ENVIRONMENTAL AUDIT, INC.®

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

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January 8, 1996

Project No. 1233

quarterly MTBE

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

RE: FOURTH QUARTER 1995 GROUND WATER MONITORING REPORT
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 1995, Montgomery Ward Auto Service Center, 7575 Dublin Boulevard, Dublin, California," dated January 8, 1996.

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

Sincerely,

ENVIRONMENTAL AUDIT, INC.

John R. Cimbricz
Environmental Specialist

REGISTERED PROFESSIONAL ENGINEER
EDWARD H. LEONHARDT
C.E. 24274
CIVIL
STATE OF CALIFORNIA

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

JRC:EHL:SAB

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)

JRC WORD 1233M95D

QUARTERLY GROUND WATER MONITORING REPORT

Fourth Quarter 1995
Montgomery Ward Auto Service Center
7575 Dublin Boulevard
Dublin, California

January 8, 1996

Project No. 1233

Prepared for:

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

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 1995 ground water monitoring report for the Montgomery Ward Auto Service Center property located at 7575 Dublin Boulevard, Dublin, California (see Figure 1). 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) is operated at the site. Ground water is being extracted from well B-12 (see Figure 2). All other wells associated with the site function as monitoring wells at this time. Wells MW-100, MW-101 and MW-102 were installed in May 1993, pursuant to a request by the Alameda County Department of Environmental Health (County), and were subsequently included in the quarterly ground water monitoring.

As requested by the County, ground water monitoring wells MW-1 through MW-4 at the Enea Properties site (Enea Properties), located immediately south of the intersection of Amador Plaza Road and Dublin Boulevard, were gauged and sampled as part of the quarterly monitoring activities. Wells PZ-1 and EW-1 associated with the Enea Properties were not sampled since these wells are located within ten feet of monitoring well MW-1.

2.0 FIELD INVESTIGATION

2.1 GROUND WATER ELEVATION SURVEY

On October 19, 1995, Environmental Audit, Inc. obtained ground water depth measurements from the wells associated with the site and the Enea Properties using an Oil Recovery System interface probe accurate to 0.01 feet. Water depth measurements were not taken from well MW-102 because the well was inaccessible due to street construction. No free-product was detected in the wells during gauging activities. The measured water levels were converted to elevations relative to mean sea level (MSL) 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 GROUND WATER AND EFFLUENT SAMPLING

On October 19 and 20, 1995, ground water samples were obtained from the wells for analytical testing. Samples were not taken from well MW-102 because the well was inaccessible due to street construction. Prior to sampling, all wells except extraction well B-12 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).

Purging of well B-12 prior to sampling was unnecessary since the System was active during sampling of this well. 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. A treated effluent sample was obtained from the sampling port located downstream of the two 180-pound carbon treatment units. The water samples were sealed in a one-liter plastic bottle and two 40-milliliter (ml) 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 were chilled until delivered to the laboratory for analytical testing. All samples were logged on chain of custody record forms (see Appendix B).

2.3 SAMPLING EQUIPMENT CLEANING PROTOCOL

The submersible pump and hose (Equipment) used to purge the wells prior to sampling was decontaminated between each purging activity using the following procedure: 1) the Equipment was flushed in a solution of Alconox detergent and tap water; and 2) the Equipment was flushed with tap water.

2.4 EFFLUENT HANDLING

All effluent generated during purging, sampling and equipment decontamination activities was temporarily stored in seven 55-gallon drums which were then emptied into the System for treatment and subsequent discharge into the sanitary sewerage system.

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) using modified EPA Method 8015, benzene, toluene, xylenes and ethylbenzene (BTXE) using EPA Method 8020, and total lead using EPA Method 7420. The results of the testing are shown in Table 2 along with the results from previous testing period. The laboratory reports are contained in Appendix C.

4.0 SYSTEM OPERATION/MAINTENANCE

During the July 28, 1995 through October 20, 1995 period, the ground water treatment system was inspected and routine maintenance of the system was undertaken once every two weeks or more often if required.

On October 20, 1995, the ground water extraction and treatment system was shut-down. A Regenesis oxygen releasing compound was installed in wells B-5 and B-12. B-5 is a two-inch diameter well, and B-12 is the 12-inch extraction well. Prior to installation of the ORC, in-situ dissolved oxygen measurements were obtained from the wells associated with the site as part of the quarterly ground water monitoring activities conducted on October 19 and 20, 1995.

Table 3 presents the effluent flowmeter reading for the period from April 15, 1994 through October 20, 1995. Approximately 429,940 gallons of treated ground water were discharged into the Dublin-San Ramon Water Services District sanitary sewerage system during the July 28, 1995 through October 20, 1995 period. This discharge volume computes into an average ground water extraction rate during the July 28, 1995 through October 20, 1995 period of approximately 3.55 gallons per minute.

During the July 28, 1995 through October 20, 1995 period, approximately 5.01 pounds of TPH-G and 0.05 pounds of benzene extracted and treated by the ground water remediation system.

5.0 LIMITATION

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

JRC:EHL:SAB

JRC WORD 1233M95D

TABLES

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

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
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
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

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

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)
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
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
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

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

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)
01/18/95		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
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
MW-101					
	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
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

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

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)
10/19/1995 [1]		NM	-	0.00	NM
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
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
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
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

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

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)
01/18/95		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
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

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

ANALYTICAL TESTING RESULTS

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

Compounds	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Lead
Well B-5						
04-16-92	4400	670	160	280	320	ND
07-24-92	31000	5400	2600	2200	5800	ND
10-22-92	9100	1100	190	520	740	ND
01-15-93	2300	530	160	300	470	7.9
04-15-93	4900	600	160	470	390	ND
07-14-93	8800	590	210	840	1100	9.9
10-14-93	4500	530	46	490	350	ND
01-13-94	120	15	1.9	12	11	ND
04-04-94	5700	450	39	350	400	ND
07-05-94	2200	69	13	150	95	ND
10-03-94	4700	190	38	510	570	ND
01-18-95	2200	53	27	120	280	ND
04-21-95	5800	90	74	300	910	4.0
07-28-95	2600	57	26	190	570	2.5
10-20-95	3400	27	15	210	530	4.2
Well B-10						
04-16-92	7300	1400	640	880	1100	ND
07-24-92	27000	3800	1600	2000	4000	ND
10-22-92	16000	2300	340	1100	1200	ND
01-15-93	10000	1400	310	730	1100	13
04-15-93	8100	580	270	810	580	19
07-14-93	6400	840	120	750	800	7.1
10-14-93	100000	720	120	930	1100	ND
01-13-94	18000	990	180	1300	2400	ND
04-04-94	12000	370	96	900	1800	ND
07-05-94	7800	170	50	550	810	ND
10-03-94	6300	120	33	480	630	ND
01-18-95	3300	38	28	160	450	2.9
04-21-95	4200	39	8.6	220	310	ND
07-28-95	2900	22	4.3	140	330	2.0
10-20-95	1900	3.9	1.5	74	170	ND
Well B-12						
04-16-92	12000	1300	1100	510	1200	ND
07-24-92	12000	1000	630	520	1000	ND
10-22-92	11000	370	230	400	940	ND
01-15-93	120	2.8	ND	1.6	3.6	11
04-15-93	7100	730	240	350	570	ND
07-14-93	4500	540	97	380	610	ND
10-14-93	11000	710	170	650	1600	ND
01-13-94	6000	330	100	330	620	24
04-04-94	8700	350	58	350	660	ND
07-05-94	8800	250	340	370	920	ND
10-03-94	1300	63	42	110	140	ND

TABLE 2

ANALYTICAL TESTING RESULTS

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

Compounds	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Lead
01-18-95	5000	93	65	190	510	ND
04-21-95	14000	190	320	420	1500	ND
07-28-95	10000	110	120	490	1500	ND
10-20-95	1400	16	13	81	180	ND
Well B-15						
04-16-92	65	4.4	2.4	6.1	2.8	ND
07-24-92	ND	3.6	1.5	3.1	1.6	ND
10-22-92	ND	1.7	0.89	0.78	0.88	ND
01-15-93	ND	ND	ND	ND	ND	13
04-15-93	ND	2.8	ND	3.0	1.5	ND
07-14-93	ND	ND	ND	0.57	0.74	7.8
10-14-93	ND	0.96	2.6	1.3	3.6	25
01-13-94	ND	ND	0.92	0.70	2	ND
04-04-94	ND	ND	ND	0.56	1	ND
07-05-94	ND	ND	ND	ND	ND	ND
10-03-94	ND	ND	ND	ND	ND	ND
01-18-95	ND	ND	0.69	ND	2.2	ND
04-21-95	ND	ND	1.0	ND	2.5	ND
07-28-95	ND	ND	ND	ND	ND	ND
10-20-95	ND	ND	ND	ND	ND	ND
Well B-16						
04-16-92	1300	390	1.7	35	9.3	ND
07-24-92	1600	120	5.7	120	410	ND
10-22-92	1000	76	ND	55	130	ND
01-15-93	160	6.5	0.86	2.3	2.6	5.5
04-15-93	300	65	ND	13	2	ND
07-14-93	170	5.9	ND	4.6	12	ND
10-14-93	390	11	2.4	16	45	21
01-13-94	350	8.7	0.62	25	68	ND
04-04-94	550	8.7	ND	35	81	ND
07-05-94	850	14	5.6	52	130	ND
10-03-94	210	5.3	ND	26	5.8	ND
01-18-95	ND	ND	0.94	ND	1.3	2.7
04-21-95	ND	ND	0.66	ND	ND	ND
07-28-95	57	0.71	ND	1.6	2.6	ND
10-20-95	810	4.1	ND	22	100	ND
Well MW-100						
05-13-93	13000	83	ND	960	820	NA
07-14-93	13000	32	ND	1400	790	8
10-14-93	7500	48	16	900	520	22
01-13-94	7000	51	ND	590	330	ND
04-04-94	9800	69	ND	540	410	ND
07-05-94	5900	31	8.7	190	190	ND
10-03-94	3900	ND	ND	220	200	ND

