



ENVIRONMENTAL AUDIT, INC.

ENVIRONMENTAL
PROTECTION
PR 9000A ORTEGA WAY • PLACENTIA, CA 92670-7125

96 DEC 17 AM 97 54/632-8521 • FAX: 714/632-6754

December 12, 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

**RE: GROUND WATER MONITORING REPORT
FOURTH 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, Fourth Quarter 1996, Montgomery Ward Auto Service Center, 7575 Dublin Boulevard, Dublin, California," dated December 12, 1996.

On October 20, 1995, the ground water extraction and treatment system at the site was shut-down. Based upon the none detect and low levels of total petroleum hydrocarbon and benzene, toluene, total xylenes and ethylbenzene observed in the monitoring wells sampled during the last four quarterly monitoring periods, Environmental Audit, Inc. is planning to sample and analytically test all ground water monitoring wells on the Montgomery Ward site and Enea Property sites during the January 1997 sampling event. If the analytical tests show similar results to those which have been experienced over the past year, EAI will recommend that the site be considered for case closure. OK

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

Sincerely,

ENVIRONMENTAL AUDIT, INC.

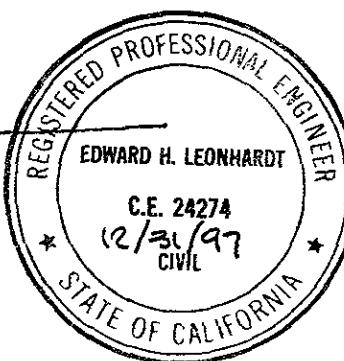


Edward H. Leonhardt, R.C.E. x 232
Manager, Civil Engineering

AH:EHL:SAB: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)
S. Bezark, Altheimer & Gray (w/enclosure)



GROUND WATER MONITORING REPORT

FOURTH 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

December 12, 1996

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 constitutes the Fourth 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 (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 third quarterly sampling event after deactivation of the 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

2.1 GROUND WATER ELEVATION SURVEY

On October 24, 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 October 24, 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 and five feet below the water surface (see Table 2).

2.3 GROUND WATER SAMPLING

On October 24, 1996, ground water samples were obtained for analytical testing from Montgomery Ward wells B-5, B-10, B-12, B-16, MW-100 and MW-102, and from Enea Properties' wells MW-1 and MW-3. Prior to sampling, all wells except well B-5 and extraction well B-12 were purged using a Whale Supersub 921 submersible pump. Wells B-5 and B-12, which contained the ORC, were not purged prior to sampling because purging of the wells would decrease the dissolved oxygen levels in the wells and inhibit the effect of the ORC. Purging activities continued until the temperature, conductivity and pH of the extracted water had stabilized (see Appendix A).

All wells were sampled in the order that purging activities were completed. Well B-12 was sampled before all other wells were sampled. 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. Each water sample was 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 sample 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. On July 17, 1996, new ORCs were installed in wells B-5 and B-12 below the water table replacing the existing ORC.

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 this quarter's purging, sampling and equipment decontamination activities was temporarily stored in three 55-gallon drums which were then emptied into the System for treatment and subsequent discharge into the sanitary sewerage system. A treated

effluent sample was obtained from the sampling port located downstream of the two 180-pound carbon treatment units when the System was turned on to treat and dispose of the purged ground water.

3.0 ANALYTICAL TESTING

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-tert-butylether (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

The water level in wells sampled this quarter, excluding Montgomery Ward B-12, dropped on average approximately 0.5 foot. Wells B-5 and B-12 showed large decreases in TPH-G and BTEX from previous sampling periods. Generally however, the analytical results are similar to the previous quarters for both the Montgomery Ward wells and the Enea Property wells.

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 collected on October 24, 1996 show similar microbial population dynamics compared to the previous sampling events.

5.0 LIMITATION

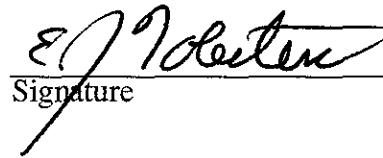
Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities. This report has been prepared for Montgomery Ward. The conclusions and recommendations 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

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

 12/2/96
Signature Date

AH:EHL:SAB:sh

JRC WORD 1233M96D

TABLES

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

Page 1 of 6

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
04/10/96		10.38	-	0.00	329.67
07/17/96		11.16	-	0.00	328.89
10/24/96		11.72	-	0.00	328.33
B-10					
	339.70				
04/16/92		10.32	-	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
04/10/96		10.09	-	0.00	329.61
07/17/96		10.90	-	0.00	328.80
10/24/96		11.44	-	0.00	328.26

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

Page 2 of 6

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-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	
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	
04/10/96	09.20	-	0.00	329.90	
07/17/96	10.00	-	0.00	329.10	
10/24/96	10.51	-	0.00	328.59	
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	
04/10/96	10.81	-	0.00	329.81	
07/17/96	11.51	-	0.00	329.11	

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

Page 3 of 6

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)
10/24/96		12.02	-	0.00	328.60
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
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
04/10/96		10.42	-	0.00	329.40
07/17/96		11.14	-	0.00	328.68
10/24/96		11.66	-	0.00	328.16
MW-100	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
04/10/96		10.58	-	0.00	329.03
07/17/96		11.29	-	0.00	328.32
10/24/96		11.82	-	0.00	327.79

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

Page 4 of 6

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)
	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
04/10/96		10.23	-	0.00	328.31
07/17/96		10.56	-	0.00	327.98
10/24/96		11.00	-	0.00	327.54
MW-102	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
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 (1)		NM	-	0.00	NM
01/11/96	338.44	10.13	-	0.00	328.31
04/10/96		09.04	-	0.00	329.40
07/17/96		09.87	-	0.00	328.57
10/24/96		10.42	-	0.00	328.02
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

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

Page 5 of 6

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		08.03	-	0.00	327.81
10/19/95		08.82	-	0.00	327.02
01/11/96		08.52	-	0.00	327.32
04/10/96		07.84	-	0.00	328.00
07/17/96		08.35	-	0.00	327.49
10/24/96		08.84	-	0.00	327.00
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
04/10/96		07.38	-	0.00	328.23
07/17/96		08.04	-	0.00	327.57
10/24/96		08.66	-	0.00	326.95
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
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
04/10/96		08.61	-	0.00	328.32
07/17/96		09.16	-	0.00	327.77
10/24/96		09.65	-	0.00	327.28
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

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

Page 6 of 6

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)
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
04/10/96		08.11	-	0.00	327.65
07/17/96		08.54	-	0.00	327.22
10/24/96		08.99	-	0.00	326.77
ENEAEW-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
04/10/96		08.08	-	0.00	328.00
07/17/96		08.60	-	0.00	327.48
10/24/96		09.07	-	0.00	327.01
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-10, 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\EELEV.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
04/10/96	>20	0.81	0.25	0.19	0.20
07/17/96	3.61	3.56	3.73	3.77	3.80
10/24/96	NM	15.24	NM	0.66	NM
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
04/10/96	0.74	0.33	0.19	0.17	0.15
07/17/96	2.74	2.73	2.71	2.59	2.40
10/24/96	NM	0.18	NM	0.05	NM
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
04/10/96	7.36	5.76	0.55	0.09	0.06
07/17/96	7.48	4.05	4.25	4.25	3.98
10/24/96	NM	2.41	NM	0.18	NM
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
04/10/96	0.52	0.32	0.31	0.29	0.21
07/17/96	5.37	5.72	5.03	4.64	3.57
10/24/96	NM	0.94	NM	0.15	NM
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
04/10/96	0.39	0.20	0.15	0.12	0.13
07/17/96	2.13	2.16	2.19	2.15	2.04
10/24/96	NM	0.41	NM	0.07	NM
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
04/10/96	0.32	0.16	0.13	0.10	0.09
07/17/96	0.68	0.59	0.53	0.40	0.21
10/24/96	NM	0.10	NM	0.04	NM
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
04/10/96	0.68	0.63	0.74	0.63	0.41
07/17/96	2.31	2.07	1.95	1.69	1.43
10/24/96	NM	1.38	NM	0.55	NM

TABLE 2
DISSOLVED OXYGEN MEASUREMENTS

Montgomery Ward Auto Service Center

Enea Properties

Dublin, California

Page 2 of 2

Milligrams per liter (mg/l)

