	-	0.00	327.52
10/19/95		08.95	-	0.00	326.81
01/11/96		08.70	-	0.00	327.06
ENEA EW-1					
	336.08				
10/14/93		NI	-	0.00	NI
01/13/94		NM	-	0.00	NM
04/04/94		08.62	-	0.00	327.46
07/05/94		09.28	-	0.00	326.80
10/04/94		09.89	-	0.00	326.19
01/18/95		07.76	-	0.00	328.32
04/20/95		07.66	-	0.00	328.42
07/27/95		08.27	-	0.00	327.81
10/19/95		09.05	-	0.00	327.03
01/11/96		08.75	-	0.00	327.33
NOTES:					
(1) = Well MW-102 was not measured because the well was inaccessible due to street construction.					
NI	Not installed, NM - Not measured				
MSL	Mean Sea Level				
bgs	below ground surface				
Depth to water is as measured from the cut notch at the top side of each PVC well casing.					
The elevations of all wells were surveyed in October 1993 to City of Dublin Benchmark No. DUB-680 (elevation=331.60 MSL), located along Dublin Boulevard, 0.60 miles easterly from San Ramon Road.					
All depth to water measurements were converted to MSL elevations using well casing elevation datum surveyed on 10/14/93.					
Wells B-5, B-12, B-15, B-16, MW-100, MW-101 and MW-102 are owned by Montgomery Ward and are associated with 7575 Dublin Blvd.					
Wells MW-1, MW-2, MW-3, MW-4 and EW-1 are owned by Enea Properties and are located at Amador Plaza Road and Dublin Boulevard.					
DTP:1233:ELEV.XLS					

**TABLE 2**  
**DISSOLVED OXYGEN MEASUREMENTS**

Montgomery Ward Auto Service Center

Enea Properties

Dublin, California

Milligrams per liter (mg/l)

Page 1 of 2

Date Measured	At Water Surface	One foot bgs	Three feet bgs	Five feet bgs	Seven feet bgs
B-5					
10/19/95	1.68	0.69	0.23	0.13	0.12
01/11/96	>20	1.59	0.48	0.25	0.21
B-10					
10/19/95	2.77	0.56	0.43	0.76	0.18
01/11/96	2.96	0.29	0.18	0.17	0.16
B-12					
10/19/95	5.86	0.42	0.09	0.03	0.00
01/11/96	9.02	0.87	0.25	0.12	0.11
B-15					
10/19/95	6.15	1.63	0.85	0.17	0.18
01/11/96	4.81	1.01	0.85	0.77	0.30
B-16					
10/19/95	0.91	0.21	0.13	0.09	0.12
01/11/96	2.57	0.46	0.28	0.27	0.26
MW-100					
10/19/95	1.58	0.54	0.40	0.39	0.35
01/11/96	2.44	0.28	0.22	0.18	0.16
MW-101					
10/19/95	3.38	2.38	1.90	1.12	0.70
01/11/96	5.40	1.32	1.24	1.26	0.87
MW-102					
10/19/95 <sup>(1)</sup>	NM	NM	NM	NM	NM
01/11/96	7.78	0.57	0.20	0.16	0.11
ENEA MW-1					
10/19/95	7.50	2.07	0.71	0.54	0.20
01/11/96	8.75	0.63	0.25	0.16	0.12
ENEA MW-2					
10/19/95	4.63	1.27	0.34	0.28	NM
01/11/96	3.67	0.56	0.34	0.31	NM
ENEA MW-3					
10/19/95	7.22	2.66	1.20	0.94	0.14
01/11/96	8.03	0.65	0.33	0.14	0.11
ENEA MW-4					
10/19/95	4.04	0.95	0.45	0.27	0.36
01/11/96	4.60	0.50	0.19	0.16	0.15

**TABLE 2**  
**DISSOLVED OXYGEN MEASUREMENTS**  
Montgomery Ward Auto Service Center  
Enea Properties  
Dublin, California  
Milligrams per liter (mg/l)

Page 2 of 2

Date Measured	At Water Surface	One foot bgs	Three feet bgs	Five feet bgs	Seven feet bgs
ENEA EW-1					
10/19/95	5.42	1.10	0.36	0.22	0.09
01/11/96	5.55	0.76	0.22	0.17	0.13
NOTES:					
(1) = Well MW-102 was not measured because the well was inaccessible due to street construction.					
NM - Not measured					
bgs - below ground surface					
Wells B-5, B-12, B-15, B-16, MW-100, MW-101 and MW-102 are owned by Montgomery Ward and are associated with 7575 Dublin Blvd.					
Wells MW-1, MW-2, MW-3, MW-4 and EW-1 are owned by Enea Properties and are located at Amador Plaza Road and Dublin Boulevard.					
K:1233:OXYGEN.XLS					

TABLE 3

**ANALYTICAL TESTING RESULTS**  
 Montgomery Ward Auto Service Center  
 ENEA Properties  
 Dublin, California  
 Parts per billion (ppb)

Page 1 of 4

Compounds	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Lead	MTBE
<b>Well B-5</b>							
04-16-92	4400	670	160	280	320	ND	NA
07-24-92	31000	5400	2600	2200	5800	ND	NA
10-22-92	9100	1100	190	520	740	ND	NA
01-15-93	2300	530	160	300	470	7.9	NA
04-15-93	4900	600	160	470	390	ND	NA
07-14-93	8800	590	210	840	1100	9.9	NA
10-14-93	4500	530	46	490	350	ND	NA
01-13-94	120	15	1.9	12	11	ND	NA
04-04-94	5700	450	39	350	400	ND	NA
07-05-94	2200	69	13	150	95	ND	NA
10-03-94	4700	190	38	510	570	ND	NA
01-18-95	2200	53	27	120	280	ND	NA
04-21-95	5800	90	74	300	910	4.0	NA
07-28-95	2600	57	26	190	570	2.5	ND
10-20-95	3400	27	15	210	530	4.2	ND
01-12-96	2100	37	12	130	320	7.5	ND
<b>Well B-10</b>							
04-16-92	7300	1400	640	880	1100	ND	NA
07-24-92	27000	3800	1600	2000	4000	ND	NA
10-22-92	16000	2300	340	1100	1200	ND	NA
01-15-93	10000	1400	310	730	1100	13	NA
04-15-93	8100	580	270	810	580	19	NA
07-14-93	6400	840	120	750	800	7.1	NA
10-14-93	100000	720	120	930	1100	ND	NA
01-13-94	18000	990	180	1300	2400	ND	NA
04-04-94	12000	370	96	900	1800	ND	NA
07-05-94	7800	170	50	550	810	ND	NA
10-03-94	6300	120	33	480	630	ND	NA
01-18-95	3300	38	28	160	450	2.9	NA
04-21-95	4200	39	8.6	220	310	ND	NA
07-28-95	2900	22	4.3	140	330	2.0	55
10-20-95	1900	3.9	1.5	74	170	ND	13
01-12-96	3400	24	5.4	130	260	4.5	94
<b>Well B-12</b>							
04-16-92	12000	1300	1100	510	1200	ND	NA
07-24-92	12000	1000	630	520	1000	ND	NA
10-22-92	11000	370	230	400	940	ND	NA
01-15-93	120	2.8	ND	1.6	3.6	11	NA
04-15-93	7100	730	240	350	570	ND	NA
07-14-93	4500	540	97	380	610	ND	NA
10-14-93	11000	710	170	650	1600	ND	NA
01-13-94	6000	330	100	330	620	24	NA
04-04-94	8700	350	58	350	660	ND	NA