TABLE 2

ANALYTICAL TESTING RESULTS

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

Compounds	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Lead
01-18-95	3700	48	31	190	120	2.8
04-21-95	3100	10	ND	130	44	ND
07-28-95	3300	ND	ND	100	42	ND
10-20-95	2200	ND	ND	72	27	ND
Well MW-101						
05-13-93	ND	ND	ND	ND	ND	NA
07-14-93	ND	ND	ND	ND	ND	11
10-14-93	ND	0.65	0.89	ND	1.1	ND
01-13-94	ND	ND	ND	ND	ND	28
04-04-94	ND	ND	ND	ND	ND	ND
07-05-94	ND	ND	ND	ND	ND	ND
10-03-94	ND	ND	ND	ND	ND	ND
01-18-95	ND	ND	ND	ND	ND	2.6
04-21-95	ND	ND	ND	ND	ND	ND
07-28-95	ND	ND	ND	ND	ND	ND
10-20-95	ND	ND	ND	ND	ND	ND
Well MW-102						
05-13-93	3600	17	ND	130	63	NA
07-14-93	1500	13	ND	64	4.9	ND
10-14-93	24000	9.6	5.2	60	60	ND
01-13-94	2000	22	ND	26	55	ND
04-04-94	2100	16	2.5	15	35	ND
07-05-94	1300	7	2.9	10	23	ND
10-03-94	620	5.1	ND	5.2	11	ND
01-18-95	440	ND	ND	3.0	5.3	3.7
04-21-95	250	ND	0.78	0.96	0.63	ND
07-28-95	140	ND	ND	ND	0.70	ND
10-20-95 [1]	NS	NS	NS	NS	NS	NS
EFFLUENT						
04-15-93	ND	ND	ND	ND	ND	ND
07-14-93	ND	ND	ND	ND	ND	ND
10-14-93	ND	ND	ND	ND	0.97	48
01-13-94	ND	ND	ND	ND	ND	ND
04-04-94	ND	ND	ND	ND	ND	33
07-05-94	ND	ND	ND	ND	ND	ND
10-03-94	ND	ND	ND	ND	ND	ND
01-18-95	ND	ND	ND	ND	ND	ND
04-21-95	ND	1.0	ND	ND	ND	ND
07-28-95	ND	ND	ND	ND	1.5	ND
10-20-95	ND	ND	ND	ND	ND	ND
ENEA MW-1						
10-14-93	5700	76	19	160	460	ND

TABLE 2

ANALYTICAL TESTING RESULTS

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

Compounds	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Lead
04-04-94	7000	27	ND	260	49	ND
07-05-94	5100	23	ND	260	50	ND
10-03-94	4400	8.1	ND	170	50	ND
01-18-95	2000	7.1	2.4	47	5.5	2.2
04-21-95	1400	2.9	9.0	22	1.2	5.8
07-28-95	1100	ND	ND	14	1.4	ND
10-20-95	1700	ND	2.2	22	3.6	ND
ENEA MW-2						
10-14-93	ND	ND	ND	1.1	0.71	21
04-04-94	ND	ND	ND	ND	ND	21
07-05-94	ND	ND	ND	ND	ND	ND
10-03-94	590	1.1	ND	22	6.5	ND
01-18-95	ND	ND	ND	ND	ND	2.4
04-21-95	ND	ND	ND	ND	ND	ND
07-28-95	ND	ND	ND	ND	0.57	ND
10-20-95	ND	ND	ND	ND	ND	ND
ENEA MW-3						
10-14-93	2600	26	30	100	130	ND
04-04-94	2600	13	3.4	90	140	ND
07-05-94	3400	15	5	31	48	ND
10-03-94	1400	6.3	ND	31	36	ND
01-18-95	2300	5.1	1.6	2.9	18	2.1
04-21-95	1900	5.3	ND	7.5	4.2	ND
07-28-95	1400	ND	ND	5.5	1.5	ND
10-20-95	730	ND	ND	1.7	ND	ND
ENEA MW-4						
04-04-94	ND	ND	ND	ND	ND	23
07-05-94	ND	ND	0.5	ND	0.62	ND
10-03-94	ND	ND	ND	ND	ND	ND
01-18-95	ND	ND	0.87	ND	ND	7.2
04-21-95	ND	ND	1.7	ND	ND	2.8
07-28-95	ND	ND	ND	ND	ND	2.9
10-20-95	ND	ND	ND	ND	ND	ND

NOTES:

In July 28, 1995 sampling, the Methyl-tert-butylether level was 55 ppb in Well B-10, 10 ppb in Well ENEA MW-1, 11 ppb in Well ENEA MW-3 and not detected in other wells.
In October 20, 1995 sampling, the Methyl-tert-butylether level was 13 ppb in Well B-10, 23 ppb in Well ENEA MW-1, 15 ppb in Well MW-100 and not detected in other wells.
(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 3

FLOW METER READINGS
Montgomery Ward Auto Service Center
Dublin, California

DATE	FLOW METER READING (in gallons)	AVERAGE GPM
04/15/94	402,210	
04/22/94	458,320	5.57
04/26/94	488,950	5.32
05/03/94	491,750	0.28
05/20/94	639,200	6.02
06/03/94	759,790	5.98
06/29/94	941,580	4.86
07/06/94	999,750	5.77
07/12/94	999,906	0.02
07/19/94	1,006,600	0.66
07/22/94	1,032,828	6.07
08/02/94	1,102,920	4.43
08/11/94	1,169,050	5.10
08/18/94	1,226,910	5.74
09/02/94	1,284,880	2.68
09/16/94	1,349,350	3.20
09/30/94	1,390,510	2.04
10/04/94	1,419,110	4.97
10/14/94	1,471,530	3.64
10/16/94	1,482,270	3.73
10/21/94	1,504,630	3.11
11/09/94	1,607,260	3.75
11/18/94	1,659,920	4.06
12/02/94	1,746,840	4.31
12/16/94	1,844,050	4.82
01/03/95	1,913,930	2.70
01/18/95	1,994,670	3.74
01/19/95	1,997,480	1.95
02/04/95	1,997,480	0.00
02/18/95	2,065,120	3.36
02/24/95	2,113,210	5.57
03/04/95	2,160,520	4.11
03/14/95	2,216,350	3.88
03/25/95	2,263,180	2.96
04/04/95	2,322,830	4.14
04/14/95	2,361,020	2.65
04/20/95	2,361,020	0.00
04/21/95	2,367,000	4.15
04/28/95	2,395,430	2.82

TABLE 3

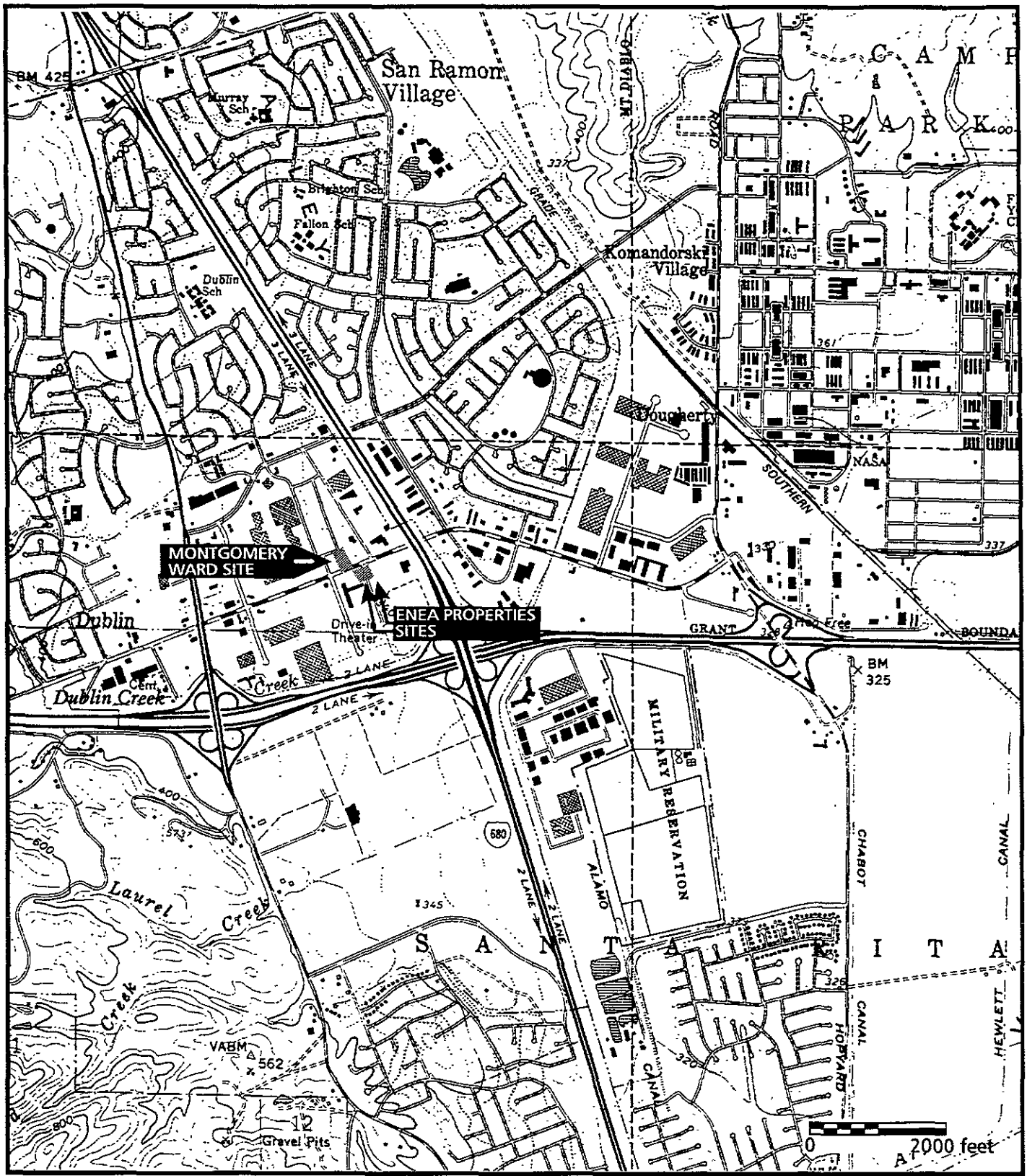
FLOW METER READINGS
Montgomery Ward Auto Service Center
Dublin, California