Date Measured	At Water Surface	One foot bgs	Three feet bgs	Five feet bgs	Seven feet bgs
MW-102					
10/19/95 (1)	NM	NM	NM	NM	NM
01/11/96	7.78	0.57	0.20	0.16	0.11
04/10/96	0.49	0.27	0.14	0.11	0.09
07/17/96	1.11	0.99	1.78	2.12	3.33
10/24/96	NM	0.76	NM	0.11	NM
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
04/10/96	0.19	0.17	0.09	0.07	0.05
07/17/96	0.13	0.14	0.17	0.20	NM
10/24/96	NM	0.83	NM	0.36	NM
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
04/10/96	1.33	1.25	1.17	0.73	NM
07/17/96	2.32	1.96	2.64	NM	NM
10/24/96	NM	0.87	NM	0.49	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
04/10/96	0.76	0.24	0.20	0.10	0.07
07/17/96	1.20	0.83	1.95	NM	NM
10/24/96	NM	2.42	NM	0.28	NM
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
04/10/96	0.25	0.18	0.06	0.04	0.03
07/17/96	1.84	4.72	0.94	2.16	3.98
10/24/96	NM	0.65	NM	0.18	NM
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
04/10/96	0.13	0.11	0.04	0.02	0.02
07/17/96	3.52	2.50	0.93	1.12	1.81
10/24/96	NM	0.96	NM	0.32	NM
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 5

Compounds	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Lead	MTBE
Well B-5							
04-16-92	4400	670	160	280	320	<5	NA
07-24-92	31000	5400	2600	2200	5800	<5	NA
10-22-92	9100	1100	190	520	740	<5	NA
01-15-93	2300	530	160	300	470	7.9	NA
04-15-93	4900	600	160	470	390	<5	NA
07-14-93	8800	590	210	840	1100	9.9	NA
10-14-93	4500	530	46	490	350	<20	NA
01-13-94	120	15	1.9	12	11	<20	NA
04-04-94	5700	450	39	350	400	<20	NA
07-05-94	2200	69	13	150	95	<20	NA
10-03-94	4700	190	38	510	570	<50	NA
01-18-95	2200	53	27	120	280	<2	NA
04-21-95	5800	90	74	300	910	4.0	NA
07-28-95	2600	57	26	190	570	2.5	<100
10-20-95	3400	27	15	210	530	4.2	<50
01-12-96	2100	37	12	130	320	7.5	<250
04-11-96	5700	120	41	450	1200	<2	290
07-17-96	2400	55	2.8	170	99	<2	NA
10-24-96	420	6.8	0.79	49	3.8	7.9	<30
Well B-10							
04-16-92	7300	1400	640	880	1100	<5	NA
07-24-92	27000	3800	1600	2000	4000	<5	NA
10-22-92	16000	2300	340	1100	1200	<5	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	<20	NA
01-13-94	18000	990	180	1300	2400	<20	NA
04-04-94	12000	370	96	900	1800	<20	NA
07-05-94	7800	170	50	550	810	<20	NA
10-03-94	6300	120	33	480	630	<50	NA
01-18-95	3300	38	28	160	450	2.9	NA
04-21-95	4200	39	8.6	220	310	<2	NA
07-28-95	2900	22	4.3	140	330	2.0	55
10-20-95	1900	3.9	1.5	74	170	<2	13
01-12-96	3400	24	5.4	130	260	4.5	94
04-11-96	2200	3.6	<1	180	84	<2	<100
07-17-96	2200	2.5	0.78	180	86	4.2	NA
10-24-96	6600	<5	<5	760	28	2.3	<300
Well B-12							
04-16-92	12000	1300	1100	510	1200	<5	NA
07-24-92	12000	1000	630	520	1000	<5	NA

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

Page 2 of 5

Compounds	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Lead	MTBE
10-22-92	11000	370	230	400	940	<5	NA
01-15-93	120	2.8	<0.5	1.6	3.6	11	NA
04-15-93	7100	730	240	350	570	<5	NA
07-14-93	4500	540	97	380	610	<5	NA
10-14-93	11000	710	170	650	1600	<20	NA
01-13-94	6000	330	100	330	620	24	NA
04-04-94	8700	350	58	350	660	<20	NA
07-05-94	8800	250	340	370	920	<20	NA
10-03-94	1300	63	42	110	140	<50	NA
01-18-95	5000	93	65	190	510	<2	NA
04-21-95	14000	190	320	420	1500	<2	NA
07-28-95	10000	110	120	490	1500	<2	<100
10-20-95	1400	16	13	81	180	<2	<10
01-12-96	2900	23	3.6	130	240	7.0	<50
04-11-96	2600	23	12	130	200	16	82
07-17-96	7100	53	20	450	770	5.2	NA
10-24-96	520	<0.5	0.56	11	46	<2	<30

Well B-15

04-16-92	65	4.4	2.4	6.1	2.8	<5	NA
07-24-92	<50	3.6	1.5	3.1	1.6	<5	NA
10-22-92	<50	1.7	0.89	0.78	0.88	<5	NA
01-15-93	<50	<0.5	<0.5	<0.5	<0.5	13	NA
04-15-93	<50	2.8	<0.5	3.0	1.5	<5	NA
07-14-93	<50	<0.5	<0.5	0.57	0.74	7.8	NA
10-14-93	<50	0.96	2.6	1.3	3.6	25	NA
01-13-94	<50	<0.5	0.92	0.70	2.0	<20	NA
04-04-94	<50	<0.5	<0.5	0.56	1.0	<20	NA
07-05-94	<50	<0.5	<0.5	<0.5	<0.5	<20	NA
10-03-94	<50	<0.5	<0.5	<0.5	<0.5	<50	NA
01-18-95	<50	<0.5	0.69	<0.5	2.2	<2	NA
04-21-95	<50	<0.5	1.0	<0.5	2.5	<2	NA
07-28-95	<50	<0.5	<0.5	<0.5	<0.5	<2	<10
10-20-95	<50	<0.5	<0.5	<0.5	<0.5	<2	<10
01-12-96	NS	NS	NS	NS	NS	NS	NS
04-11-96	NS	NS	NS	NS	NS	NS	NS
07-17-96	NS	NS	NS	NS	NS	NS	NS
10-24-96	NS	NS	NS	NS	NS	NS	NS

Well B-16

04-16-92	1300	390	1.7	35	9.3	5.7*	NA
07-24-92	1600	120	5.7	120	410	<5	NA
10-22-92	1000	76	<0.5	55	130	<5	NA
01-15-93	160	6.5	0.86	2.3	2.6	5.5	NA
04-15-93	300	65	<0.5	13	2.0	13*	NA
07-14-93	170	5.9	<0.5	4.6	12	<5	NA
10-14-93	390	11	2.4	16	45	21	NA

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

Page 3 of 5

Compounds	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Lead	MTBE
01-13-94	350	8.7	0.62	25	68	<20	NA
04-04-94	550	8.7	<0.5	35	81	<20	NA
07-05-94	850	14	5.6	52	130	<20	NA
10-03-94	210	5.3	<0.5	26	5.8	<50	NA
01-18-95	<50	<0.5	0.94	<0.5	1.3	2.7	NA
04-21-95	<50	<0.5	0.66	<0.5	<0.5	<2	NA
07-28-95	57	0.71	<0.5	1.6	2.6	<2	<10
10-20-95	810	4.1	<0.5	22	100	<2	<10
01-12-96	NS	NS	NS	NS	NS	NS	NS
04-11-96	55	<0.5	<0.5	0.73	0.60	<2	<50
07-17-96	NS	NS	NS	NS	NS	NS	NS
10-24-96	400	1.0	<0.5	17	19	<2	<30
Well MW-100							
05-13-93	13000	83	<0.5	960	820	NA	NA
07-14-93	13000	32	<0.5	1400	790	8.0	NA
10-14-93	7500	48	16	900	520	22	NA
01-13-94	7000	51	<0.5	590	330	<20	NA
04-04-94	9800	69	<0.5	540	410	<20	NA
07-05-94	5900	31	8.7	190	190	<20	NA
10-03-94	3900	<0.5	<0.5	220	200	<50	NA
01-18-95	3700	48	31	190	120	2.8	NA
04-21-95	3100	10	<3	130	44	<2	NA
07-28-95	3300	<3	<3	100	42	<2	<50
10-20-95	2200	<0.5	<0.5	72	27	<2	15
01-12-96	1400	<0.5	<0.5	43	19	<2	<50
04-11-96	1600	7.7	1.3	23	9.0	<2	<50
07-17-96	1600	<0.5	<0.5	26	12	<2	NA
10-24-96	1300	<0.5	<0.5	24	8.4	<2	<30
Well MW-101							
05-13-93	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
07-14-93	<50	<0.5	<0.5	<0.5	<0.5	11	NA
10-14-93	<50	0.65	0.89	<0.5	1.1	<20	NA
01-13-94	<50	<0.5	<0.5	<0.5	<0.5	28	NA
04-04-94	<50	<0.5	<0.5	<0.5	<0.5	<20	NA
07-05-94	<50	<0.5	<0.5	<0.5	<0.5	<20	NA
10-03-94	<50	<0.5	<0.5	<0.5	<0.5	<50	NA
01-18-95	<50	<0.5	<0.5	<0.5	<0.5	2.6	NA
04-21-95	<50	<0.5	<0.5	<0.5	<0.5	<2	NA
07-28-95	<50	<0.5	<0.5	<0.5	<0.5	<2	<10
10-20-95	<50	<0.5	<0.5	<0.5	<0.5	<2	<10
01-12-96	NS	NS	NS	NS	NS	NS	NS
04-11-96	NS	NS	NS	NS	NS	NS	NS
07-17-96	NS	NS	NS	NS	NS	NS	NS
10-24-96	NS	NS	NS	NS	NS	NS	NS