TABLE 3

**ANALYTICAL TESTING RESULTS**  
 Montgomery Ward Auto Service Center  
 ENEA Properties  
 Dublin, California  
 Parts per billion (ppb)

Page 2 of 4

Compounds	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Lead	MTBE
07-05-94	8800	250	340	370	920	ND	NA
10-03-94	1300	63	42	110	140	ND	NA
01-18-95	5000	93	65	190	510	ND	NA
04-21-95	14000	190	320	420	1500	ND	NA
07-28-95	10000	110	120	490	1500	ND	ND
10-20-95	1400	16	13	81	180	ND	ND
01-12-96	2900	23	3.6	130	240	7.0	ND
<b>Well B-15</b>							
04-16-92	65	4.4	2.4	6.1	2.8	ND	NA
07-24-92	ND	3.6	1.5	3.1	1.6	ND	NA
10-22-92	ND	1.7	0.89	0.78	0.88	ND	NA
01-15-93	ND	ND	ND	ND	ND	13	NA
04-15-93	ND	2.8	ND	3.0	1.5	ND	NA
07-14-93	ND	ND	ND	0.57	0.74	7.8	NA
10-14-93	ND	0.96	2.6	1.3	3.6	25	NA
01-13-94	ND	ND	0.92	0.70	2	ND	NA
04-04-94	ND	ND	ND	0.56	1	ND	NA
07-05-94	ND	ND	ND	ND	ND	ND	NA
10-03-94	ND	ND	ND	ND	ND	ND	NA
01-18-95	ND	ND	0.69	ND	2.2	ND	NA
04-21-95	ND	ND	1.0	ND	2.5	ND	NA
07-28-95	ND	ND	ND	ND	ND	ND	ND
10-20-95	ND	ND	ND	ND	ND	ND	ND
01-12-96	NS	NS	NS	NS	NS	NS	NS
<b>Well B-16</b>							
04-16-92	1300	390	1.7	35	9.3	ND	NA
07-24-92	1600	120	5.7	120	410	ND	NA
10-22-92	1000	76	ND	55	130	ND	NA
01-15-93	160	6.5	0.86	2.3	2.6	5.5	NA
04-15-93	300	65	ND	13	2	ND	NA
07-14-93	170	5.9	ND	4.6	12	ND	NA
10-14-93	390	11	2.4	16	45	21	NA
01-13-94	350	8.7	0.62	25	68	ND	NA
04-04-94	550	8.7	ND	35	81	ND	NA
07-05-94	850	14	5.6	52	130	ND	NA
10-03-94	210	5.3	ND	26	5.8	ND	NA
01-18-95	ND	ND	0.94	ND	1.3	2.7	NA
04-21-95	ND	ND	0.66	ND	ND	ND	NA
07-28-95	57	0.71	ND	1.6	2.6	ND	ND
10-20-95	810	4.1	ND	22	100	ND	ND
01-12-96	NS	NS	NS	NS	NS	NS	NS
<b>Well MW-100</b>							
05-13-93	13000	83	ND	960	820	NA	NA
07-14-93	13000	32	ND	1400	790	8	NA

TABLE 3

**ANALYTICAL TESTING RESULTS**  
 Montgomery Ward Auto Service Center  
 ENEA Properties  
 Dublin, California  
 Parts per billion (ppb)

Page 3 of 4

Compounds	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Lead	MTBE
10-14-93	7500	48	16	900	520	22	NA
01-13-94	7000	51	ND	590	330	ND	NA
04-04-94	9800	69	ND	540	410	ND	NA
07-05-94	5900	31	8.7	190	190	ND	NA
10-03-94	3900	ND	ND	220	200	ND	NA
01-18-95	3700	48	31	190	120	2.8	NA
04-21-95	3100	10	ND	130	44	ND	NA
07-28-95	3300	ND	ND	100	42	ND	ND
10-20-95	2200	ND	ND	72	27	ND	ND
01-12-96	1400	ND	ND	43	19	ND	15
<b>Well MW-101</b>							
05-13-93	ND	ND	ND	ND	ND	NA	NA
07-14-93	ND	ND	ND	ND	ND	11	NA
10-14-93	ND	0.65	0.89	ND	1.1	ND	NA
01-13-94	ND	ND	ND	ND	ND	28	NA
04-04-94	ND	ND	ND	ND	ND	ND	NA
07-05-94	ND	ND	ND	ND	ND	ND	NA
10-03-94	ND	ND	ND	ND	ND	ND	NA
01-18-95	ND	ND	ND	ND	ND	2.6	NA
04-21-95	ND	ND	ND	ND	ND	ND	NA
07-28-95	ND	ND	ND	ND	ND	ND	ND
10-20-95	ND	ND	ND	ND	ND	ND	ND
01-12-96	NS	NS	NS	NS	NS	NS	NS
<b>Well MW-102</b>							
05-13-93	3600	17	ND	130	63	NA	NA
07-14-93	1500	13	ND	64	4.9	ND	NA
10-14-93	24000	9.6	5.2	60	60	ND	NA
01-13-94	2000	22	ND	26	55	ND	NA
04-04-94	2100	16	2.5	15	35	ND	NA
07-05-94	1300	7	2.9	10	23	ND	NA
10-03-94	620	5.1	ND	5.2	11	ND	NA
01-18-95	440	ND	ND	3.0	5.3	3.7	NA
04-21-95	250	ND	0.78	0.96	0.63	ND	NA
07-28-95	140	ND	ND	ND	0.70	ND	ND
10-20-95 <sup>(u)</sup>	NS	NS	NS	NS	NS	NS	NS
01-12-96	1500	ND	ND	0.68	ND	ND	ND
<b>ENEA MW-1</b>							
10-14-93	5700	76	19	160	460	ND	NA
04-04-94	7000	27	ND	260	49	ND	NA
07-05-94	5100	23	ND	260	50	ND	NA
10-03-94	4400	8.1	ND	170	50	ND	NA
01-18-95	2000	7.1	2.4	47	5.5	2.2	NA
04-21-95	1400	2.9	9.0	22	1.2	5.8	NA