DATE	FLOW METER READING (in gallons)	AVERAGE GPM
05/06/95	2,422,520	2.35
05/19/95	2,472,180	2.65
06/02/95	2,508,060	1.78
06/15/95	2,539,020	1.65
06/22/95	2,580,488	4.11
07/14/95	2,640,660	1.90
07/28/95	2,675,790	1.74
08/11/95	2,734,880	2.93
08/28/95	2,826,100	3.73
09/08/95	2,883,370	3.62
09/29/95	2,969,690	2.85
10/13/95	3,063,500	4.65
10/20/95	3,105,730	4.19
VOLUME SINCE 04/15/1994 = 2,703,520 Gal		3.40
VOLUME FROM 7/28/95 TO 10/20/95 = 429,940 Gal		3.55

GPM – Gallons per minute

LOTUS123:1233FLOW

FIGURES



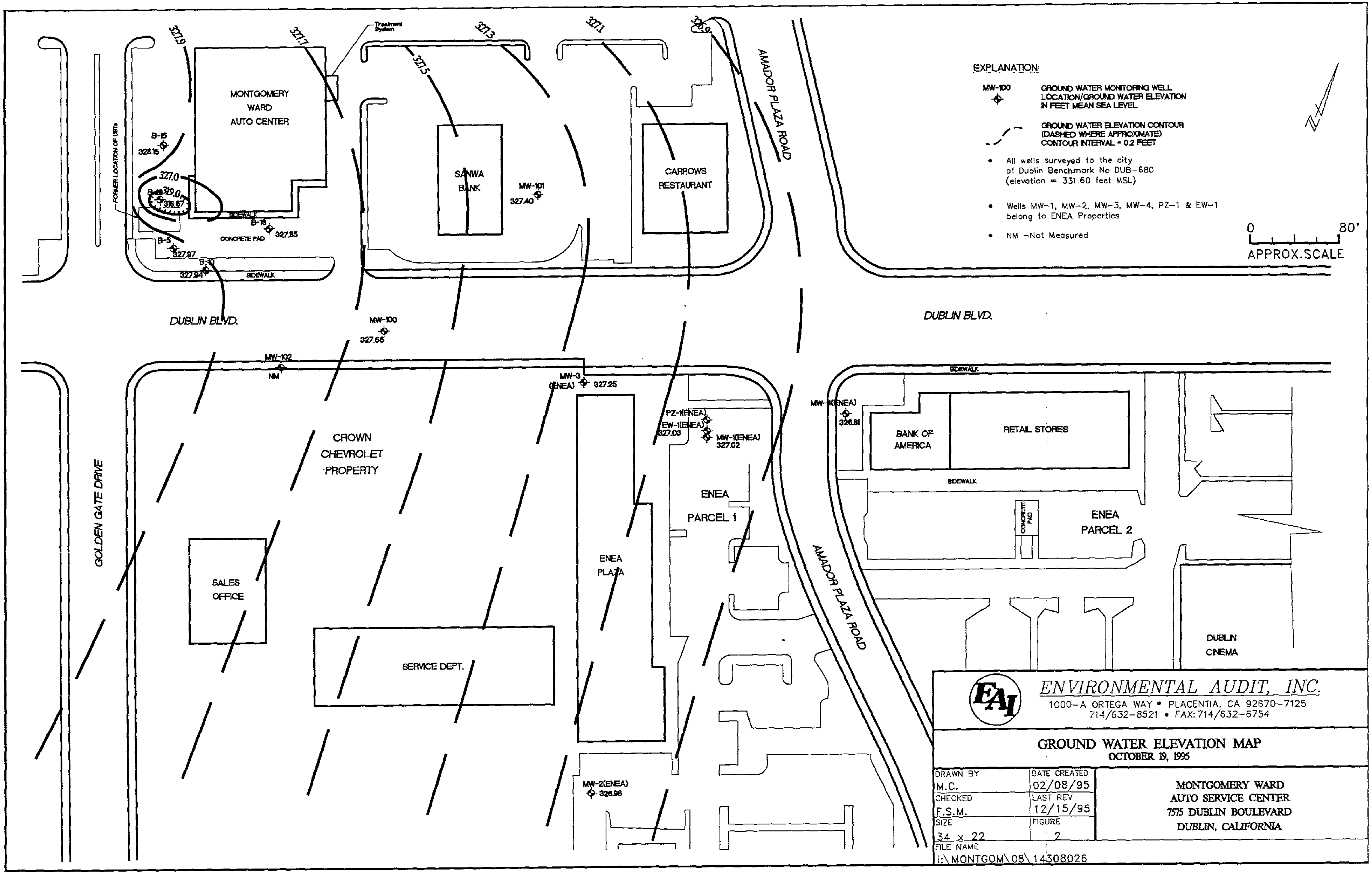
Environmental Audit, Inc.®

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

SOURCE: USGS TOPOGRAPHIC 7.5 MINUTE SERIES
DUBLIN, CALIFORNIA QUADRANGLE

Figure 1

Project No. 1233
K:\1233\1233-LM.CDR



MONTGOMERY WARD AUTO CENTER
Treatment System
FORMER LOCATION OF USTs
B-15 328.15
327.0
319.0
316.67
B-16 327.85
B-5 327.97
B-10 327.94
CONCRETE PAD
SIDEWALK
327.9
327.7
327.5
327.3
327.1
326.9
SANWA BANK
MW-101 327.40
CARROWS RESTAURANT
AMADOR PLAZA ROAD
DUBLIN BLVD.
MW-100 327.66
MW-102 NM
MW-3 (ENEA) 327.25
PZ-1(ENEA)
EW-1(ENEA) 327.03
MW-1(ENEA) 327.02
MW-4(ENEA) 326.81
CROWN CHEVROLET PROPERTY
GOLDEN GATE DRIVE
SALES OFFICE
SERVICE DEPT.
ENEA PLAZA
ENEA PARCEL 1
MW-2(ENEA) 326.98
BANK OF AMERICA
RETAIL STORES
CONCRETE PAD
ENEA PARCEL 2
DUBLIN CINEMA
EXPLANATION:
MW-100 GROUND WATER MONITORING WELL LOCATION/GROUND WATER ELEVATION IN FEET MEAN SEA LEVEL
GROUND WATER ELEVATION CONTOUR (DASHED WHERE APPROXIMATE) CONTOUR INTERVAL - 0.2 FEET
• All wells surveyed to the city of Dublin Benchmark No DUB-680 (elevation = 331.60 feet MSL)
• Wells MW-1, MW-2, MW-3, MW-4, PZ-1 & EW-1 belong to ENEA Properties
• NM -Not Measured
0 80'
APPROX.SCALE
ENVIRONMENTAL AUDIT, INC.
1000-A ORTEGA WAY • PLACENTIA, CA 92670-7125
714/632-8521 • FAX:714/632-6754
GROUND WATER ELEVATION MAP
OCTOBER 19, 1995
DRAWN BY M.C.
DATE CREATED 02/08/95
CHECKED F.S.M.
LAST REV 12/15/95
SIZE 34 x 22
FIGURE 2
FILE NAME I:\MONTGOM\08\14308026
MONTGOMERY WARD AUTO SERVICE CENTER
7575 DUBLIN BOULEVARD
DUBLIN, CALIFORNIA

Job No. 1233

APPENDICES

APPENDIX A: GROUND WATER SAMPLING LOG FORMS

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:	10/19/95
PROJECT NO.:	1233
CLIENT:	Montgomery Ward-Dublin
WELL NO.:	B-5
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)				
21.23	—	12.08		—	=	9.15	x .16 (WELL VOLUME VOLUME FACTOR)	= 1.46 (ONE CASING VOLUME OF WATER (GALLONS))

WELL VOLUME FACTORS

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

PURGE TIME (hrs.): START 13:48 STOP 13:54

METHOD: DOWN HOLE PUMP ☒ DEDICATED PUMP ☐ BAILER ☐ OTHER ☐

TYPE/MODEL: Whale Supersub 921

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) x 10^3	pH	TURBIDITY (NTU)	REMARKS
1.5	74.3	9.10×10^2	6.84	7200	
3	72.4	9.46×10^2	6.79	644	
4.5	71.3	9.45×10^2	6.76	30.0	
6	70.9	9.43×10^2	6.76	22.2	

WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.): 14:20

METHOD: DOWN HOLE PUMP ☐ DEDICATED PUMP ☐ BAILER ☒ OTHER ☐

TYPE/MODEL : Voss Technologies

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:	10/19/95
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)				
7.2	—	11.76		—		8.24	X .16	= 1.32

WELL VOLUME FACTORS

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

WELL VOLUME VOLUME FACTOR

ONE CASING VOLUME OF WATER (GALLONS)

PURGE TIME (hrs.): START 13:55 STOP 14:01

METHOD: DOWN HOLE PUMP ☒ DEDICATED PUMP ☐ BAILER ☐ OTHER ☐

TYPE/MODEL: Whale Supersub 921

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) x 10^3	pH	TURBIDITY (NTU)	REMARKS
1.5	71.0	1.01×10^3	6.71	744	
3	70.8	1.02×10^3	6.69	>200	
4.5	70.6	1.03×10^3	6.70	94.2	
6	70.4	1.02×10^3	6.69	31.6	

WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.): 14:35

METHOD: DOWN HOLE PUMP ☐ DEDICATED PUMP ☐ BAILER ☒ OTHER ☐

TYPE/MODEL : Voss Technologies

COMMENTS: _____

GROUND WATER Sampling Log

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Planning, Environmental Analyses and Hazardous Substances Management and Remediation
1000 ORTEGA WAY, SUITE A
PLACENTIA, CA 92670-7125
☎ (714) 632 - 8521
FAX (714) 632 - 6754

DATE:	10/17/95
PROJECT NO.:	1233
CLIENT:	Montgomery Ward-Dublin
WELL NO.:	B-15
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)				
22.64	−	17.47	→	8.17	X	.65	=	5.31

WELL VOLUME FACTORS

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

WELL VOLUME FACTOR

ONE CASING VOLUME OF WATER (GALLONS)

PURGE TIME (hrs.): START 16:50 STOP 17:02

METHOD: DOWN HOLE PUMP ☒ DEDICATED PUMP ☐ BAILER ☐ OTHER ☐

TYPE/MODEL: Whale Supersub 921

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) x 10^3	pH	TURBIDITY (NTU)	REMARKS
5	72.4	1.04×10^3	6.85	38.8	
10	71.9	1.01×10^3	6.88	12.40	
15	71.2	1.03×10^3	6.87	7.44	
20	70.8	1.03×10^3	6.85	6.55	
25	70.6	1.03×10^3	6.85	7.19	

WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.): 17:40

METHOD: DOWN HOLE PUMP ☐ DEDICATED PUMP ☐ BAILER ☒ OTHER ☐

TYPE/MODEL: Voss Technologies

COMMENTS: _____

GROUND WATER Sampling Log

Environmental Audit, Inc.®
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FAX (714) 632 - 6754

DATE:	10/19/95
PROJECT NO.:	1233
CLIENT:	Montgomery Ward-Dublin
WELL NO.:	B-16
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)				
23.35	−	11.97	=	—	11.38	X	6.5	7.40

WELL VOLUME FACTORS

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

WELL VOLUME VOLUME FACTOR

ONE CASING VOLUME OF WATER (GALLONS)

PURGE TIME (hrs.): START 16:00 STOP 16:20

METHOD: DOWN HOLE PUMP ☒ DEDICATED PUMP ☐ BAILER ☐ OTHER ☐

TYPE/MODEL: Whale Supersub 921

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) x 10^3	pH	TURBIDITY (NTU)	REMARKS
5	72.4	1.09×10^3	6.68	0.85	
10	71.4	1.08×10^3	6.68	0.79	
15	71.3	1.08×10^3	6.66	0.61	
20	70.9	1.08×10^3	6.68	0.66	
25	70.4	1.08×10^3	6.67	0.62	
30	70.9	1.08×10^3	6.62	0.58	

WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.): 16:55

METHOD: DOWN HOLE PUMP ☐ DEDICATED PUMP ☐ BAILER ☒ OTHER ☐

TYPE/MODEL: Voss Technologies

COMMENTS:

GROUND WATER Sampling Log

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

DATE:	10/19/95
PROJECT NO.:	1233
CLIENT:	Montgomery Ward-Dublin
WELL NO.:	MW-10c
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)				
28.00	—	11.95	=	—	=	16.05	X .65	= 10.43

WELL VOLUME FACTORS

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

WELL VOLUME VOLUME FACTOR

ONE CASING VOLUME OF WATER (GALLONS)

PURGE TIME (hrs.): START 16:07 STOP 16:35

METHOD: DOWN HOLE PUMP ☒ DEDICATED PUMP ☐ BAILER ☐ OTHER ☐

TYPE/MODEL: Whale Supersub 921

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) x 10^3	pH	TURBIDITY (NTU)	REMARKS
5	74.3	1.01×10^3	6.90	43.9	
10	72.1	1.03×10^3	6.68	55.0	
15	71.4	1.02×10^3	6.68	32.5	
20	71.1	1.02×10^3	6.69	19.02	
25	70.9	1.02×10^3	6.70	17.31	
30	71.7	1.02×10^3	6.68	12.12	
35	71.9	1.01×10^3	6.69	10.19	
40	71.7	1.05×10^3	6.70	7.94	
45	71.8	1.04×10^3	6.69	5.31	

WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.): 17:15

METHOD: DOWN HOLE PUMP ☐ DEDICATED PUMP ☐ BAILER ☒ OTHER ☐

TYPE/MODEL : Voss Technologies

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:	10/26/95
PROJECT NO.:	1233
CLIENT:	Montgomery Ward-Dublin
WELL NO.:	MW-1C L
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	−	11.14	=	—	=	16.86	X	.65	=	10.96

WELL VOLUME FACTORS

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

WELL VOLUME VOLUME FACTOR

ONE CASING VOLUME OF WATER (GALLONS)

PURGE TIME (hrs.): START 10:40 STOP 11:03

METHOD: DOWN HOLE PUMP ☒ DEDICATED PUMP ☐ BAILER ☐ OTHER ☐

TYPE/MODEL: Whale Supersub 921

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) x 10^3	pH	TURBIDITY (NTU)	REMARKS
5	69.2	1.11×10^3	6.96	11.14	
10	69.8	1.12×10^3	6.91	9.66	
15	69.8	1.09×10^3	6.92	8.85	
20	70.5	1.13×10^3	6.90	6.80	
25	70.4	1.13×10^3	6.87	7.20	
30	70.1	1.06×10^3	6.86	6.66	
35	69.7	1.12×10^3	6.87	6.80	
40	69.5	1.11×10^3	6.87	6.11	
45	69.8	1.11×10^3	6.86	6.19	

WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.): 11:23

METHOD: DOWN HOLE PUMP ☐ DEDICATED PUMP ☐ BAILER ☒ OTHER ☐

TYPE/MODEL : Voss Technologies

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:	10/20/95
PROJECT NO.:	1233
CLIENT:	Montgomery Ward-Dublin
WELL NO.:	EnEnviro-1
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)				
15.10	−	5.82	→	6.28	X	.65	=	4.08

WELL VOLUME FACTORS

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

WELL VOLUME VOLUME FACTOR

ONE CASING VOLUME OF WATER (GALLONS)

PURGE TIME (hrs.): START 7:20 STOP 8:15

METHOD: DOWN HOLE PUMP ☒ DEDICATED PUMP ☐ BAILER ☐ OTHER ☐

TYPE/MODEL: Whale Supersub 921

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) x 10^3	pH	TURBIDITY (NTU)	REMARKS
5	64.9	9.76 x 10^2	6.67	5.19	
10	66.8	9.94 x 10^2	6.63	3.12	
15	67.4	9.93 x 10^2	6.63	2.25	
20	67.0	9.95 x 10^2	6.63	1.26	

WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.): 9:30

METHOD: DOWN HOLE PUMP ☐ DEDICATED PUMP ☐ BAILER ☒ OTHER ☐

TYPE/MODEL : Voss Technologies

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:	10/20/95
PROJECT NO.:	1233
CLIENT: Montgomery Ward-Dublin	
WELL NO.:	FWFA MW-2
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.): 14.71 — DEPTH TO WATER LEVEL (ft. bgs): 8.63

DEPTH TO FREE PRODUCT (ft. bgs): —

6.08 X 0.65 (WELL VOLUME VOLUME FACTOR) = 3.95 (ONE CASING VOLUME OF WATER (GALLONS))

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

PURGE TIME (hrs.): START 9:05 STOP 9:13

METHOD: DOWN HOLE PUMP ☒ DEDICATED PUMP ☐ BAILER ☐ OTHER ☐

TYPE/MODEL: Whale Supersub 921

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) x 10³	pH	TURBIDITY (NTU)	REMARKS
5	64.1	1.09x10³	6.83	121.5	
10	66.4	1.13x10³	6.77	33.3	
15	66.7	1.10x10³	6.77	7.37	

WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.): 10:15

METHOD: DOWN HOLE PUMP ☐ DEDICATED PUMP ☐ BAILER ☒ OTHER ☐

TYPE/MODEL: Voss Technologies

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:	10/20/95
PROJECT NO.:	1233
CLIENT:	Montgomery Ward-Dublin
WELL NO.:	EWEH MW-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)				
15.10	—	9.68	=	—	→	5.42	X 1.65 (WELL VOLUME FACTOR)	= 3.53 (ONE CASING VOLUME OF WATER (GALLONS))

WELL VOLUME FACTORS

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

PURGE TIME (hrs.): START 8:20 STOP 9:30

METHOD: DOWN HOLE PUMP ☒ DEDICATED PUMP ☐ BAILER ☐ OTHER ☐

TYPE/MODEL: Whale Supersub 921

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) x 10^3	pH	TURBIDITY (NTU)	REMARKS
5	66.4	9.30×10^2	6.67	16.92	
10	66.0	9.18×10^2	6.68	6.83	
15	64.0	8.97×10^2	6.68	6.17	

WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.): 9:50

METHOD: DOWN HOLE PUMP ☐ DEDICATED PUMP ☐ BAILER ☒ OTHER ☐

TYPE/MODEL: Voss Technologies

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:	10/26/95
PROJECT NO.:	1233
CLIENT:	Montgomery Ward-Dublin
WELL NO.:	EMEK-MW-7
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.): 22.5 — DEPTH TO WATER LEVEL (ft. bgs): 8.55 DEPTH TO FREE PRODUCT (ft. bgs): —

→ 13.35 x 0.16 (WELL VOLUME FACTOR) = 2.14 (ONE CASING VOLUME OF WATER (GALLONS))