TABLE 3

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

Page 4 of 5

Compounds	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Lead	MTBE
Well MW-102							
05-13-93	3600	17	<0.5	130	63	NA	NA
07-14-93	1500	13	<0.5	64	4.9	<5	NA
10-14-93	24000	9.6	5.2	60	60	<20	NA
01-13-94	2000	22	<0.5	26	55	<20	NA
04-04-94	2100	16	2.5	15	35	<20	NA
07-05-94	1300	7.0	2.9	10	23	<20	NA
10-03-94	620	5.1	<0.5	5.2	11	<50	NA
01-18-95	440	<0.5	<0.5	3.0	5.3	3.7	NA
04-21-95	250	<0.5	0.78	0.96	0.63	<2	NA
07-28-95	140	<0.5	<0.5	<0.5	0.70	<2	<10
10-20-95 ⁽¹⁾	NS	NS	NS	NS	NS	NS	NS
01-12-96	1500	<0.5	<0.5	0.68	<0.5	<2	<50
04-11-96	190	<0.5	<0.5	<0.5	<0.5	<2	<50
07-17-96	280	<0.5	0.60	<0.5	<0.5	<2	NA
10-24-96	280	<0.5	<0.5	<0.5	<0.5	<2	<30
ENEA MW-1							
10-14-93	5700	76	19	460*	160*	<20	NA
01-13-94	NS	NS	NS	NS	NS	NS	NS
04-04-94	7000	27	<0.5	260	49	<20	NA
07-05-94	5100	23	<0.5	260	50	<20	NA
10-03-94	4400	8.1	<0.5	170	50	<50	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
07-28-95	1100	<0.5	<0.5	14	1.4	<2	10
10-20-95	1700	<0.5	2.2	22	3.6	<2	23
01-12-96	920	<0.5	<0.5	9.9	2.2	<2	<50
04-11-96	1100	<0.5	<0.5	3.3	1.6	<2	<50
07-17-96	710	<0.5	<0.5	1.2	<0.5	<2	NA
10-24-96	920	<0.5	<0.5	1.9	<0.5	<2	<30
ENEA MW-2							
10-14-93	<50	<0.5	<0.5	0.71*	1.1*	21	NA
01-13-94	NS	NS	NS	NS	NS	NS	NS
04-04-94	<50	<0.5	<0.5	<0.5	<0.5	21	NA
07-05-94	<50	<0.5	<0.5	<0.5	<0.5	<20	NA
10-03-94	590	1.1	<0.5	22	6.5	<50	NA
01-18-95	<50	<0.5	<0.5	<0.5	<0.5	2.4	NA
04-21-95	<50	<0.5	<0.5	<0.5	<0.5	<2	NA
07-28-95	<50	<0.5	<0.5	<0.5	0.57	<2	<10
10-20-95	<50	<0.5	<0.5	<0.5	<0.5	<2	<10
01-12-96	NS	NS	NS	NS	NS	NS	NS
04-11-96	<50	<0.5	<0.5	<0.5	<0.5	<2	<50
07-17-96	NS	NS	NS	NS	NS	NS	NS
10-24-96	NS	NS	NS	NS	NS	NS	NS

TABLE 3

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

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Compounds	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Lead	MTBE
ENEA MW-3							
10-14-93	2600	26	30	130*	100*	<20	NA
01-13-94	NS	NS	NS	NS	NS	NS	NS
04-04-94	2600	13	3.4	90	140	<20	NA
07-05-94	3400	15	5.0	31	48	<20	NA
10-03-94	1400	6.3	<0.5	31	36	<50	NA
01-18-95	2300	5.1	1.6	2.9	18	2.1	NA
04-21-95	1900	5.3	<0.5	7.5	4.2	<2	NA
07-28-95	1400	<0.5	<0.5	5.5	1.5	<2	11
10-20-95	730	<0.5	<0.5	1.7	<0.5	<2	<10
01-12-96	370	<0.5	<0.5	<0.5	<0.5	<2	<50
04-11-96	410	<0.5	<0.5	<0.5	<0.5	<2	<50
07-17-96	450	<0.5	<0.5	<0.5	<0.5	<2	NA
10-24-96	290	<0.5	<0.5	<0.5	<0.5	<2	<30
ENEA MW-4							
04-04-94	<50	<0.5	<0.5	<0.5	<0.5	23	NA
07-05-94	<50	<0.5	0.5	<0.5	0.62	<20	NA
10-03-94	<50	<0.5	<0.5	<0.5	<0.5	<50	NA
01-18-95	<50	<0.5	0.87	<0.5	<0.5	7.2	NA
04-21-95	<50	<0.5	1.7	<0.5	<0.5	2.8	NA
07-28-95	<50	<0.5	<0.5	<0.5	<0.5	2.9	<10
10-20-95	<50	<0.5	<0.5	<0.5	<0.5	<2	<10
01-12-96	NS	NS	NS	NS	NS	NS	NS
04-11-96	<50	<0.5	<0.5	<0.5	<0.5	2.6	<50
07-17-96	NS	NS	NS	NS	NS	NS	NS
10-24-96	NS	NS	NS	NS	NS	NS	NS

NOTES:

TPH-G = Total Petroleum Hydrocarbons as Gasoline

MTBE = Methyl-Tertiary-Butylether

(1) -Well MW-102 was not sampled because well was inaccessible due to street construction.

NA-Not Analyzed

ND-Not Detected

NS-Not Sampled

* - Data points corrected on June 1, 1996.

< = Not detected at or above concentration limit listed.

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)	Potassium (ppm)	GME	SME	%BIO
Well B-5									
10-20-95	NA	NA	NA	NA	NA	NA	2.4	0.23	9.6
01-12-96	NA	NA	NA	NA	NA	NA	0.88	0.05	5.7
04-11-96	NA	NA	NA	NA	NA	NA	4.4	1.9	43.2
07-17-96	NA	NA	NA	NA	NA	NA	1.6	0.08	5.0
10-24-96	NA	NA	NA	NA	NA	NA	1.2	0.05	0.43
Well B-10									
10-20-95	NA	NA	NA	NA	NA	NA	13	0.02	1.5
01-12-96	NA	NA	NA	NA	NA	NA	1.6	0.04	2.5
04-11-96	NA	NA	NA	NA	NA	NA	3.2	1.1	34.4
07-17-96	NA	NA	NA	NA	NA	NA	2.44	1.46	59.8
10-24-96	NA	NA	NA	NA	NA	NA	0.7	0.66	94.3
Well B-12									
10-20-95	6.9	2.6	ND	0.17	0.2	NA	2.8	0.11	3.9
01-12-96	7.1	0.2	0.3	1.6	5.2	NA	9.9	0.27	2.7
04-11-96	7.3	0.7	2.0	0.64	2.5	NA	2.2	0.56	25.5
07-17-96	7.2	1.0	ND	1.4	2.5	5.5	NC	0.14	--
10-24-96	7.7	1.6	5.0	0.45	0.9	6.0	1.94	0.006	0.31

NOTES:

GME-Gen. Microb. Enumeration (Colony forming units (Viable cells) X 10⁵/ml)