**TABLE 3**  
**ANALYTICAL TESTING RESULTS**  
Montgomery Ward Auto Service Center  
ENEA Properties  
Dublin, California  
Parts per billion (ppb)

Compounds	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Lead	MTBE	Page 4 of 4
07-28-95	1100	ND	ND	14	1.4	ND	10	
10-20-95	1700	ND	2.2	22	3.6	ND	23	
01-12-96	920	ND	ND	9.9	2.2	ND	ND	
<b>ENEA MW-2</b>								
10-14-93	ND	ND	ND	1.1	0.71	21	NA	
04-04-94	ND	ND	ND	ND	ND	21	NA	
07-05-94	ND	ND	ND	ND	ND	ND	NA	
10-03-94	590	1.1	ND	22	6.5	ND	NA	
01-18-95	ND	ND	ND	ND	ND	2.4	NA	
04-21-95	ND	ND	ND	ND	ND	ND	NA	
07-28-95	ND	ND	ND	ND	0.57	ND	ND	
10-20-95	ND	ND	ND	ND	ND	ND	ND	
01-12-96	NS	NS	NS	NS	NS	NS	NS	
<b>ENEA MW-3</b>								
10-14-93	2600	26	30	100	130	ND	NA	
04-04-94	2600	13	3.4	90	140	ND	NA	
07-05-94	3400	15	5	31	48	ND	NA	
10-03-94	1400	6.3	ND	31	36	ND	NA	
01-18-95	2300	5.1	1.6	2.9	18	2.1	NA	
04-21-95	1900	5.3	ND	7.5	4.2	ND	NA	
07-28-95	1400	ND	ND	5.5	1.5	ND	11	
10-20-95	730	ND	ND	1.7	ND	ND	ND	
01-12-96	370	ND	ND	ND	ND	ND	ND	
<b>ENEA MW-4</b>								
04-04-94	ND	ND	ND	ND	ND	23	NA	
07-05-94	ND	ND	0.5	ND	0.62	ND	NA	
10-03-94	ND	ND	ND	ND	ND	ND	NA	
01-18-95	ND	ND	0.87	ND	ND	7.2	NA	
04-21-95	ND	ND	1.7	ND	ND	2.8	NA	
07-28-95	ND	ND	ND	ND	ND	2.9	ND	
10-20-95	ND	ND	ND	ND	ND	ND	ND	
01-12-96	NS	NS	NS	NS	NS	NS	NS	

NOTES:

(1) -Well MW-102 was not sampled because well was inaccessible due to street construction.  
NA-Not Analyzed  
ND-Not Detected  
NS-Not Sampled

DTP:1233:ANALYTIC.DOC

TABLE 4

**PHYSICOCHEMICAL AND MICROBIOLOGICAL RESULTS**  
**Montgomery Ward Auto Service Center**  
**Dublin, California**

Page 1 of 1

Parameter	pH	Nitrate (ppm)	Nitrite (ppm)	Ammonium (ppm)	Phosphate (ppm)	GME	SME	%BIO
<b>Well B-5</b>								
10-20-95	NA	NA	NA	NA	NA	2.4	0.23	9.6
01-12-96	NA	NA	NA	NA	NA	0.88	0.05	5.7
<b>Well B-10</b>								
10-20-95	NA	NA	NA	NA	NA	13	0.02	1.5
01-12-96	NA	NA	NA	NA	NA	1.6	0.04	2.5
<b>Well B-12</b>								
10-20-95	6.9	2.6	ND	0.17	0.2	2.8	0.11	3.9
01-12-96	7.1	0.2	0.3	1.6	5.2	9.9	0.27	2.7

## NOTES:

GME-Gen. Microb. Enumeration (Colony forming units (Viable cells) X 10<sup>5</sup>/ml)