WELL VOLUME FACTORS

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

PURGE TIME (hrs.): START 8:50 STOP 8:56

METHOD: DOWN HOLE PUMP ☒ DEDICATED PUMP ☐ BAILER ☐ OTHER ☐

TYPE/MODEL: Whale Supersub 921

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) x 10³	pH	TURBIDITY (NTU)	REMARKS
2	64.3	9.56×10^2	6.67	7200	
4	66.6	1.06×10^3	6.66	151.1	
6	67.1	1.07×10^3	6.68	114.5	
8	67.3	1.08×10^3	6.70	18.1	

WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.): 10:00

METHOD: DOWN HOLE PUMP ☐ DEDICATED PUMP ☐ BAILER ☒ OTHER ☐

TYPE/MODEL : Voss Technologies

COMMENTS:

APPENDIX B: CHAIN OF CUSTODY RECORD FORMS

G9510408 PAGE 1 of 2

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

Chain of Custody Record

SAMPLING REQUIREMENTS: RCRA ☐ NPDES ☐ SDWA ☐ _____ ☐

WRITTEN QC REPORT
ROUTINE QC ☒
RWQCB QC ☐

TURNAROUND TIME:
SAME DAY ☐ 24hr ☐ 48hr ☐ NORMAL ☒

PROJECT NO.	PROJECT NAME
1233	Montgomery Ward-Dublin

SAMPLER (Signature with Printed Name): John R. Cimbricz

PROJECT MANAGER: Frank Muramoto

SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION	CONTR TYPE: GLASS	PLASTIC	BRASS/SS TUBE	ANALYSES REQUESTED: TPH-D 8015M	TPH-G 8015M	TRPH 418.1	BTEX 8020	VOC 8240	EDC 8270	OIL & GREASE	CAM METALS TOT WET	LEAD	HVOC 8010	NUMBER OF CONTAINERS	REMARKS
B-12	10/19/95	12:00		1	Water	1	1			1		1					1		3	One 1-liter Plastic Bottle (Lead) Two 40-mL VOA Vials (TPH/BTEX) -1
B-5	"	14:20		1	"	1	1			1		1					1		3	-2
B-10	"	14:35		1	"	1	1			1		1					1		3	-3
B-16	"	16:55		1	"	1	1			1		1					1		3	-4
MW-10D	"	17:15		1	"	1	1			1		1					1		3	-5
B-15	"	17:40		1	"	1	1			1		1					1		3	-6
ENEA MW-1	10/20/95	9:30		1	"	1	1			1		1					1		3	-7
																		TOTAL NUMBER OF CONTAINERS	21	

RELINQUISHED BY: (Signature/Name) John R. Cimbricz — DATE/TIME 15:20 10/20/95

RECEIVED BY: (Signature/Name) Bill Rogers

RELINQUISHED BY: (Signature/Name) Bill Rogers — DATE/TIME 10:20 4/10

RECEIVED BY: (Signature/Name) Kimberly Emy

RELINQUISHED BY: (Signature/Name) Kimberly Emy — DATE/TIME 10/20/95 6:00

RECEIVED BY: (Signature/Name)

RELINQUISHED BY: (Signature/Name)

DATE/TIME

RECEIVED BY: (Signature/Name)

SAMPLES SHIPPED VIA:
FEDEX ☐ UPS ☐ AIRBORNE ☐
HAND ☐ AIRFREIGHT ☐ _____ ☐

SHIPPED BY: (Signature/Name)

AIRBILL #:

COURIER: (Signature/Name)

RECEIVED FOR BY: (Signature/Name)

DATE/TIME

LAB:

G9510408 PAGE 2 of 2

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

Chain of Custody Record

SAMPLING REQUIREMENTS: RCRA ☐ NPDES ☐ SDWA ☐ _____ ☐

WRITTEN QC REPORT
ROUTINE QC ☒
RWQCB QC ☐

TURNAROUND TIME:
SAME DAY ☐ 24hr ☐ 48hr ☐ NORMAL ☒

PROJECT NO.: 1233

PROJECT NAME: Montgomery Ward-Dublin

SAMPLER (Signature with Printed Name): John R. Cimbricz

PROJECT MANAGER: Frank Muramoto

SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION	CONTR TYPE: GLASS	PLASTIC	BRASS/SS TUBE	ANALYSES REQUESTED: TPH-D 8015M	TPH-G 8015M	TRPH 418.1	BTEX 8020	VOC 8240	EOC 8270	OIL & GREASE	CAM METALS TOT WET	LEAD	HVOC 8010	NUMBER OF CONTAINERS	REMARKS	
EWEA MW-3	10/19/95	9:50		1	Water	1	1			1		1					1		3	One 1-liter Plastic Bottle (Lead) Two 40-mL VOA Vials (TPH/BTEX)	-8
EWEA MW-4	11	10:00		1	11	1	1			1		1					1		3		-9
EWEA MW-2	11	10:15		1	11	1	1			1		1					1		3		-10
MW-101	11	11:23		1	11	1	1			1		1					1		3		-11
Effluent	11	11:45		1	11	1	1			1		1					1		3		-12

TOTAL NUMBER OF CONTAINERS: 15

RELINQUISHED BY: (Signature/Name) John R. Cimbricz — DATE/TIME: 10/20/95 15:20
RECEIVED BY: (Signature/Name) Bill Rogers
RELINQUISHED BY: (Signature/Name) Bill Rogers — DATE/TIME: 10-20-95 4:10
RECEIVED BY: (Signature/Name) Kimberly Emig

RELINQUISHED BY: (Signature/Name) Kimberly Emig — DATE/TIME: 10/20/95 6:00
RECEIVED BY: (Signature/Name)
RELINQUISHED BY: (Signature/Name)
DATE/TIME
RECEIVED BY: (Signature/Name)

SAMPLES SHIPPED VIA:
FEDEX ☐ UPS ☐ AIRBORNE ☐
HAND ☐ AIRFREIGHT ☐ _____ ☐

SHIPPED BY: (Signature/Name)
AIRBILL #:
COURIER: (Signature/Name)
RECEIVED FOR BY: (Signature/Name)
DATE/TIME
LAB:

APPENDIX C: LABORATORY REPORTS

ANALYTICAL REPORT

B C Analytical

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

NOV - 6 1995

LOG NO: G95-10-408

Received: 20 OCT 95

Mailed: NOV 1 1995

Mr. Frank Muramoto
Environmental Audit
1000 A Ortega Way
Placentia, California 92670

Project: 1233

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
10-408-1	B-12	19 OCT 95
10-408-2	B-5	19 OCT 95
10-408-3	B-10	19 OCT 95
10-408-4	B-16	19 OCT 95
10-408-5	MW-100	19 OCT 95

PARAMETER	10-408-1	10-408-2	10-408-3	10-408-4	10-408-5
Lead (7421), mg/L	<0.002	0.0042	<0.002	<0.002	<0.002
Furnace Digestion (3020), Date	10/30/95	10/30/95	10/30/95	10/30/95	10/30/95
TPH (8015M.TX)					
Date Analyzed	10/27/95	10/27/95	10/27/95	10/27/95	10/27/95
Dilution Factor, Times	1	5	1	1	1
Benzene, ug/L	16	27	3.9	4.1	<0.5
Toluene, ug/L	13	15	1.5	<0.5	<0.5
Ethylbenzene, ug/L	81	210	74	22	72
Methyl-tert-butylether, ug/L	<10	<50	13	<10	15
Total Xylene Isomers, ug/L	180	530	170	100	27
Carbon Range, .	C6-C12	C6-C12	C6-C12	C6-C12	C6-C12
TPH (Gasoline Range), ug/L	1400	3400	1900	810	2200
Surrogates **					
a,a,a-Trifluorotoluene Rep., ug/L	52.7	269	54.7	54.0	59.7
a,a,a-Trifluorotoluene Th., ug/L	50.0	250	50.0	50.0	50.0

B C Analytical

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

LOG NO: G95-10-408

Received: 20 OCT 95

Mr. Frank Muramoto
Environmental Audit
1000 A Ortega Way
Placentia, California 92670

Project: 1233

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
10-408-6	B-15	19 OCT 95
10-408-7	EWEA MW-1	20 OCT 95
10-408-8	EWEA MW-3	20 OCT 95
10-408-9	EWEA MW-4	20 OCT 95
10-408-10	EWEA MW-2	20 OCT 95

PARAMETER	10-408-6	10-408-7	10-408-8	10-408-9	10-408-10
Lead (7421), mg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Furnace Digestion (3020), Date	10/30/95	10/30/95	10/30/95	10/30/95	10/30/95
TPH (8015M.TX)					
Date Analyzed	10/27/95	10/27/95	10/27/95	10/28/95	10/28/95
Dilution Factor, Times	1	1	1	1	1
Benzene, ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene, ug/L	<0.5	2.2	<0.5	<0.5	<0.5
Ethylbenzene, ug/L	<0.5	22	1.7	<0.5	<0.5
Methyl-tert-butylether, ug/L	<10	23	<10	<10	<10
Total Xylene Isomers, ug/L	<0.5	3.6	<0.5	<0.5	<0.5
Carbon Range, .	C6-C12	C6-C12	C6-C12	C6-C12	C6-C12
TPH (Gasoline Range), ug/L	<50	1700	730	<50	<50
Surrogates **					
a,a,a-Trifluorotoluene Rep., ug/L	51.6	58.6	57.2	53.1	52.6
a,a,a-Trifluorotoluene Th., ug/L	50.0	50.0	50.0	50.0	50.0

B C Analytical

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

LOG NO: G95-10-408

Received: 20 OCT 95

Mr. Frank Muramoto
Environmental Audit
1000 A Ortega Way
Placentia, California 92670

Project: 1233

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
10-408-11	MW-101	20 OCT 95
10-408-12	Effluent	20 OCT 95