NA-Not Analyzed

ND-Not Detected at detection limit of 0.1 ppm

NC-Not Counted at 10⁻³ final dilution

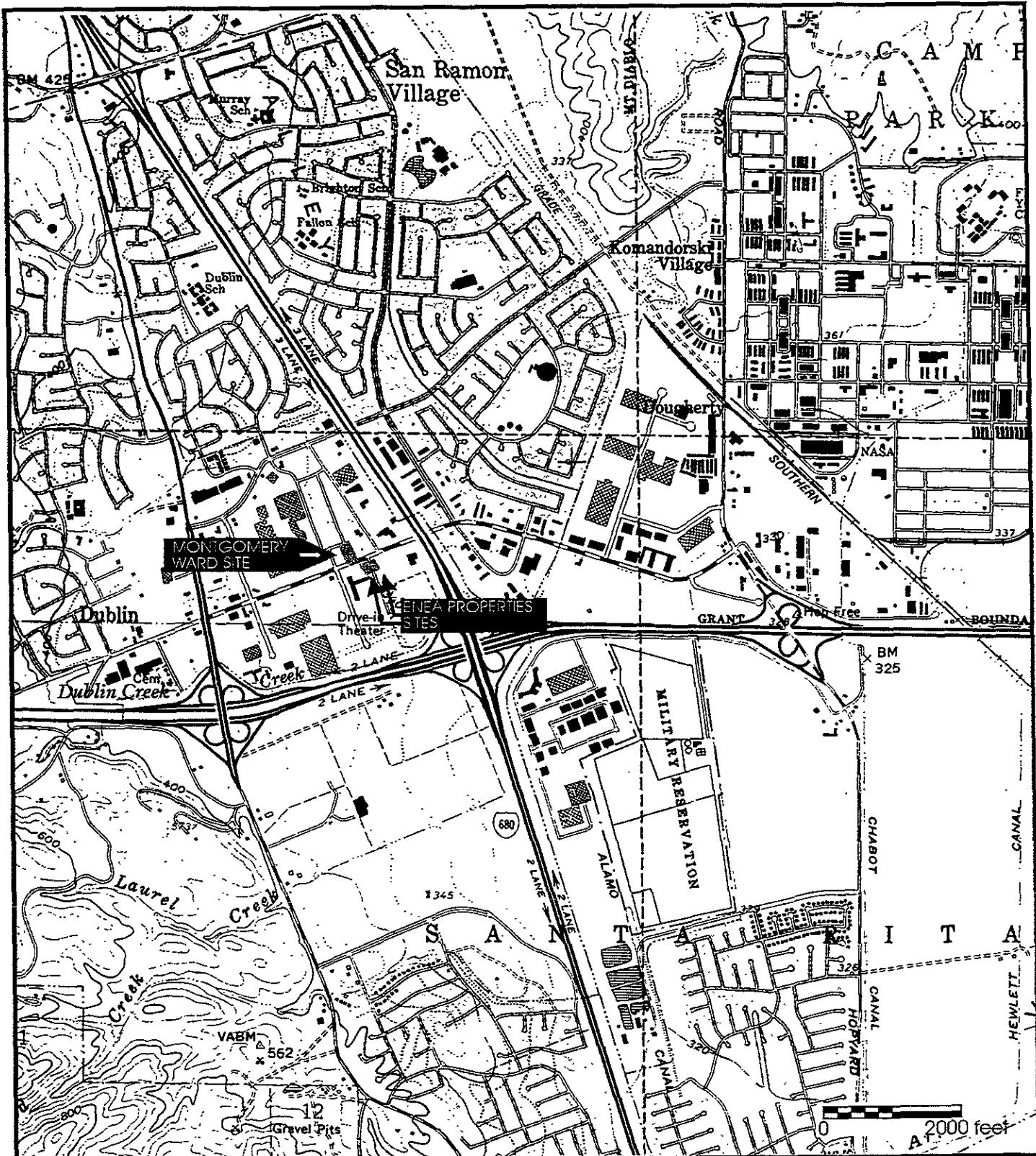
ppm -Parts per million

SME-Sel. Microb. Enumeration (Colony forming units (Viable cells) X 10⁵/ml)

%BIO-Percent Biodegraders

K:\1233\BIOLRES.DOC

FIGURES



Environmental Audit, Inc.

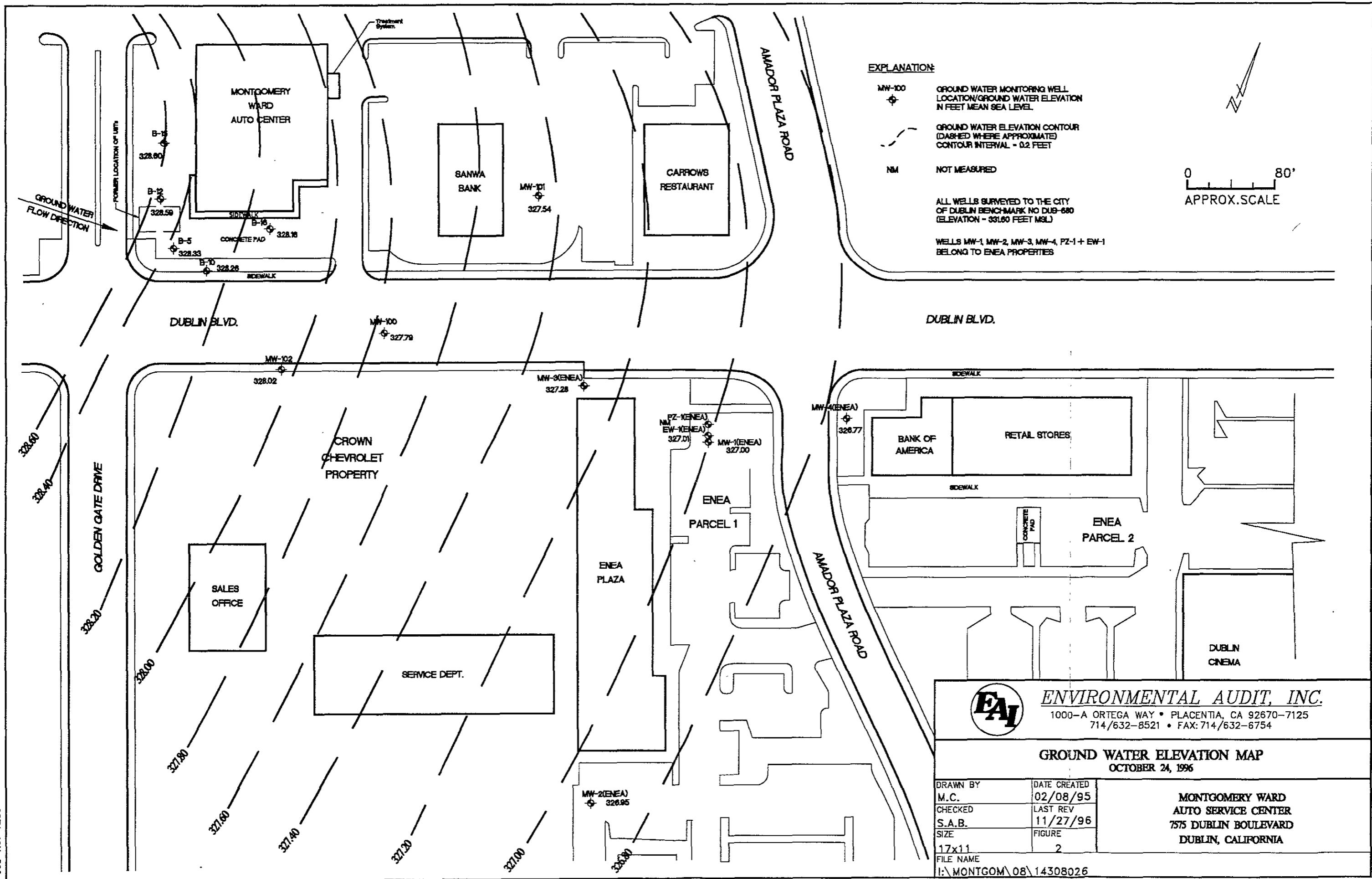
LOCATION MAP
Montgomery Ward Auto Service Center
Enea Properties
Dublin, California