NA-Not Analyzed

ND-Not Detected at detection limit of 0.1 ppm

ppm -Parts per million

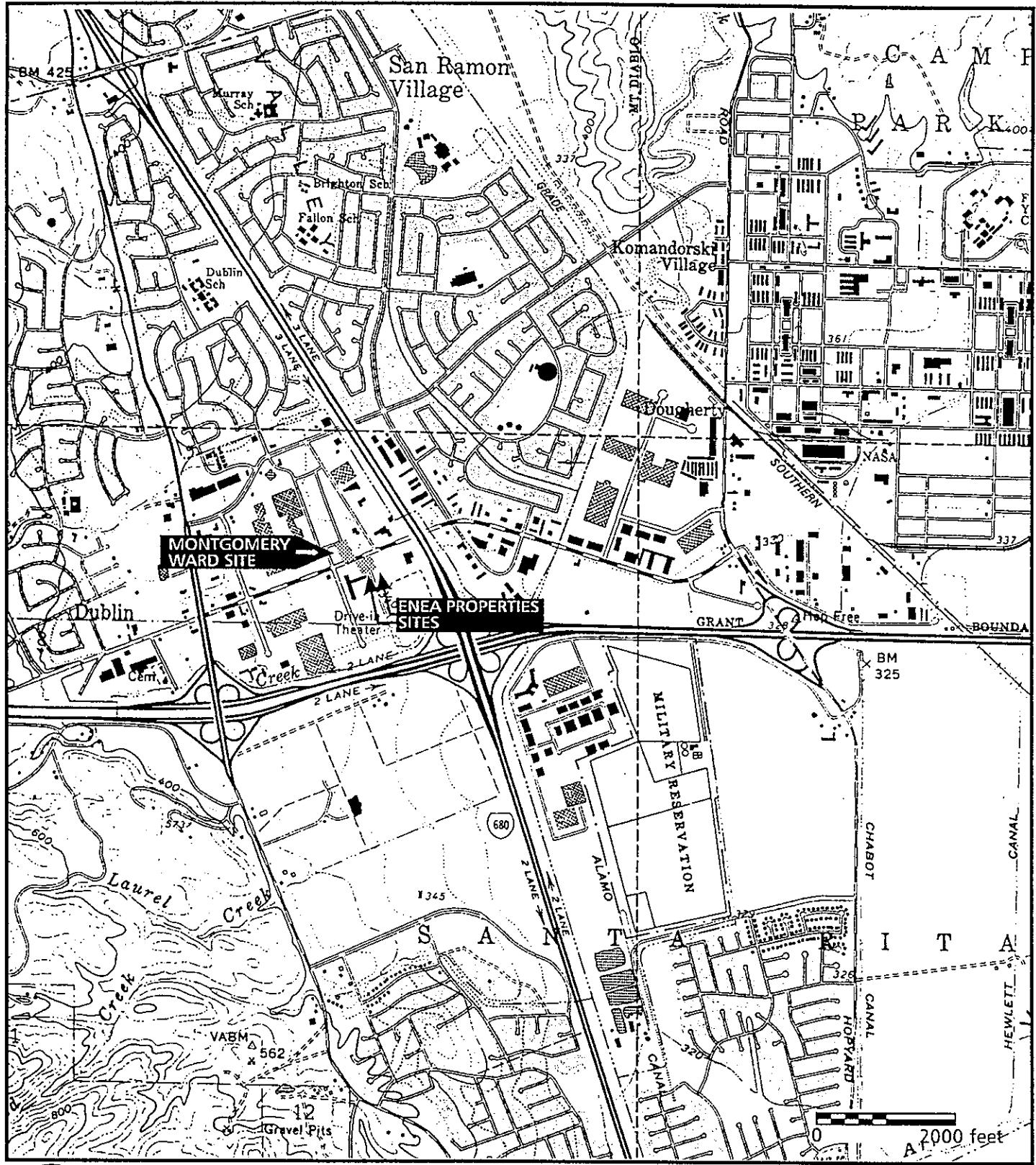
SME-Sel. Microb. Enumeration (Colony forming units (Viable cells) X 10<sup>5</sup>/ml)

%BIO-Percent Biodegraders

DTP:1233:BIOLRES.DOC

## **FIGURES**

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Environmental Audit, Inc.

### LOCATION MAP

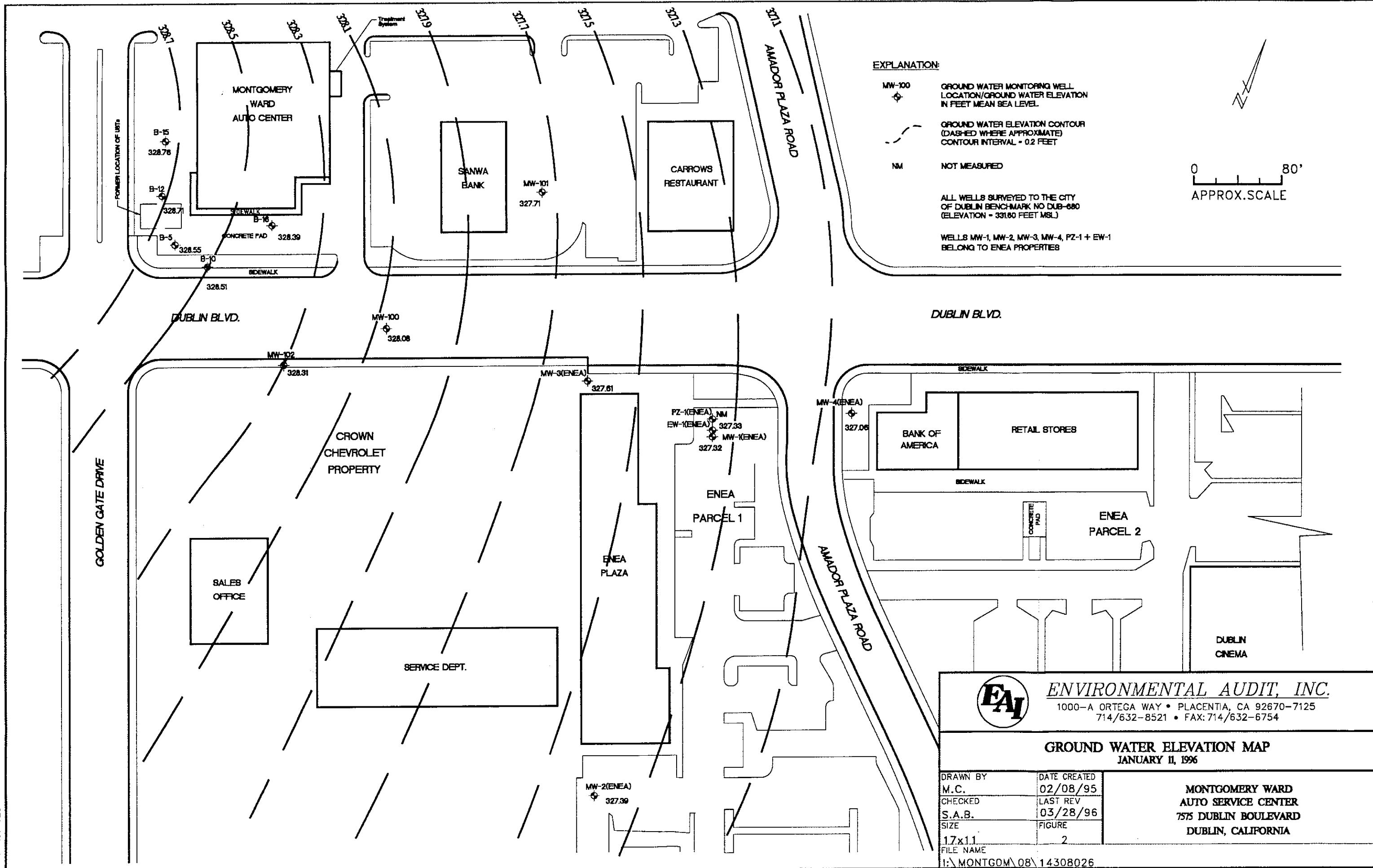
## Montgomery Ward Auto Service Center Enea Properties Dublin, California