PARAMETER	10-408-11	10-408-12
Lead (7421), mg/L	<0.002	<0.002
Furnace Digestion (3020), Date	10/30/95	10/30/95
TPH (8015M.TX)		
Date Analyzed	10/28/95	10/28/95
Dilution Factor, Times	1	1
Benzene, ug/L	<0.5	<0.5
Toluene, ug/L	<0.5	<0.5
Ethylbenzene, ug/L	<0.5	<0.5
Methyl-tert-butylether, ug/L	<10	<10
Total Xylene Isomers, ug/L	<0.5	<0.5
Carbon Range, .	C6-C12	C6-C12
TPH (Gasoline Range), ug/L	<50	<50
Surrogates **		
a,a,a-Trifluorotoluene Rep., ug/L	53.7	53.7
a,a,a-Trifluorotoluene Th., ug/L	50.0	50.0

B C Analytical

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

LOG NO: G95-10-408

Received: 20 OCT 95

Mr. Frank Muramoto
Environmental Audit
1000 A Ortega Way
Placentia, California 92670

Project: 1233

REPORT OF ANALYTICAL RESULTS

Jane Freemyer, Program Manager

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
9510408*1	B-12	PB,GFA	10.30.95	7421	534-04	951892	7396
		GAS.BTX.TESNC	10.27.95	8015M.TX	536-23	955142	8559
		DIG,AQ,GFA	10.30.95	3020		951892	7093
9510408*2	B-5	PB,GFA	10.30.95	7421	534-04	951892	7396
		GAS.BTX.TESNC	10.27.95	8015M.TX	536-23	955142	8559
		DIG,AQ,GFA	10.30.95	3020		951892	7093
9510408*3	B-10	PB,GFA	10.30.95	7421	534-04	951892	7396
		GAS.BTX.TESNC	10.27.95	8015M.TX	536-23	955142	8559
		DIG,AQ,GFA	10.30.95	3020		951892	7093
9510408*4	B-16	PB,GFA	10.30.95	7421	534-04	951892	7396
		GAS.BTX.TESNC	10.27.95	8015M.TX	536-23	955142	8559
		DIG,AQ,GFA	10.30.95	3020		951892	7093
9510408*5	MW-100	PB,GFA	10.30.95	7421	534-04	951892	7396
		GAS.BTX.TESNC	10.27.95	8015M.TX	536-23	955142	8559
		DIG,AQ,GFA	10.30.95	3020		951892	7093
9510408*6	B-15	PB,GFA	10.30.95	7421	534-04	951892	7396
		GAS.BTX.TESNC	10.27.95	8015M.TX	536-23	955142	8559
		DIG,AQ,GFA	10.30.95	3020		951892	7093
9510408*7	EWEA MW-1	PB,GFA	10.30.95	7421	534-04	951892	7396
		GAS.BTX.TESNC	10.27.95	8015M.TX	536-23	955142	8559
		DIG,AQ,GFA	10.30.95	3020		951892	7093
9510408*8	EWEA MW-3	PB,GFA	10.30.95	7421	534-04	951892	7396
		GAS.BTX.TESNC	10.27.95	8015M.TX	536-23	955142	8559
		DIG,AQ,GFA	10.30.95	3020		951892	7093
9510408*9	EWEA MW-4	PB,GFA	10.30.95	7421	534-04	951892	7396
		GAS.BTX.TESNC	10.28.95	8015M.TX	536-23	955142	8559
		DIG,AQ,GFA	10.30.95	3020		951892	7093
9510408*10	EWEA MW-2	PB,GFA	10.30.95	7421	534-04	951892	7396
		GAS.BTX.TESNC	10.28.95	8015M.TX	536-23	955142	8559
		DIG,AQ,GFA	10.30.95	3020		951892	7093
9510408*11	MW-101	PB,GFA	10.30.95	7421	534-04	951892	7396
		GAS.BTX.TESNC	10.28.95	8015M.TX	536-23	955142	8559
		DIG,AQ,GFA	10.30.95	3020		951892	7093
9510408*12	Effluent	PB,GFA	10.30.95	7421	534-04	951892	7396
		GAS.BTX.TESNC	10.28.95	8015M.TX	536-23	955142	8559
		DIG,AQ,GFA	10.30.95	3020		951892	7093

**

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 G9510408

DATE REPORTED : 11/01/95

LABORATORY CONTROL STANDARDS
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER		DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
1. Lead	C5103789*1	10.30.95	951892	0.0453	0.0500	mg/L	91
2. Lead	C5103790*1	10.30.95	951892	0.0457	0.0500	mg/L	91
3. BTEX/TPH	C5103670*1						
Date Analyzed		10.27.95	955142	10/27/95	10/27/95	Date	N/A
Benzene		10.27.95	955142	14.6	15.2	ug/L	96
Toluene		10.27.95	955142	94.4	97.4	ug/L	97
Ethylbenzene		10.27.95	955142	20.3	20.4	ug/L	100
Total Xylene Isomers		10.27.95	955142	122	119	ug/L	103
TPH (Gasoline Range)		10.27.95	955142	1160	1100	ug/L	105
a,a,a-Trifluorotoluene Rep.		10.27.95	955142	60.5	50.0	ug/L	121 Q
a,a,a-Trifluorotoluene Th.		10.27.95	955142	50.0	50.0	ug/L	100

BC ANALYTICAL

ORDER QC REPORT FOR G9510408

DATE REPORTED : 11/01/95

ADDITIONAL LCS PRECISION (DUPLICATES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	LC1 RESULT	LC2 RESULT	UNIT	RELATIVE % DIFF
1. Lead		10.30.95	951892	0.0453	0.0457	mg/L	1

BC ANALYTICAL

ORDER QC REPORT FOR G9510408

DATE REPORTED : 11/01/95

MATRIX QC PRECISION (DUPLICATE SPIKES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS RESULT	MSD RESULT	UNIT	RELATIVE % DIFF
1. Lead	9510408*1	10.30.95	951892	0.0198	0.0194	mg/L	2
2. TPH	9510383*1						
Date Analyzed		10.27.95	955142	10/27/95	10/27/95	Date	N/A
Benzene		10.27.95	955142	13.7	13.9	ug/L	1
Toluene		10.27.95	955142	89.9	88.5	ug/L	2
Ethylbenzene		10.27.95	955142	18.9	18.9	ug/L	0
Total Xylene Isomers		10.27.95	955142	115	115	ug/L	0
TPH (Gasoline Range)		10.27.95	955142	1140	1180	ug/L	3
a,a,a-Trifluorotoluene Rep.		10.27.95	955142	58.8	58.7	ug/L	0
a,a,a-Trifluorotoluene Th.		10.27.95	955142	50.0	50.0	ug/L	0

BC ANALYTICAL

ORDER QC REPORT FOR G9510408

DATE REPORTED : 11/01/95

MATRIX QC ACCURACY (SPIKES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS %		MSD %		TRUE RESULT	UNIT	
1. Lead	9510408*1	10.30.95	951892	99		97		0.0200	mg/L	
2. TPH	9510383*1									
Benzene		10.27.95	955142	90		91		15.2	ug/L	
Toluene		10.27.95	955142	92		91		97.4	ug/L	
Ethylbenzene		10.27.95	955142	93		93		20.4	ug/L	
Total Xylene Isomers		10.27.95	955142	97		97		119	ug/L	
TPH (Gasoline Range)		10.27.95	955142	104		107		1100	ug/L	
a,a,a-Trifluorotoluene Rep.		10.27.95	955142	118	Q	117		50.0	ug/L	Q
a,a,a-Trifluorotoluene Th.		10.27.95	955142	100		100		50.0	ug/L	

BC ANALYTICAL

ORDER QC REPORT FOR G9510408

DATE REPORTED : 11/01/95

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	B5102127*1	10.30.95	951892	0	0.002	mg/L	239.2
2. BTEX/TPH	B5102061*1						
Date Analyzed		10.27.95	955142	10/27/95	NA	Date	8015M
Benzene		10.27.95	955142	0	0.3	ug/L	8015M
Toluene		10.27.95	955142	0	0.3	ug/L	8015M
Ethylbenzene		10.27.95	955142	0	0.3	ug/L	8015M
Total Xylene Isomers		10.27.95	955142	0	0.6	ug/L	8015M
TPH (Gasoline Range)		10.27.95	955142	0	100	ug/L	8015M
a,a,a-Trifluorotoluene Rep.		10.27.95	955142	50.8	0.5	ug/L	8015M
a,a,a-Trifluorotoluene Th.		10.27.95	955142	50.0	NA	ug/L	8015M

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6777

StID 1054

April 25, 1996

Mr. Edward Leonhardt
Environmental Audit, Inc
1000A Ortega Way
Placentia, CA 92670-7125

RE: Use of ORC in Groundwater Monitoring Wells

Dear Mr. Leonhardt:

I have received information from Regenesis, who developed the Oxygen Release Compound (ORC) remediation technology, that it is not recommended to purge monitoring wells with ORC prior to sampling. Purging would remove dissolved oxygen, thus defeating the purpose of using ORC.

Future sampling should discontinue purging of wells B5 and B12. Analysis for MTBE may also be discontinued at this time.

If you have any questions, I can be reached at (510) 567-6762.

eva chu
Hazardous Materials Specialist

c: Ed Koberstein, Montgomery Ward Inc, 1331 South Harbor Blvd.
Fullerton, CA 92632
files

mtgmry.4

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.