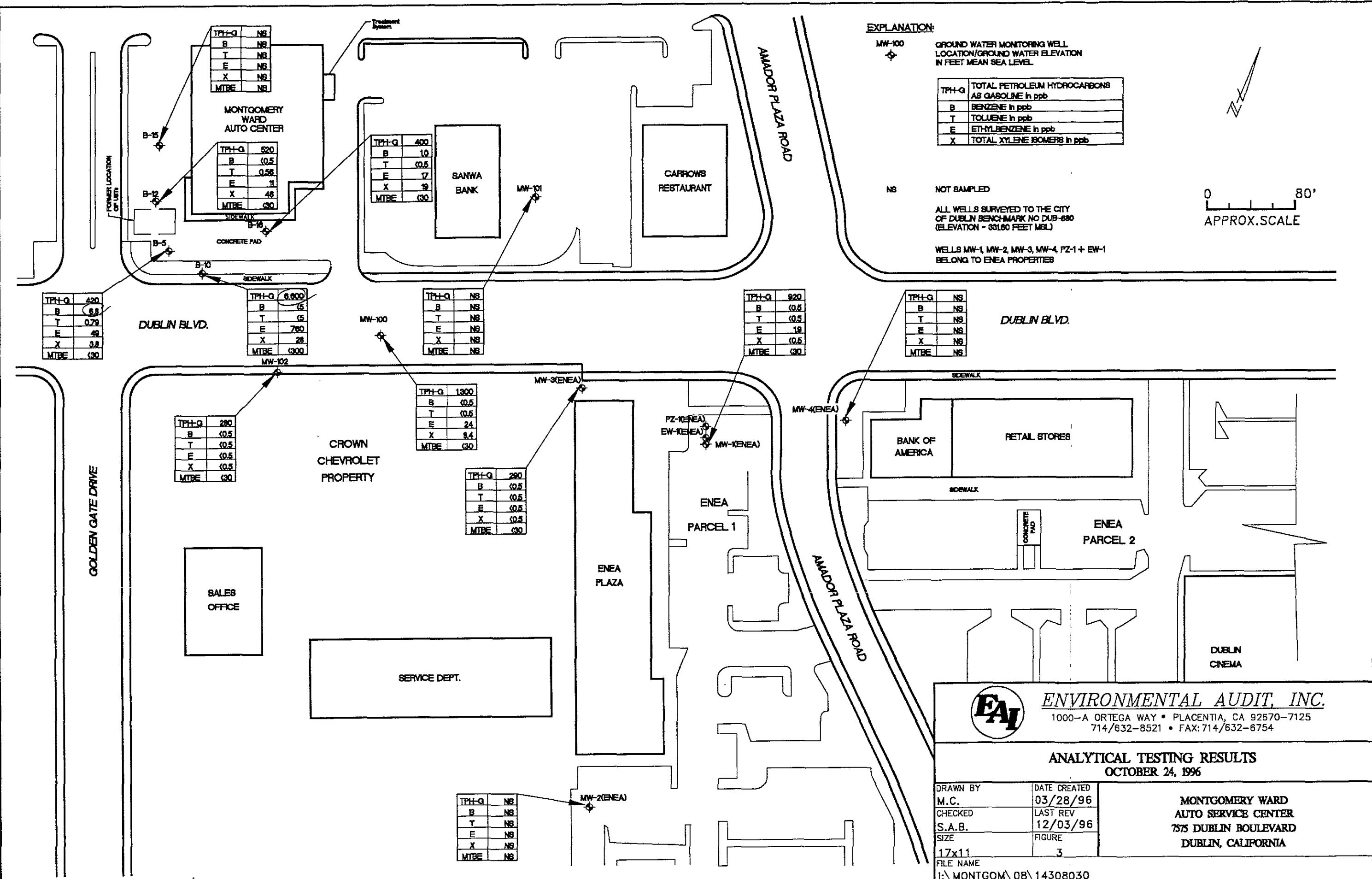
SOURCE: USGS TOPOGRAPHIC 7.5 MINUTE SERIES
 DUBLIN, CALIFORNIA QUADRANGLE

Project No. 1233
 KA12331233-UM.CDR



Figure 1





APPENDIX A: GROUND WATER SAMPLING LOGS

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:	10/24/96
PROJECT NO.:	1233
CLIENT:	Montgomery Ward, Dublin
WELL NO.:	B-10
WELL DIAMETER (INCHES):	2"
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)
20	11.4	—

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

$$8.56 \times 0.16 = 1.37$$

WELL VOLUME
VOLUME FACTOR

ONE CASING
VOLUME OF WATER (GALLONS)

PURGE TIME (hrs.): START 12:15 STOP 12:20

METHOD: DOWN HOLE PUMP DEDICATED PUMP BAILER OTHER

TYPE/MODEL: Whale Supersub 921

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) x 10 ²	pH	TURBIDITY (NTU)	DISSOLVED OXYGEN	REMARKS
2	67.4	9.07x10 ²	8.30	137.8		
4	68.2	9.19x10 ²	8.37	28.5		
6	68.6	9.14x10 ²	8.19	11.52		

WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.): 12:35

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:	10-24-96
PROJECT NO.:	1233
CLIENT:	Montgomery Ward, Dublin
WELL NO.:	B-16
WELL DIAMETER (INCHES):	4"
SAMPLED BY:	AH/RC

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)

23.25

11.66

—

WELL VOLUME FACTORS

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

—

11.59

X

0.65

7.53

 WELL VOLUME
VOLUME FACTOR

 ONE CASING
VOLUME OF WATER (GALLONS)

PURGE TIME (hrs.):

START

14.20

STOP

14.38

 METHOD: DOWN HOLE PUMP DEDICATED PUMP BAILER OTHER

TYPE/MODEL:

Whale Supersub 921

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) $\times 10^3$	pH	TURBIDITY (NTU)	DISSOLVED OXYGEN	REMARKS
5	68.3	9.18 $\times 10^2$	7.90	8.03	-	
10	69.3	9.26 $\times 10^2$	7.49	8.93		
15	69.2	9.25 $\times 10^2$	7.24	3.56		
20	69.5	9.31 $\times 10^2$	7.05	2.15		
25	69.3	9.32 $\times 10^2$	7.01	2.04		
30	69.2	9.29 $\times 10^2$	6.96	1.96		

WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.):

15:10

 METHOD: DOWN HOLE PUMP DEDICATED PUMP BAILER OTHER

TYPE/MODEL:

Voss Technologies Disposable

COMMENTS:

GROUND WATER Sampling Log



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

DATE:	10-24-96
PROJECT NO.:	1233
CLIENT:	Montgomery Ward, Dublin
WELL NO.:	MW-100
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)
28	11.82	—

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

$$\text{28} - 11.82 = 16.18 \quad 16.18 \times 0.65 = 10.52$$

ONE CASING VOLUME OF WATER (GALLONS)

PURGE TIME (hrs.): START 14:25 STOP 14:50

METHOD: DOWN HOLE PUMP DEDICATED PUMP BAILER OTHER

TYPE/MODEL: Whale Supersub 921

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) $\times 10^2$ <input type="checkbox"/>	pH	TURBIDITY (NTU)	DISSOLVED OXYGEN	REMARKS
5	67.2	9.08 $\times 10^2$	8.00	48.9		
10	68.8	9.30 $\times 10^2$	7.76	52.4		
15	69.5	9.12 $\times 10^2$	7.69	28.8		
20	70.2	9.45 $\times 10^2$	7.13	4.64		
25	69.9	9.38 $\times 10^2$	6.99	6.81		
30	68.6	9.28 $\times 10^2$	6.84	55.7		
35	68.7	9.28 $\times 10^2$	6.74	39.8		
40	69.3	9.40 $\times 10^2$	6.62	15.28		

WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.): 15:20

METHOD: DOWN HOLE PUMP DEDICATED PUMP BAILER OTHER

TYPE/MODEL: Voss Technologies Disposable

COMMENTS:

GROUND WATER Sampling Log


ENVIRONMENTAL AUDIT, INC.[®]
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Substances Management and Remediation*

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

DATE:	10-24-1996
PROJECTNO.:	1233
CLIENT:	Montgomery Ward, Dublin
WELLNO.:	MW-102
WELLDIAMETER(INCHES):	4"
SAMPLED BY:	AH/RC

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)
28	10.42	—

WELL VOLUME FACTORS

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

$$28 - 10.42 = 17.58 \quad \times \quad 0.65 = 11.43$$

WELL VOLUME / VOLUME FACTOR = ONE CASING VOLUME OF WATER (GALLONS)