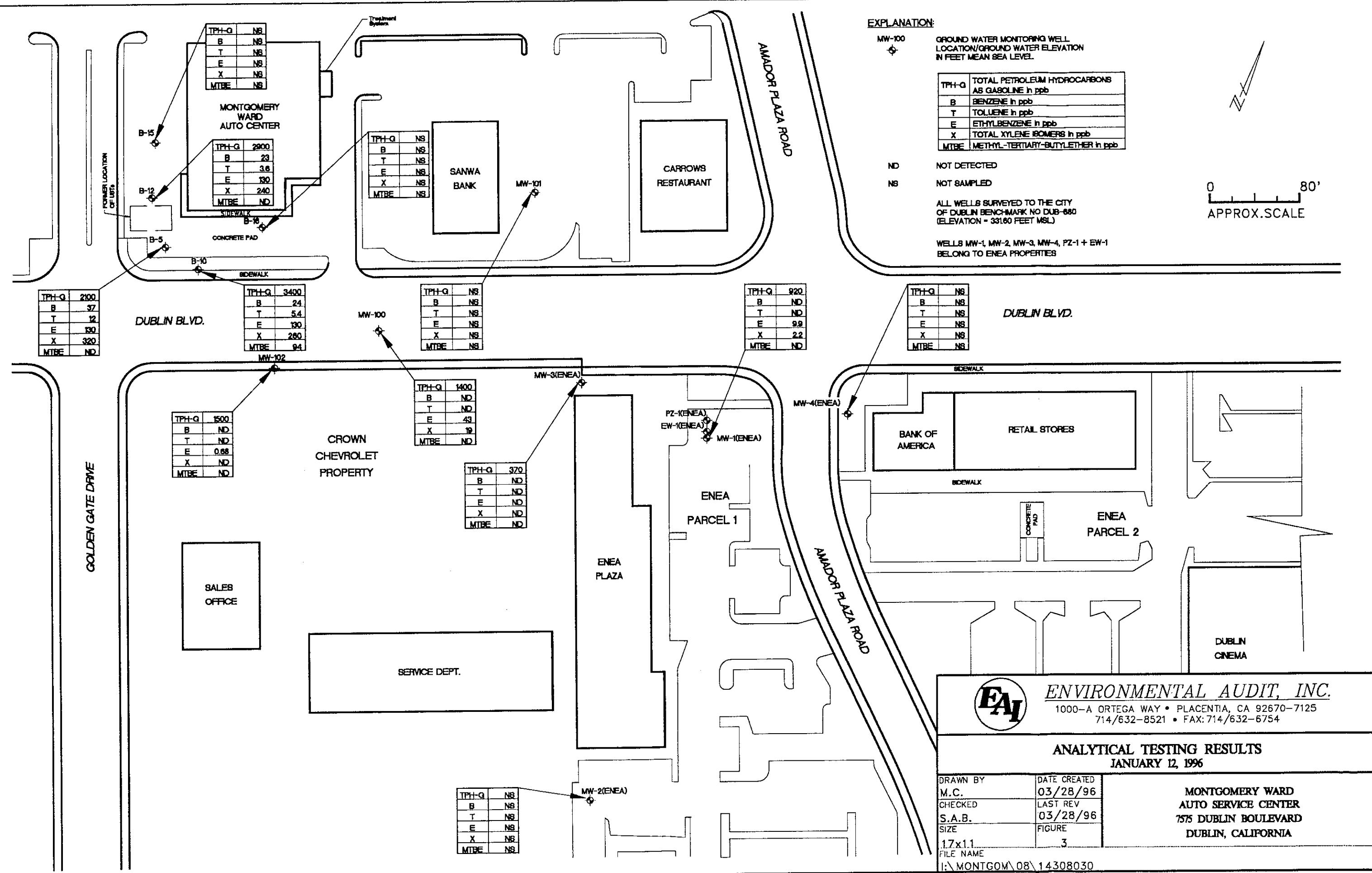
SOURCE: USGS TOPOGRAPHIC 7.5 MINUTE SERIES  
DUBLIN, CALIFORNIA QUADRANGLE

Project No. 1233  
K12331233-LM.CDR

Figure 1







**APPENDIX A: GROUND WATER SAMPLING LOG FORMS**

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# GROUND WATER Sampling Log



**ENVIRONMENTAL AUDIT, INC.**®

Planning, Environmental Analyses and Hazardous  
Substances Management and Remediation

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

DATE:	1/12/96
PROJECT NO.:	1233
CLIENT:	Montgomery Ward, Dublin
WELL NO.:	B-12
WELL DIAMETER (INCHES):	15"
SAMPLED BY:	AH/JRC

## WELL PURGING INFORMATION

ONE CASING VOLUME OF WATER CALCULATED USING THE FOLLOWING:

TOTAL DEPTH OF  
WELL (ft.)

NM

DEPTH TO WATER  
LEVEL (ft. bgs)

10.39

DEPTH TO FREE  
PRODUCT (ft. bgs)

—

### WELL VOLUME FACTORS

WELL CASING ID (inches)	VOLUME FACTOR
2.0	0.16
4.0	0.65
6.0	1.47

9.18  
X  
WELL VOLUME  
VOLUME FACTOR  
=

NM

NM

ONE CASING  
VOLUME OF WATER (GALLONS)

PURGE TIME (hrs.):

START 8:55

STOP 9:25

METHOD: DOWN HOLE PUMP  DEDICATED PUMP  BAILER  OTHER

TYPE/MODEL:

Whale Supersub 921

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) x 10 <sup>2</sup>	pH	TURBIDITY (NTU)	DISSOLVED OXYGEN	REMARKS
10	50.0	3.44 x 10 <sup>2</sup>	7.37	3.91		
20	52.1	5.60 x 10 <sup>2</sup>	7.37	4.14		
30	56.0	5.61 x 10 <sup>2</sup>	7.37	3.51		
40	60.5	7.88 x 10 <sup>2</sup>	7.24	2.66		
50	60.8	5.97 x 10 <sup>2</sup>	7.32	4.45		
60	62.1	6.03 x 10 <sup>2</sup>	7.32	3.63		
70	61.1	8.14 x 10 <sup>2</sup>	7.22	2.73		
80	62.6	3.15 x 10 <sup>2</sup>	7.22	2.28		
90	61.8	8.21 x 10 <sup>2</sup>	7.22	2.18		
100	60.7	8.54 x 10 <sup>2</sup>	7.21	2.37		
110	62.0	8.40 x 10 <sup>2</sup>	7.23	2.30		

## WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.):

9:45

METHOD: DOWN HOLE PUMP  DEDICATED PUMP  BAILER  OTHER

TYPE/MODEL :

Voss Technologies Disposable

COMMENTS:

# GROUND WATER Sampling Log


**ENVIRONMENTAL AUDIT, INC.**
*Planning, Environmental Analyses and Hazardous Substances Management and Remediation*

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

(714) 632 - 8521

FAX (714) 632 - 6754

DATE:	1/12 1996
PROJECT NO.:	1233
CLIENT:	Montgomery Ward, Dublin
WELL NO.:	MWR 100
WELL DIAMETER (INCHES):	7"
SAMPLED BY:	AH/JRC

## WELL PURGING INFORMATION

ONE CASING VOLUME OF WATER CALCULATED USING THE FOLLOWING:

 TOTAL DEPTH OF  
WELL (ft.)