REGISTERED PROFESSIONAL ENGINEER
EDWARD H. LEONHARDT
C.E. 24274
12/31/97
CIVIL
STATE OF CALIFORNIA

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

ENVIRONMENTAL AUDIT, INC. ®

Planning, Environmental Analyses and Hazardous
Substances Management and Remediation

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

TABLE OF CONTENTS

JRC:WORD:1233M96A

1.0 INTRODUCTION

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

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 in future

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

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

The water level is 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

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

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

JRC WORD:1233M96A

TABLES

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

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

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

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
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
MW-101					
	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
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

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

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 [1]		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

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)

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 [1]	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)

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)

Compounds	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Lead	MTBE
Well B-5							
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
Well B-10							
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
Well B-12							
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)

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
Well B-15							
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
Well B-16							
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
Well MW-100							
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)

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	15
01-12-96	1400	ND	ND	43	19	ND	ND
Well MW-101							
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
Well MW-102							
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 [1]	NS	NS	NS	NS	NS	NS	NS
01-12-96	1500	ND	ND	0.68	ND	ND	ND
ENEA MW-1							
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
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
ENEA MW-2							
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
ENEA MW-3							
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
ENEA MW-4							
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 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
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
ENEA MW-2							
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
ENEA MW-3							
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
ENEA MW-4							
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

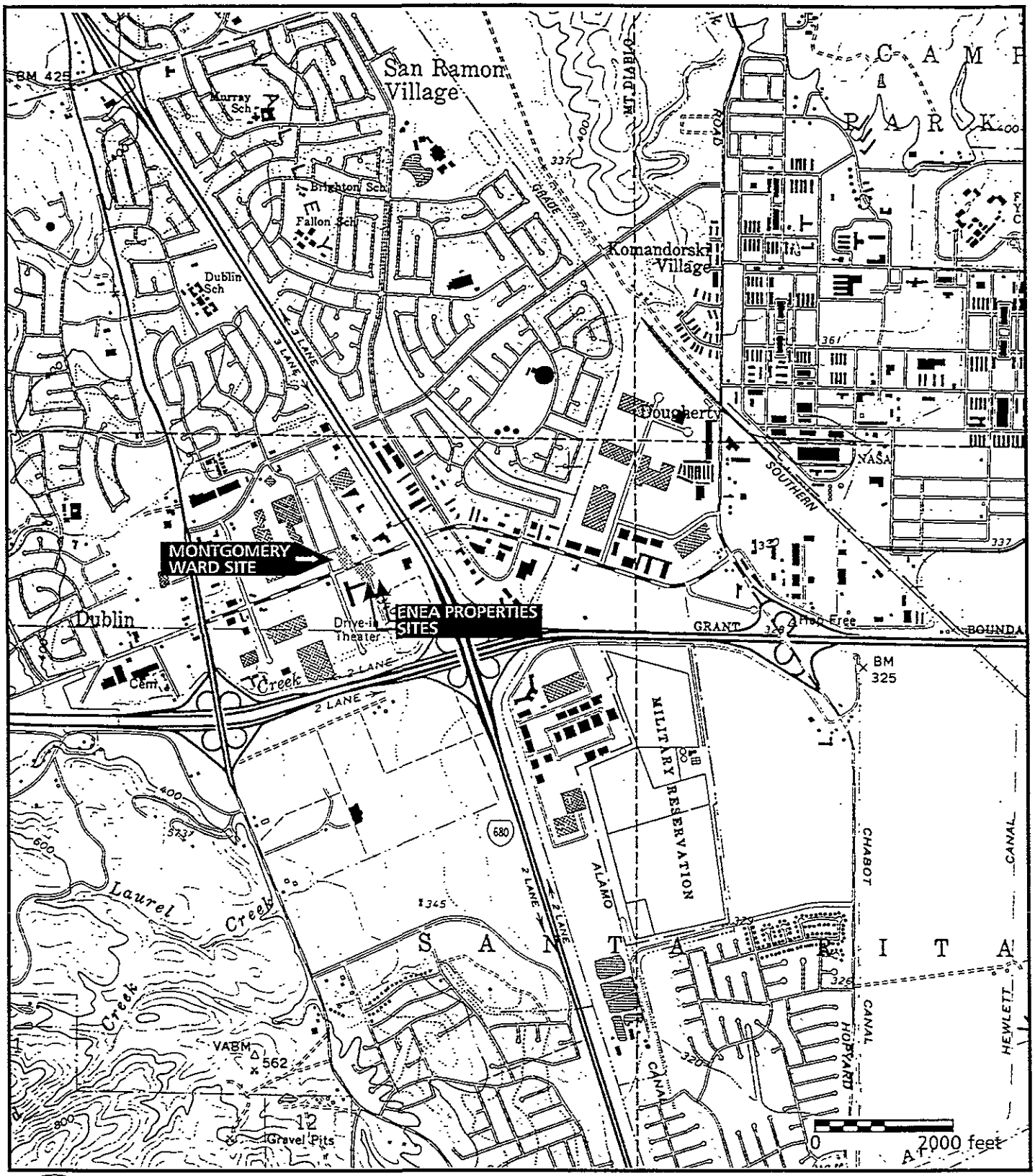
Parameter	pH	Nitrate (ppm)	Nitrite (ppm)	Ammonium (ppm)	Phosphate (ppm)	GME	SME	%BIO
Well B-5								
10-20-95	NA	NA	NA	NA	NA	2.4	0.23	9.6
01-12-96	NA	NA	NA	NA	NA	0.88	0.05	5.7
Well B-10								
10-20-95	NA	NA	NA	NA	NA	13	0.02	1.5
01-12-96	NA	NA	NA	NA	NA	1.6	0.04	2.5
Well B-12								
10-20-95	6.9	2.6	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) $X10^5$/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) $X\ 10^5$/ml)
%BIO-Percent Biodegraders

DTP.1233:BIOLRES.DOC

FIGURES



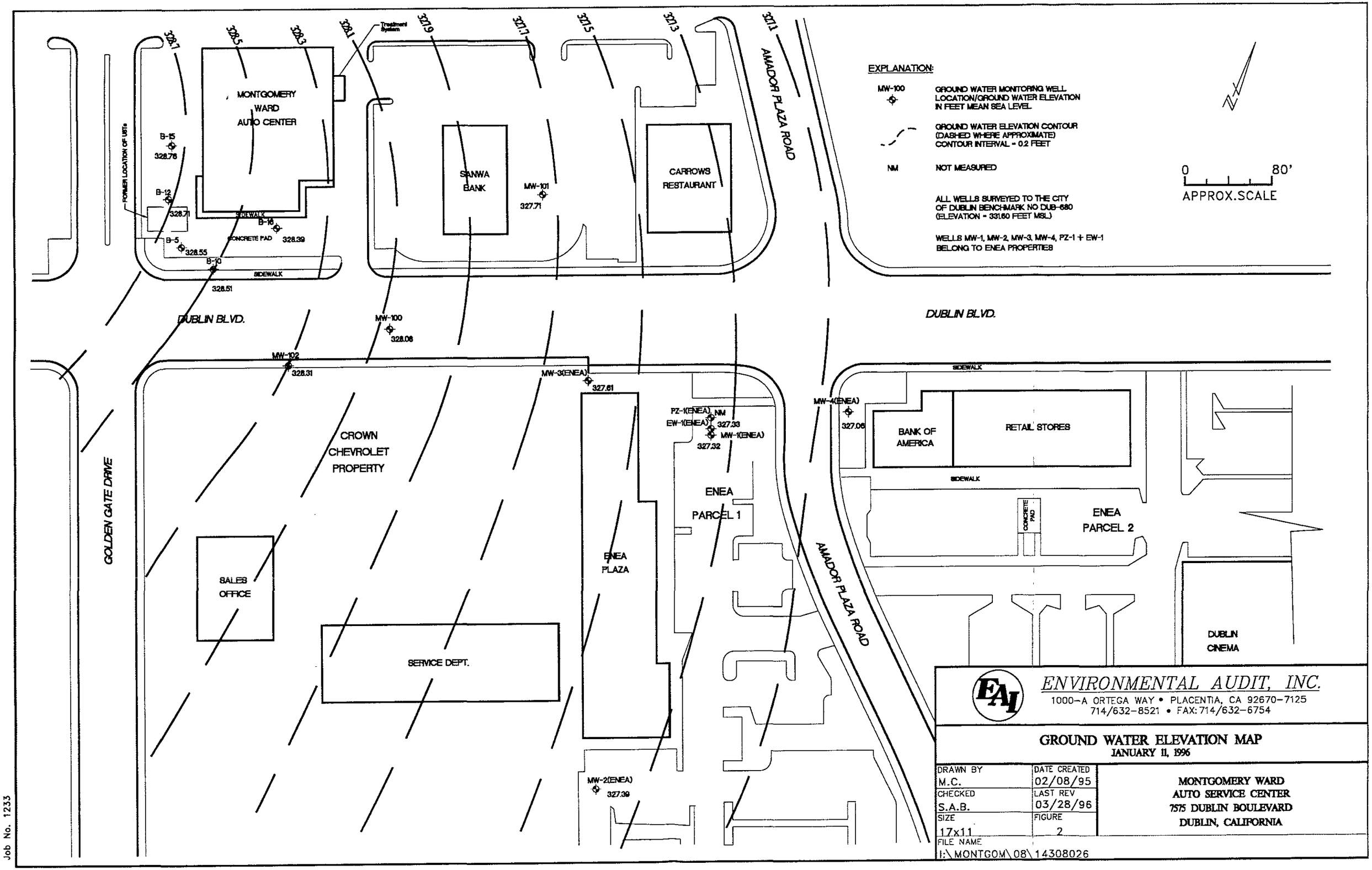
Environmental Audit, Inc.