 PURGE TIME (hrs.): START **15:30** STOP **15:55**

 METHOD: DOWN HOLE PUMP DEDICATED PUMP BAILER OTHER

 TYPE/MODEL: **Whale Supersub 921**

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) $\times 10^2$ <input type="checkbox"/>	pH	TURBIDITY (NTU)	DISSOLVED OXYGEN	REMARKS
5	68.1	9.10×10^2	6.66	11.70		
10	68.6	8.99×10^2	6.64	7.79		
15	69.0	9.37×10^2	6.69	7.85		
20	68.7	9.32×10^2	6.71	4.43		
25	68.6	9.28×10^2	6.74	3.44		
30	68.5	9.23×10^2	6.78	2.60		
35	68.1	9.30×10^2	6.81	6.34		
40	68.3	9.29×10^2	6.80	6.80		

WELL SAMPLING INFORMATION

 TIME SAMPLED (hrs.): **16:05**

 METHOD: DOWN HOLE PUMP DEDICATED PUMP BAILER OTHER

 TYPE/MODEL: **Voss Technologies Disposable**

COMMENTS: _____

GROUND WATER Sampling Log



ENVIRONMENTAL AUDIT, INC.®

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Substances Management and Remediation

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

DATE:	10-24 1996
PROJECTNO.:	1233
CLIENT:	Montgomery Ward, Dublin
WELLNO.:	MW-1
WELLDIAMETER(INCHES):	4"
SAMPLED BY:	AH/JRC

WELL PURGING INFORMATION

ONE CASING VOLUME OF WATER CALCULATED USING THE FOLLOWING:

TOTAL DEPTH OF WELL (ft.)

15.1

DEPTH TO WATER LEVEL (ft. bgs)

8.84

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



6.24

X

0.65

4.07

ONE CASING VOLUME OF WATER (GALLONS)

PURGE TIME (hrs.):

START

16:20

STOP

16:30

METHOD: DOWN HOLE PUMP DEDICATED PUMP BAILER OTHER

TYPE/MODEL:

Whale Supersub 921

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) x 10	pH	TURBIDITY (NTU)	DISSOLVED OXYGEN	REMARKS
5	67.4	9.52 x 10 ²	6.73	6.58		
10	68.8	9.72 x 10 ²	6.63	3.31		
15	69.0	9.76 x 10 ²	6.54	2.95		

WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.):

16:50

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 **(714) 632 - 8521**
PLACENTIA, CA 92670-7125 **FAX (714) 632 - 6754**

DATE:	10-24 1986
PROJECT NO.:	1233
CLIENT:	Montgomery Ward, Dublin
WELL NO.:	MW-3
WELL DIAMETER (INCHES):	4"
SAMPLED BY:	AH/ARC

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)
15.1	9.65	—
		5.45

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

$$5.45 \times 0.65 = 3.54$$

PURGE TIME (hrs.): START **16:10** STOP **16:20**

ONE CASING VOLUME OF WATER (GALLONS)

METHOD: DOWN HOLE PUMP DEDICATED PUMP BAILER OTHER

TYPE/MODEL: **Whale Supersub 921**

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) $\times 10^2$ <input type="checkbox"/>	pH	TURBIDITY (NTU)	DISSOLVED OXYGEN	REMARKS
5	65.0	8.50×10^2	6.93	39.7		
10	67.3	8.81×10^2	6.72	16.99		
15	68.4	8.83×10^2	6.56	6.08		

WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.): **16:45**

METHOD: DOWN HOLE PUMP DEDICATED PUMP BAILER OTHER

TYPE/MODEL: **Voss Technologies Disposable**

COMMENTS:

**APPENDIX B: CHAIN OF CUSTODY RECORDS
AND LABORATORY REPORTS**

ANALYTICAL REPORT

NOV 6 1996

ENVIRONMENTAL



Our Quality Control Is Your Quality Assurance

LOG NO: G96-10-583

Received: 25 OCT 96

Mailed: NOV 6 1996

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

Project: 1233.MONTGOMERY.WARD.DUB

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED				
10-583-1	B-12					24 OCT 96
10-583-2	B-5					24 OCT 96
10-583-3	B-10					24 OCT 96
10-583-4	B-16					24 OCT 96
10-583-5	MW-100					24 OCT 96
PARAMETER		10-583-1	10-583-2	10-583-3	10-583-4	10-583-5
Lead (7421), mg/L		<0.002	0.0079	0.0023	<0.002	<0.002
Furnace Digestion (3020), Date	10/30/96	10/30/96	10/30/96	10/30/96	10/30/96	10/30/96
GRO (8015M.TX)						
Date Analyzed	10/31/96	10/31/96	10/31/96	10/31/96	10/31/96	10/31/96
Dilution Factor, Times	1	1	10	1	1	1
Benzene, ug/L	<0.5	6.8	<5	1.0	<0.5	
Toluene, ug/L	0.56	0.79	<5	<0.5	<0.5	
Ethylbenzene, ug/L	11	49	760	17	24	
Methyl-tert-butylether, ug/L	<30	<30	<300	<30	<30	
Total Xylene Isomers, ug/L	46	3.8	28	19	8.4	
Carbon Range, .	C6-C12	C6-C12	C6-C12	C6-C12	C6-C12	
TPH (Gasoline Range), ug/L	520	420	6600	400	1300	
Surrogates **						
a,a,a-Trifluorotoluene Rep., ug/L	44.6	44.2	445	43.7	47.1	
a,a,a-Trifluorotoluene Th., ug/L	50.0	50.0	500	50.0	50.0	



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LOG NO: G96-10-583

Received: 25 OCT 96

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

Project: 1233.MONTGOMERY.WARD.DUB

REPORT OF ANALYTICAL RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED			
PARAMETER		10-583-6	10-583-7	10-583-8	10-583-9
10-583-6	MW-102			24 OCT 96	
10-583-7	ENEA-MW-3			24 OCT 96	
10-583-8	ENEA-MW-1			24 OCT 96	
10-583-9	Effluent			25 OCT 96	
Lead (7421), mg/L		<0.002	<0.002	<0.002	<0.002
Furnace Digestion (3020), Date		10/30/96	10/30/96	10/30/96	10/30/96
GRO (8015M.TX)					
Date Analyzed		10/31/96	10/31/96	10/31/96	11/01/96
Dilution Factor, Times		1	1	1	1
Benzene, ug/L		<0.5	<0.5	<0.5	<0.5
Toluene, ug/L		<0.5	<0.5	<0.5	<0.5
Ethylbenzene, ug/L		<0.5	<0.5	1.9	<0.5
Methyl-tert-butylether, ug/L		<30	<30	<30	<30
Total Xylene Isomers, ug/L		<0.5	<0.5	<0.5	<0.5
Carbon Range, .		C6-C12	C6-C12	C6-C12	C6-C12
TPH (Gasoline Range), ug/L		280	290	920	<50
Surrogates **					
a,a,a-Trifluorotoluene Rep., ug/L		47.9	45.5	47.8	44.4
a,a,a-Trifluorotoluene Th., ug/L		50.0	50.0	50.0	50.0



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LOG NO: G96-10-583

Received: 25 OCT 96

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

Project: 1233.MONTGOMERY.WARD.DUB

REPORT OF ANALYTICAL RESULTS

Page 3



Greta Galoustian, 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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: ORDER PLACED FOR CLIENT: Environmental Audit 9610583 :
: BC ANALYTICAL : GLEN LAB : 10:58:50 06 NOV 1996 - P. 1 :

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE.....	METHOD.....	EQUIP.	BATCH..	ID.NO
				ANALYZED			
9610583*1	B-12	PB,GFA DIG,AQ,GFA GAS.MTBE.TESNC	10.30.96 10.30.96 10.31.96	7421 3020 8015M.TX	534-07 536-23 534-07	962504 962504 962504	1002 7093 1008
9610583*2	B-5	PB,GFA DIG,AQ,GFA GAS.MTBE.TESNC	10.30.96 10.30.96 10.31.96	7421 3020 8015M	534-07 536-23 536-23	962504 962504 965146	1002 7093 1008
9610583*3	B-10	PB,GFA DIG,AQ,GFA GAS.MTBE.TESNC	10.30.96 10.30.96 10.31.96	7421 3020 8015M	534-07 536-23 536-23	962504 962504 965146	1002 7093 1008
9610583*4	B-16	PB,GFA DIG,AQ,GFA GAS.MTBE.TESNC	10.30.96 10.30.96 10.31.96	7421 3020 8015M	534-07 536-23 536-23	962504 962504 965146	1002 7093 1008
9610583*5	MW-100	PB,GFA DIG,AQ,GFA GAS.MTBE.TESNC	10.30.96 10.30.96 10.31.96	7421 3020 8015M	534-07 536-23 536-23	962504 962504 965146	1002 7093 1008
9610583*6	MW-102	PB,GFA DIG,AQ,GFA GAS.MTBE.TESNC	10.30.96 10.30.96 10.31.96	7421 3020 8015M.TX	534-07 536-23 536-23	962504 962504 965146	1002 7093 1008
9610583*7	ENEA-MW-3	PB,GFA DIG,AQ,GFA GAS.MTBE.TESNC	10.30.96 10.30.96 10.31.96	7421 3020 8015M.TX	534-07 536-23 536-23	962504 962504 965146	1002 7093 1008
9610583*8	ENEA-MW-1	PB,GFA DIG,AQ,GFA GAS.MTBE.TESNC	10.30.96 10.30.96 10.31.96	7421 3020 8015M.TX	534-07 536-23 536-23	962504 962504 965146	1002 7093 1008
9610583*9	Effluent	PB,GFA DIG,AQ,GFA GAS.MTBE.TESNC	10.30.96 10.30.96 11.01.96	7421 3020 8015M.TX	534-07 536-23 536-23	962504 962504 965146	1002 7093 1008