28.0

 DEPTH TO WATER  
LEVEL (ft. bgs)

11.53

 DEPTH TO FREE  
PRODUCT (ft. bgs)

—

### WELL VOLUME FACTORS

WELL CASING ID (inches)	VOLUME FACTOR
2.0	0.16
4.0	0.65
6.0	1.47

→ 16.47

X

.65

= 10.70

 WELL VOLUME  
VOLUME FACTOR

 ONE CASING  
VOLUME OF WATER (GALLONS)

PURGE TIME (hrs.):

START 10:30

STOP 10:55

 METHOD: DOWN HOLE PUMP  DEDICATED PUMP  BAILER  OTHER 

TYPE/MODEL:

Whale Supersub 921

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) x 10 <sup>3</sup>	pH	TURBIDITY (NTU)	DISSOLVED OXYGEN	REMARKS
5	74.0	1.04 x 10 <sup>3</sup>	7.35	20.2		
10	64.6	1.22 x 10 <sup>3</sup>	7.25	6.17		
15	65.2	1.19 x 10 <sup>3</sup>	7.19	5.22		
20	64.8	1.22 x 10 <sup>3</sup>	7.13	6.34		
25	65.6	1.23 x 10 <sup>3</sup>	7.22	7.64		
30	65.8	1.21 x 10 <sup>3</sup>	7.16	4.90		
35	64.8	1.21 x 10 <sup>3</sup>	7.28	4.03		
40	64.7	1.20 x 10 <sup>3</sup>	7.35	3.91		
45	65.0	1.21 x 10 <sup>3</sup>	7.37	3.50		

## WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.):

11:20

 METHOD: DOWN HOLE PUMP  DEDICATED PUMP  BAILER  OTHER 

TYPE/MODEL:

Voss Technologies Disposable

COMMENTS:



# **GROUND WATER Sampling Log**



# ENVIRONMENTAL AUDIT, INC.

# *Planning, Environmental Analyses and Hazardous Substances Management and Remediation*

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

DATE:	1/12 196
PROJECT NO.:	1233
CLIENT:	Montgomery Ward, Dublin
WELL NO.:	ENR-111-1
WELL DIAMETER (INCHES):	5"
SAMPLED BY:	AH/JRC

# **WELL PURGING INFORMATION**

ONE CASING VOLUME OF WATER CALCULATED USING THE FOLLOWING:

TOTAL DEPTH OF  
WELL (ft.)

DEPTH TO WATER  
LEVEL (ft. bgs)

DEPTH TO FREE  
PRODUCT (ft. bgs)

WELL VOLUME FACTORS	
WELL CASING ID (inches)	VOLUME FACTOR
2.0	0.16
4.0	0.65
6.0	1.47

PURGETIME(hrs.):

START 11:40

STOP | 11:57

4.28

## METHOD: DOWN H

## DEDICATED PUMP

DEDICATED PUMP  BAILER  OTHER

**TYPE/MODEL:**

Whale Supersub 921

# **WELL SAMPLING INFORMATION**

TIME SAMPLED (hrs.):

12:05

METHOD: DOWN HOLE PUMP  DEDICATED PUMP  BAILER  OTHER

TYPE/MODEL : Yoss Technologies Disposable

**COMMENTS:**

# **GROUND WATER Sampling Log**



## **ENVIRONMENTAL AUDIT, INC.**

# *Planning, Environmental Analyses and Hazardous Substances Management and Remediation*

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

DATE:	1/12 1960
PROJECT NO.:	1233
CLIENT:	Montgomery Ward, Dublin
WELL NO.:	EVER NW-3
WELL DIAMETER (INCHES):	4"
SAMPLED BY:	AH/JRC

# **WELL PURGING INFORMATION**

ONE CASING VOLUME OF WATER CALCULATED USING THE FOLLOWING:

TOTAL DEPTH OF  
WELL (ft.)

DEPTH TO WATER  
LEVEL (ft. bgs)

DEPTH TO FREE  
PRODUCT (ft. bgs)

WELL VOLUME FACTORS	
WELL CASING ID (inches)	VOLUME FACTOR
2.0	0.16
<u>4.0</u>	<u>0.65</u>
6.0	1.47

**PURGETIME(hrs.):**

START //:4/

STOP

11:58

ONECASING  
VOLUME OF WATER (GALLONS)

METHOD: DOWN HOLE PUMP  DEDICATED PUMP  BAILER  OTHER

**TYPE/MODEL:**

Whale Supersub 921

# **WELL SAMPLING INFORMATION**

TIME SAMPLED (hrs.):

12:15

## METHOD: DOWN HOLE PUMP

## DEDICATED PUMP

BAILER X

**OTHER**

**TYPE/MODEL:**

Voss Technologies Disposable

**COMMENTS:**

**APPENDIX B:      CHAIN OF CUSTODY RECORD FORMS  
AND  
LABORATORY REPORTS**

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G9601 218

PAGE 1 of 1



# ENVIRONMENTAL AUDIT, INC.®

Planning, Environmental Analyses and Hazardous  
Substances Management and Remediation

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

## Chain of Custody Record

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

WRITTEN OC REPORT	TURNAROUND TIME:
ROUTINE OC <input checked="" type="checkbox"/> RWOCB OC <input type="checkbox"/>	SAME DAY <input type="checkbox"/> 24hr <input type="checkbox"/> 48hr <input type="checkbox"/> NORMAL <input checked="" type="checkbox"/>