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

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

BC A I CAL NDAL
QC REPORT FOR 9610583
DATE PRINTED: 06 NOV 1996

AQUEOUS SAMPLES	METHOD BLANK					LAB CONTROL						MATRIX QC					
	UNITS	RESULT	RDL	FLG	LCS	LCSD	LCL	UCL	RPD	RPD	: MS	MSD	LCL	UCL	RPD	RPD	
					%REC	FLG					%REC	FLG					
Batch: PB,GFA*962504 Method: 7421 - Lead, AA, Furnace																	
Lead	mg/L	0	0.002	-	100	-	101	-	77	124	1	-	-	117	-	121	-
Batch: GAS*965146 Method: 8015M - Modified 8015																	
Benzene	ug/L	0	0.3	-	95	-	-	-	76	155	-	-	-	99	-	103	-
Toluene	ug/L	0	0.3	-	99	-	-	-	72	121	-	-	-	97	-	98	-
Ethylbenzene	ug/L	0	0.3	-	100	-	-	-	72	115	-	-	-	92	-	95	-
Methyl-tert-butylether	ug/L	0	30	-	94	-	-	-	62	159	-	-	-	114	-	110	-
Total Xylene Isomers	ug/L	0	0.6	-	103	-	-	-	68	115	-	-	-	97	-	101	-
TPH (Gasoline Range)	ug/L	0	100	-	91	-	-	-	85	120	-	-	-	73	Q	81	-
[a,a,a-Trifluorotoluene]	Percent	88	-	-	110	-	-	-	85	118	-	-	-	90	-	96	-

: ORDER PLACED FOR CLIENT: Environmental Audit 9610583 :
: BC ANALYTICAL : GLEN LAB : 10:58:50 06 NOV 1996 - P. 1 :
=====

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

9610583*1	B-12	PB,GFA	10.30.96	7421	534-07	962504	1002
		DIG,AQ,GFA	10.30.96	3020		962504	7093
-	9610583*2	GAS.MTBE.TESNC	10.31.96	8015M.TX	536-23	965146	1008
	B-5	PB,GFA	10.30.96	7421	534-07	962504	1002
		DIG,AQ,GFA	10.30.96	3020		962504	7093
	9610583*3	GAS.MTBE.TESNC	10.31.96	8015M	536-23	965146	1008
	B-10	PB,GFA	10.30.96	7421	534-07	962504	1002
		DIG,AQ,GFA	10.30.96	3020		962504	7093
	9610583*4	GAS.MTBE.TESNC	10.31.96	8015M	536-23	965146	1008
	B-16	PB,GFA	10.30.96	7421	534-07	962504	1002
		DIG,AQ,GFA	10.30.96	3020		962504	7093
	9610583*5	GAS.MTBE.TESNC	10.31.96	8015M	536-23	965146	1008
	MW-100	PB,GFA	10.30.96	7421	534-07	962504	1002
		DIG,AQ,GFA	10.30.96	3020		962504	7093
	9610583*6	GAS.MTBE.TESNC	10.31.96	8015M.TX	536-23	965146	1008
	MW-102	PB,GFA	10.30.96	7421	534-07	962504	1002
		DIG,AQ,GFA	10.30.96	3020		962504	7093
	9610583*7	GAS.MTBE.TESNC	10.31.96	8015M.TX	536-23	965146	1008
	ENEA-MW-3	PB,GFA	10.30.96	7421	534-07	962504	1002
		DIG,AQ,GFA	10.30.96	3020		962504	7093
	9610583*8	GAS.MTBE.TESNC	10.31.96	8015M.TX	536-23	965146	1008
	ENEA-MW-1	PB,GFA	10.30.96	7421	534-07	962504	1002
		DIG,AQ,GFA	10.30.96	3020		962504	7093
	9610583*9	GAS.MTBE.TESNC	10.31.96	8015M.TX	536-23	965146	1008
	Effluent	PB,GFA	10.30.96	7421	534-07	962504	1002
		DIG,AQ,GFA	10.30.96	3020		962504	7093
		GAS.MTBE.TESNC	11.01.96	8015M.TX	536-23	965146	1008

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

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

BC ANALYTICAL, GLENDALE
QC REPORT FOR 9610583
DATE PRINTED: 06 NOV 1996

PAGE 1

AQUEOUS SAMPLES	METHOD BLANK				LAB CONTROL								MATRIX QC								
	UNITS	RESULT	RDL	FLG	LCS	LCSD	%REC	FLG	LCL	UCL	RPD	RPD	MS	MSD	%REC	FLG	LCL	UCL	RPD	RPD	
Batch: PB,GFA*962504 Method: 7421 - Lead, AA, Furnace																					
Lead	mg/L	0	0.002	-	100	-	101	-	77	124	1	-	-	117	-	121	-	40	156	4	20
Batch: GAS*965146 Method: 8015M - Modified 8015																					
Benzene	ug/L	0	0.3	-	95	-	-	-	76	155	-	-	-	99	-	103	-	70	153	4	25
Toluene	ug/L	0	0.3	-	99	-	-	-	72	121	-	-	-	97	-	98	-	69	119	1	25
Ethylbenzene	ug/L	0	0.3	-	100	-	-	-	72	115	-	-	-	92	-	95	-	68	116	2	25
Methyl-tert-butylether	ug/L	0	30	-	94	-	-	-	62	159	-	-	-	114	-	110	-	80	176	4	25
Total Xylene Isomers	ug/L	0	0.6	-	103	-	-	-	68	115	-	-	-	97	-	101	-	61	118	2	25
TPH (Gasoline Range)	ug/L	0	100	-	91	-	-	-	85	120	-	-	-	73	Q	81	-	78	124	7	25
[a,a,a-Trifluorotoluene]	Percent	88	-	-	110	-	-	-	85	118	-	-	-	90	-	96	-	85	118	-	-

: SURROGATE RECOVERIES :

: BC ANALYTICAL : GLEN LAB : 10:59:37 06 NOV 1996 - P. 1 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
9610583*1							
8015M.TX _{a,a,a} -Trifluorotoluene Re965146		10/31/96		44.6	50.0	89	
9610583*2							
8015M.TX _{a,a,a} -Trifluorotoluene Re965146		10/31/96		44.2	50.0	88	
9610583*3							
8015M.TX _{a,a,a} -Trifluorotoluene Re965146		10/31/96		44.5	50.0	89	
9610583*4							
8015M.TX _{a,a,a} -Trifluorotoluene Re965146		10/31/96		43.7	50.0	87	
9610583*5							
8015M.TX _{a,a,a} -Trifluorotoluene Re965146		10/31/96		47.1	50.0	94	
9610583*6							
8015M.TX _{a,a,a} -Trifluorotoluene Re965146		10/31/96		47.9	50.0	96	
9610583*7							
8015M.TX _{a,a,a} -Trifluorotoluene Re965146		10/31/96		45.5	50.0	91	
9610583*8							
8015M.TX _{a,a,a} -Trifluorotoluene Re965146		10/31/96		47.8	50.0	96	
9610583*9							
8015M.TX _{a,a,a} -Trifluorotoluene Re965146		11/01/96		44.4	50.0	89	


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 FAX (714) 632 - 6754

Chain of Custody Record

 SAMPLING REQUIREMENTS: RCRA NPDES SDWA

 WRITTEN QC REPORT TURNAROUND TIME:
 ROUTINE QC SAME DAY 24hr 48hr NORMAL
 RWOQB QC

PROJECT NO. 1233	PROJECT NAME <u>Montgomery Ward</u> 7575 Dublin Blvd, Dublin	SAMPLE NUMBER	DATE	TIME	COMP GRAB	SAMPLE DESCRIPTION	CONTR TYPE	ANALYSES REQUESTED								NUMBER OF CONTAINERS	REMARKS				
								GLASS	PLASTIC	BRASS/SS TUBE	TPH-D 8015M	TPH-G 8015M	TPH-I 418.1	BTEX 8020	VOC 8240	EOC 8270	OIL & GREASE	CAM METALS TOT WET	LEAD	HVOOC 8010	
B-12	10/24/96	11:45				Water		/	/		/	/	/							3	One 1-Liter Plastic Bottle (lead) Two 40-ml VOA Vials (BTEX/TPH)
B-5	"	12:05				"		/	/	/	/	/	/							3	
B-10	"	12:35				"		/	/	/	/	/	/							3	
B-16	"	15:10				"		/	/	/	/	/	/							3	
MW-100	"	15:20				"		/	/	/	/	/	/							3	
MW-102	"	16:05				"		/	/	/	/	/	/							3	
EWEA MW-3	"	16:45				"		/	/	/	/	/	/							3	

 TOTAL NUMBER
OF CONTAINERS

21

RELINQUISHED BY: [Signature/Name] <i>John R. Cimbric</i>	DATE/TIME 10/25/96 9:10	RECEIVED BY: [Signature/Name] <i>Bill Rogers</i>	RELINQUISHED BY: [Signature/Name] <i>Bill Rogers</i>	DATE/TIME 10/26/96 9:00	RECEIVED BY: [Signature/Name] <i>John R. Cimbric</i>
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"/>		SHIPPED BY: [Signature/Name]	COURIER: [Signature/Name]	RECEIVED FOR BY: [Signature/Name]	DATE/TIME
		AIRBILL #:		LAB: BC Analytical	


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Chain of Custody Record

 SAMPLING REQUIREMENTS: RCRA NPDES SDWA _____

WRITTEN OC REPORT

 ROUTINE OC
 RWOCB OC

TURNAROUND TIME:

 SAME DAY 24hr 48hr NORMAL

PROJECT NO. 1233	PROJECT NAME <u>Montgomery Ward</u> <u>7575 Dublin Blvd, Dublin</u>	CONTR TYPE	ANALYSES REQUESTED										REMARKS		
			Glass	Plastic	Brassy SS Tube	TPH-D 8015M	TPH-G 8015M	TPH-H 418.1	BTEX 8020	VOC 8240	EOC 8270	Oil & Grease	CAM METALS TOT WET		
ENEA MW-1	10/25/96 16:50	/												3	One 1-Liter Plastic Bottle (lead) Two 40-ml VOA Vials (BTEX/TPH)
Effluent	10/25/96 8:30	/												3	

 TOTAL NUMBER
OF CONTAINERS

6

REUNISHED BY: (Signature/Name) <i>John R. Cimbres</i>	DATE/TIME 10/25/96 9:10	RECEIVED BY: (Signature/Name) <i>Bill Lyons</i>	REUNISHED BY: (Signature/Name) <i>Bill Lyons</i>	DATE/TIME 10/25/96 9:00	RECEIVED BY: (Signature/Name) <i>John R. Cimbres</i>
REUNISHED BY: (Signature/Name)	DATE/TIME	RECEIVED BY: (Signature/Name)	REUNISHED 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"/>		SHIPPED BY: (Signature/Name)	COURIER: (Signature/Name)	RECEIVED FOR BY: (Signature/Name)	DATE/TIME
		AIRBILL #:		LAB: BC Analytical	



A. Keith Kaufman, M.S.

Consultant in Environmental Biotechnology

Serving Industry, Government, Academia and the Legal Profession

November 12, 1996

TO: Mr. Ed Leonhardt (Environmental Audit, Inc.)

FROM: A. Keith Kaufman *(Handwritten)*

Subject: Results of Physicochemical and Microbiological Analyses of Three (3) Water Samples (Montgomery Ward-Dublin)

Listed below are the results from the referenced analyses performed on three (3) samples of water collected on 10/24/96. As requested, physicochemical analyses were performed for Sample B-12 only, utilizing HACH Spectrophotometric and ion-specific procedures. Microbiological analyses were performed utilizing standard plate count procedures on Trypticase Soy Agar (TSA, general/heterotrophic enumeration), and Minimal Salts agar supplemented with 500 ppm gasoline as sole carbon source (MS, selective degrader enumeration). Plates were incubated under aerobic conditions for four (4) days at room temperature prior to enumeration. For comparative purposes, the results from the previous sampling event (Report of 8/02/96) are included in parentheses.

RESULTS

Parameter	SAMPLE ID.		
	B-12	B-5	B-10
pH	7.7 (7.2)	—	—
Nitrate (ppm)	1.6 (1.0)	—	—
Nitrite (ppm)	5.0 (ND)	—	—
Ammonium (ppm)	0.45 (1.5)	—	—
Phosphate (ppm)	0.9 (2.5)	—	—
Potassium (ppm)	6.0 (5.5)	—	—
Gen. Microb. Enumeration (CFU X 10 ⁵ /ml)	1.94 (NC)	1.2 (1.6)	0.7 (2.44)
Sel. Microb. Enumeration (CFU X 10 ⁵ /ml)	0.006 (0.14)	0.05 (0.08)	0.66 (1.46)
% Biodegraders	0.31(NA)	0.43 (5.0)	94.3 (59.8)

CFU = Colony-forming Units (Viable cells)

ND = Not detected @ 0.1 ppm limit

NC = No count @ 10³ final dilution

NA = Not applicable

Environmental Audit, Inc.
Montgomery Ward-Dublin
November 12, 1996

Page 2

COMMENT

Inorganic nutrient levels continue to remain below those levels normally accepted for active microbial activity and biodegradation, although slight increases in oxidized nitrogen levels were noted for Sample B-12. A reduction in ammonium concentration suggests that subsurface oxygenation has improved. Microbial population dynamics associated with all samples showed reductions in both general and selective subpopulations, although there was an increase in the percentage biodegraders for Sample B-10. These results suggest a reduction in utilizable substrate (contaminant and/or alternative organic material) in these waters. The results for Sample B-10 suggest that residual hydrocarbon is present at sufficient levels to support selective microbial growth. Without possessing physicochemical data for this sample however, it is unclear whether and to what degree physicochemistry is playing a role in modifying microbial population dynamics. As a result, for the next sampling round, you may wish to have water associated with B-5 and B-12 analyzed for physicochemical conditions. Mitigating bionutrient deficiencies, if any, will ensure improved microbial biodegradation efficiency and remaining contaminant reduction..

Should you have any questions concerning these results, please do not hesitate to contact me.

AKK:ch



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Chain of Custody Record

SAMPLING REQUIREMENTS: RCRA <input type="checkbox"/> NPDES <input type="checkbox"/> SDWA <input type="checkbox"/>	WRITTEN QC REPORT <input checked="" type="checkbox"/>	TURNAROUND TIME: ROUTINE QC <input checked="" type="checkbox"/> RIVOCB QC <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-I 418.1	6TEX8020	VOC8240	EOC8270	OIL & GREASE	CAM METALS TOT WET	LEAD	HVOC 8010	①	②
B-12	12/11/96 1:45	/	water	/													4
B-5	" 12:05	/	"	/													3
B-10	" 12:35	/	"	/													3

REUNIVERSIFIED BY: (Signature/Name)	DATE/TIME	RECEIVED BY: (Signature/Name)	REINVESTIGATED BY: (Signature/Name)	DATE/TIME	RECEIVED BY: (Signature/Name)
John R. Cimbrić	12/11/96 8:00				John R. Cimbrić 12/11/96
REINVESTIGATED BY: (Signature/Name)	DATE/TIME	RECEIVED BY: (Signature/Name)	REINVESTIGATED BY: (Signature/Name)	DATE/TIME	RECEIVED BY: (Signature/Name)
SAMPLES SHIPPED VIA:		SHIPPED BY: (Signature/Name)	ROUTER: (Signature/Name)	RECEIVED FOR BY: (Signature/Name)	DATE/TIME
FEDEX <input checked="" type="checkbox"/>	UPS <input type="checkbox"/>	AIRBORNE <input type="checkbox"/>			
HAND <input type="checkbox"/>	AIRFREIGHT <input type="checkbox"/>			LAB:	
		AIRMAIL #:			