PROJECT NO.	PROJECT NAME	CONTR TYPE	ANALYSES REQUESTED												REMARKS				
			GLASS	PLASTIC	BRASS	SS TUBE	TPH-D 8015M	TPH-G 8015M	TPH-H 418.1	BTEX 8020	VOC 8240	EOC 8270	OIL & GREASE	CAM METALS TO TOTAL WET	LEAD	HVOOC 8010			
1233	Montgomery Ward-Dublin		/	/	/	/	/	/	/	/	/	/	/	/	/	/			
SAMPLER (Signature with Printed Name)	John R. Ambrose	PROJECT MANAGER																	
		Ed Leonhardt																	
SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION												NUMBER OF CONTAINERS		
B-12	1/12/96	8:45	/	/	Water												3	One 1-liter plastic bottle (lead) Two 40-ml VOA vials (TPH-G/BTEX)	-1
B-5	1/12/96	8:20	/	/	"												3		-2
B-10	1/12/96	8:25	/	/	"												3		-3
MW-102	1/12/96	11:15	/	/	"												3		-4
MW-100	1/12/96	11:20	/	/	"												3		-5
Enea MW-1	1/12/96	12:05	/	/	"												3		-6
Enea NW-3	1/12/96	12:15	/	/	"												3		-7

RELINQUISHED BY: (Signature/Name)	RECEIVED BY: (Signature/Name)	RELINQUISHED BY: (Signature/Name)	RECEIVED BY: (Signature/Name)
<i>John R. Ambrose</i>	<i>Bill Parsons</i>	<i>Bill Parsons</i>	<i>John Wente</i>
RELINQUISHED BY: (Signature/Name)	DATE/TIME	RELINQUISHED BY: (Signature/Name)	DATE/TIME
<i>John R. Ambrose</i>	1/12/96 13:15	<i>Bill Parsons</i>	1/12/96 14:45
RELINQUISHED BY: (Signature/Name)	DATE/TIME	RELINQUISHED BY: (Signature/Name)	DATE/TIME
<i>John R. Ambrose</i>	1/15/96 10:00	<i>Bill Parsons</i>	1/15/96 10:00
SAMPLE SHIPPED VIA:	AIRBORNE <input type="checkbox"/>	SHIPPED BY: (Signature/Name)	COURIER: (Signature/Name)
FEDEX <input type="checkbox"/>	UPS <input type="checkbox"/>		
FHAIR <input type="checkbox"/>	AIRFREIGHT <input type="checkbox"/>	AIRBILL #:	LAB:

# ANALYTICAL REPORT

*B C Analytical*

1085 Shary Circle  
Concord, CA 94518  
510/825-3894  
Fax: 510/825-3924

LOG NO: G96-01-218

Received: 12 JAN 96  
Mailed : 24 JAN 96

## AMENDED REPORT

*J. Walker*

**RECEIVED**

Mr. Ed Leonhardt  
Environmental Audit  
1000 A Ortega Way  
Placentia, California 92670

FEB - 8 1996

ENVIRONMENTAL AUDIT Project: 1233

## REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED				
01-218-1	B-12					12 JAN 96
01-218-2	B-5					12 JAN 96
01-218-3	B-10					12 JAN 96
01-218-4	MW-102					12 JAN 96
01-218-5	MW-100					12 JAN 96
PARAMETER		01-218-1	01-218-2	01-218-3	01-218-4	01-218-5
Lead (7421), mg/L		0.0070	0.0075	0.0045	<0.002	<0.002
Furnace Digestion (3020), Date	01/17/96	01/17/96	01/17/96	01/17/96	01/17/96	01/17/96
GRO (8015M.TX)						
Date Analyzed		01/18/96	01/18/96	01/18/96	01/18/96	01/18/96
Dilution Factor, Times		1	5	1	1	1
Benzene, ug/L		23	37	24	<0.5	<0.5
Toluene, ug/L		3.6	12	5.4	<0.5	<0.5
Ethylbenzene, ug/L		130	130	130	0.68	43
Methyl-tert-butylether, ug/L		<50	<250	94	<50	<50
Total Xylene Isomers, ug/L		240	320	260	<0.5	19
Carbon Range, .	C6-C12	C6-C12	C6-C12	C6-C12	C6-C12	
TPH (Gasoline Range), ug/L	2900	2100	3400	1500	1400	
Surrogates **						
a,a,a-Trifluorotoluene Rep., ug/L	44.1	266	40.8	53.7	36.7	
a,a,a-Trifluorotoluene Th., ug/L	50.0	250	50.0	50.0	50.0	

**BCA**

# B C Analytical

1085 Shary Circle  
Concord, CA 94518  
510/825-3894  
Fax: 510/825-3924

LOG NO: G96-01-218

Received: 12 JAN 96  
Mailed : 24 JAN 96

Mr. Ed Leonhardt  
Environmental Audit  
1000 A Ortega Way  
Placentia, California 92670

Project: 1233

## REPORT OF ANALYTICAL RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED	
01-218-6	Enea MW-1		12 JAN 96
01-218-7	Enea MW-3		12 JAN 96
PARAMETER		01-218-6	01-218-7
Lead (7421), mg/L		<0.002	<0.002
Furnace Digestion (3020), Date		01/17/96	01/17/96
GRO (8015M.TX)			
Date Analyzed		01/19/96	01/19/96
Dilution Factor, Times		1	1
Benzene, ug/L		<0.5	<0.5
Toluene, ug/L		<0.5	<0.5
Ethylbenzene, ug/L		9.9	<0.5
Methyl-tert-butylether, ug/L		<50	<50
Total Xylene Isomers, ug/L		2.2	<0.5
Carbon Range, .		C6-C12	C6-C12
TPH (Gasoline Range), ug/L		920	370
Surrogates **			
a,a,a-Trifluorotoluene Rep., ug/L		44.4	46.8
a,a,a-Trifluorotoluene Th., ug/L		50.0	50.0

BCA

# B C Analytical

1085 Shary Circle  
Concord, CA 94518  
510/825-3894  
Fax: 510/825-3924

LOG NO: G96-01-218

Received: 12 JAN 96  
Mailed : 24 JAN 96

Mr. Ed Leonhardt  
Environmental Audit  
1000 A Ortega Way  
Placentia, California 92670

Project: 1233

## REPORT OF ANALYTICAL RESULTS

Page 3

Amended report issued to report MTBE results.  
J. Winter, 2/1/96

Jane Winter Jr.  
Jane Freemyer, Laboratory Director

The analytical results within this report relate only to the specific compounds and samples investigated and may not necessarily reflect other apparently similar material from the same or a similar location.

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**BCA**

: ORDER PLACED FOR CLIENT: Environmental Audit 9601218 :  
: BC ANALYTICAL : GLEN LAB : 12:51:42 24 JAN 1996 - P. 1 :  
=====

SAMPLES... SAMPLE DESCRIPTION.. DETERM..... DATE..... METHOD..... EQUIP. BATCH.. ID.NO  
ANALYZED

9601218*1	B-12	PB,GFA	01.19.96	7421	534-04	9681	8488
		DIG,AQ,GFA	01.17.96	3020		9681	7620
		GAS.BTX.TESNC	01.18.96	8015M.TX	536-35	96412	8501
9601218*2	B-5	PB,GFA	01.19.96	7421	534-04	9681	8488
		DIG,AQ,GFA	01.17.96	3020		9681	7620
		GAS.BTX.TESNC	01.18.96	8015M.TX	536-35	96412	8501
9601218*3	B-10	PB,GFA	01.19.96	7421	534-04	9681	8488
		DIG,AQ,GFA	01.17.96	3020		9681	7620
		GAS.BTX.TESNC	01.18.96	8015M.TX	536-35	96412	8501
9601218*4	MW-102	PB,GFA	01.19.96	7421	534-04	9681	8488
		DIG,AQ,GFA	01.17.96	3020		9681	7620
		GAS.BTX.TESNC	01.18.96	8015M.TX	536-35	96412	8501
9601218*5	MW-100	PB,GFA	01.19.96	7421	534-04	9681	8488
		DIG,AQ,GFA	01.17.96	3020		9681	7620
		GAS.BTX.TESNC	01.18.96	8015M.TX	536-35	96412	8501
9601218*6	Enea MW-1	PB,GFA	01.19.96	7421	534-04	9681	8488
		DIG,AQ,GFA	01.17.96	3020		9681	7620
		GAS.BTX.TESNC	01.18.96	8015M.TX	536-35	96412	8501
9601218*7	Enea MW-3	PB,GFA	01.19.96	7421	534-04	9681	8488
		DIG,AQ,GFA	01.17.96	3020		9681	7620
		GAS.BTX.TESNC	01.19.96	8015M.TX	536-35	96412	8501

\*\*\*

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

## BC ANALYTICAL

## ORDER QC REPORT FOR G9601218

DATE REPORTED : 01/24/96

Page 1

LABORATORY CONTROL STANDARDS  
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER		DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
1. Lead	C6011973*1	01.19.96	9681	0.0470	0.0500	mg/L	94
2. Lead	C6011974*1	01.19.96	9681	0.0477	0.0500	mg/L	95
3. BTEX/GRO	C6012401*1						
Date Analyzed		01.18.96	96412	01/18/96	01/18/96	Date	N/A
Benzene		01.18.96	96412	19.1	15.2	ug/L	126
Toluene		01.18.96	96412	88.5	97.4	ug/L	91
Ethylbenzene		01.18.96	96412	17.8	20.4	ug/L	87
Total Xylene Isomers		01.18.96	96412	98.8	119	ug/L	83
TPH (Gasoline Range)		01.18.96	96412	1040	1100	ug/L	95
a,a,a-Trifluorotoluene Rep.		01.18.96	96412	57.1	50.0	ug/L	114
a,a,a-Trifluorotoluene Th.		01.18.96	96412	50.0	50.0	ug/L	100

BC ANALYTICAL

ORDER QC REPORT FOR G9601218

DATE REPORTED : 01/24/96

Page 1

ADDITIONAL LCS PRECISION (DUPLICATES)  
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	LC1 RESULT	LC2 RESULT	UNIT	RELATIVE % DIFF
1. Lead		01.19.96	9681	0.0470	0.0477	mg/L	1

## BC ANALYTICAL

## ORDER QC REPORT FOR G9601218

DATE REPORTED : 01/24/96

Page 1

MATRIX QC ACCURACY (SPIKES)  
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS %	MSD %	TRUE RESULT	UNIT
1. Lead	9601233*1	01.19.96	9681	105	107	0.0200	mg/L
2. GRO	9601232*4						
Benzene		01.18.96	96412	83	91	15.2	ug/L
Toluene		01.18.96	96412	88	87	97.4	ug/L
Ethylbenzene		01.18.96	96412	85	83	20.4	ug/L
Total Xylene Isomers		01.18.96	96412	82	79	119	ug/L
TPH (Gasoline Range)		01.18.96	96412	93	91	1780	ug/L
a,a,a-Trifluorotoluene Rep.		01.18.96	96412	117	117	50.0	ug/L
a,a,a-Trifluorotoluene Th.		01.18.96	96412	100	100	50.0	ug/L

## BC ANALYTICAL

## ORDER QC REPORT FOR G9601218

DATE REPORTED : 01/24/96

Page 1

MATRIX QC PRECISION (DUPLICATE SPIKES)  
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS RESULT	MSD RESULT	UNIT	RELATIVE % DIFF
1. Lead	9601233*1	01.19.96	9681	0.0209	0.0213	mg/L	2
2. BTEX/GRO	9601232*4						
Date Analyzed		01.18.96	96412	01/18/96	01/18/96	Date	N/A
Benzene		01.18.96	96412	13.3	13.8	ug/L	4
Toluene		01.18.96	96412	85.6	85.2	ug/L	0
Ethylbenzene		01.18.96	96412	17.4	16.9	ug/L	3
Total Xylene Isomers		01.18.96	96412	97.0	94.2	ug/L	3
TPH (Gasoline Range)		01.18.96	96412	1700	1680	ug/L	1
a,a,a-Trifluorotoluene Rep.		01.18.96	96412	58.4	58.3	ug/L	0
a,a,a-Trifluorotoluene Th.		01.18.96	96412	50.0	50.0	ug/L	0

## BC ANALYTICAL

## ORDER QC REPORT FOR G9601218

DATE REPORTED : 01/24/96

Page 1

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)  
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER		DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
1. Lead	B6011023*1	01.19.96	9681	0	0.002	mg/L	7421
2. BTEX/GRO	B6011242*1						
Date Analyzed		01.18.96	96412	01/18/96	NA	Date	8015M
Benzene		01.18.96	96412	0	0.3	ug/L	8015M
Toluene		01.18.96	96412	0	0.3	ug/L	8015M
Ethylbenzene		01.18.96	96412	0	0.3	ug/L	8015M
Total Xylene Isomers		01.18.96	96412	0	0.6	ug/L	8015M
TPH (Gasoline Range)		01.18.96	96412	0	100	ug/L	8015M
a,a,a-Trifluorotoluene Rep.		01.18.96	96412	42.9	0.5	ug/L	8015M
a,a,a-Trifluorotoluene Th.		01.18.96	96412	50.0	NA	ug/L	8015M