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

SOURCE: USGS TOPOGRAPHIC 7.5 MINUTE SERIES
DUBLIN, CALIFORNIA QUADRANGLE

Figure 1

Project No. 1233
K:\1233\1233-LM.CDR

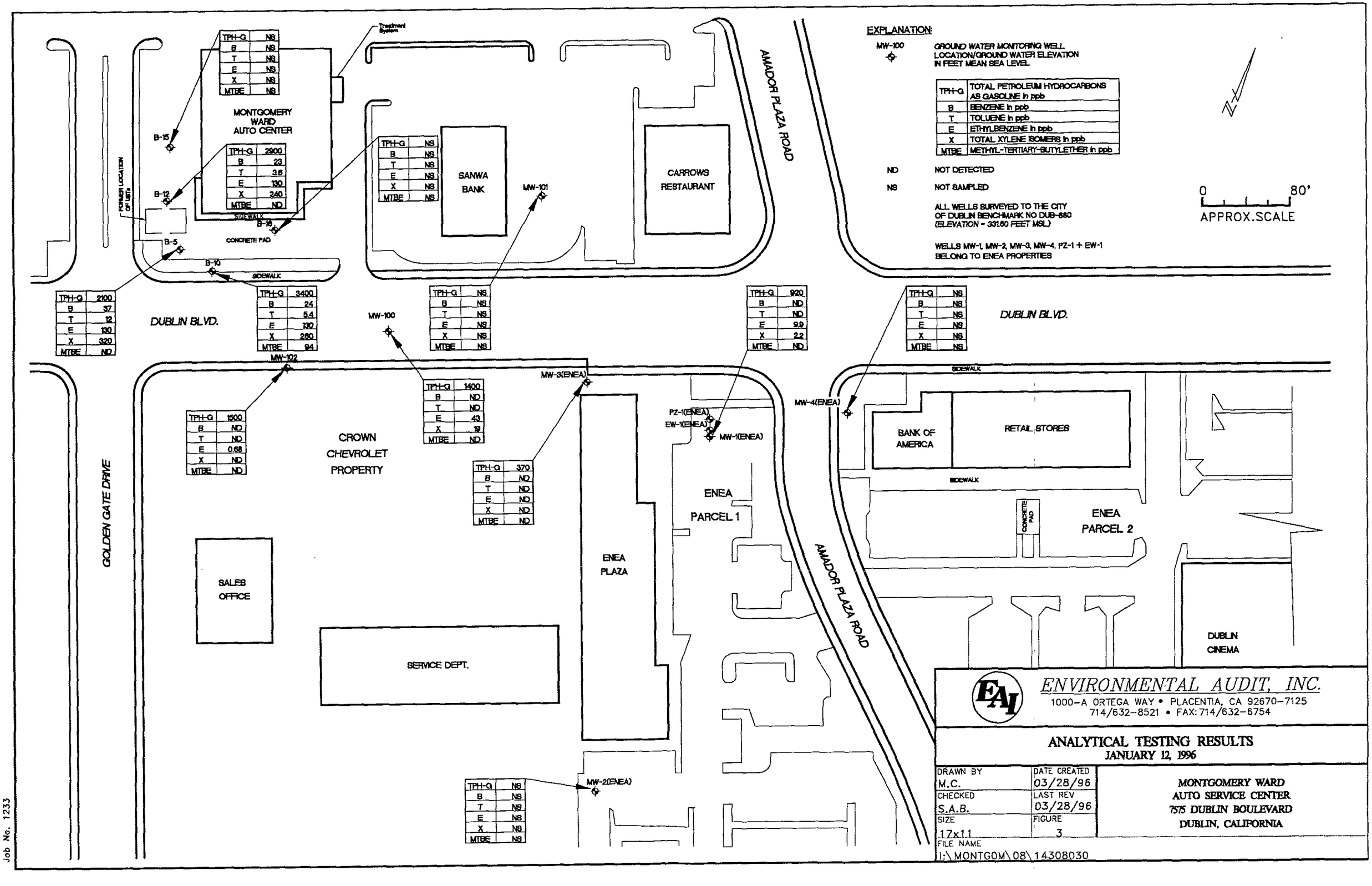


ENVIRONMENTAL AUDIT, INC.
1000-A ORTEGA WAY • PLACENTIA, CA 92670-7125
714/632-8521 • FAX: 714/632-6754

GROUND WATER ELEVATION MAP
JANUARY 11, 1996

DRAWN BY M.C.	DATE CREATED 02/08/95	MONTGOMERY WARD AUTO SERVICE CENTER 7575 DUBLIN BOULEVARD DUBLIN, CALIFORNIA
CHECKED S.A.B.	LAST REV 03/28/96	
SIZE 17x11	FIGURE 2	
FILE NAME I:\MONTGOM\08\14308026		

Job No. 1233



Job No. 1233

ENVIRONMENTAL AUDIT, INC.

1000-A ORTEGA WAY • PLACENTIA, CA 92670-7125
714/632-8521 • FAX: 714/632-6754

ANALYTICAL TESTING RESULTS
JANUARY 12, 1996

DRAWN BY	DATE CREATED
M.C.	03/28/96
CHECKED	LAST REV
S.A.B.	03/28/96
SIZE	FIGURE
17x11	3

FILE NAME
I:\MONTGOM\08\14308030

MONTGOMERY WARD
AUTO SERVICE CENTER
7575 DUBLIN BOULEVARD
DUBLIN, CALIFORNIA

APPENDIX A: GROUND WATER SAMPLING LOG FORMS

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:	-12196
PROJECT NO.:	1233
CLIENT:	Montgomery Ward, Dublin
WELL NO.:	3-5
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)				
21.23	−	11.50	=	—	=	9.73	x .16 (WELL VOLUME FACTOR)	= 1.56 (ONE CASING VOLUME OF WATER (GALLONS))

WELL VOLUME FACTORS

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

PURGE TIME (hrs.): START 7:25 STOP 7:31

METHOD: DOWN HOLE PUMP [x] DEDICATED PUMP [ ] BAILER [ ] OTHER [ ]

TYPE/MODEL: Whale Supersub 921

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) x 10 [3]	pH	TURBIDITY (NTU)	DISSOLVED OXYGEN	REMARKS
1.5	54.2	1.08	8.06	16.8		
3	58.1	1.19	7.71	9.12		
4.5	60.8	1.22	7.50	8.14		
6	62.3	1.24	7.34	8.78		

WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.): 8:20

METHOD: DOWN HOLE PUMP [ ] DEDICATED PUMP [ ] BAILER [x] 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 96
PROJECT NO.:	1233
CLIENT:	Montgomery Ward, Dublin
WELL NO.:	G-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)				
70	—	11.19		—	→	8.81	.16	1.41
							X WELL VOLUME VOLUME FACTOR	= ONE CASING VOLUME OF WATER (GALLONS)

WELL VOLUME FACTORS

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

PURGE TIME (hrs.): START 7:40 STOP 7:50

METHOD: DOWN HOLE PUMP [x] DEDICATED PUMP [ ] BAILER [ ] OTHER [ ]

TYPE/MODEL: Whale Supersub 921

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) x 10-3	pH	TURBIDITY (NTU)	DISSOLVED OXYGEN	REMARKS
1.5	60.9	1.16	7.14	164.3		
3	61.5	1.11	7.13	101.3		
4.5	63.9	1.19	7.12	66.5		
6	64.1	1.19	7.10	31.6		

WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.): 8:25

METHOD: DOWN HOLE PUMP [ ] DEDICATED PUMP [ ] BAILER [x] 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:	1/12/96
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.)		DEPTH TO WATER LEVEL (ft. bgs)		DEPTH TO FREE PRODUCT (ft. bgs)				
NM	—	10.39		—		NM	9.18	NM
							X WELL VOLUME VOLUME FACTOR	= ONE CASING VOLUME OF WATER (GALLONS)

WELL VOLUME FACTORS

WELL CASING ID (inches)	VOLUME FACTOR
2.0	0.16
4.0	0.65
6.0 (15)	1.47 9.18

PURGE TIME (hrs.): START 8:55 STOP 9:25

METHOD: DOWN HOLE PUMP [X] 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
10	50.0	3.44×10^2	7.37	3.91		
20	52.1	5.60×10^2	7.37	4.14		
30	56.0	5.61×10^2	7.37	3.51		
40	60.5	7.88×10^2	7.24	2.66		
50	60.8	5.97×10^2	7.32	4.45		
60	62.1	6.03×10^2	7.32	3.63		
70	61.1	8.14×10^2	7.22	2.73		
80	62.6	8.15×10^2	7.22	2.28		
90	61.8	8.21×10^2	7.22	2.18		
100	60.7	8.54×10^2	7.21	2.37		
110	62.0	8.40×10^2	7.23	2.30		

WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.): 9:45

METHOD: DOWN HOLE PUMP [ ] DEDICATED PUMP [ ] BAILER [X] 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:	1/12/96
PROJECT NO.:	1233
CLIENT:	Montgomery Ward, Dublin
WELL NO.:	MW-130
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.): 28.0 — DEPTH TO WATER LEVEL (ft. bgs): 11.53 → 16.47

DEPTH TO FREE PRODUCT (ft. bgs): —

16.47 x WELL VOLUME FACTOR: .65 = ONE CASING VOLUME OF WATER (GALLONS): 10.70

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

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 ☐	pH	TURBIDITY (NTU)	DISSOLVED OXYGEN	REMARKS
5	74.0	1.04×10^3	7.35	20.2		
10	64.6	1.22×10^3	7.25	6.17		
15	65.2	1.19×10^3	7.19	5.22		
20	64.8	1.22×10^3	7.13	6.34		
25	65.6	1.23×10^3	7.22	7.64		
30	65.8	1.21×10^3	7.16	4.90		
35	64.8	1.21×10^3	7.28	4.03		
40	64.7	1.20×10^3	7.35	3.91		
45	65.0	1.21×10^3	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

☎ (714) 632 - 8521
FAX (714) 632 - 6754

DATE:	1/12/96
PROJECT NO.:	1233
CLIENT:	Montgomery Ward, Dublin
WELL NO.:	MW-7
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.): 26.8 — DEPTH TO WATER LEVEL (ft. bgs): 10.13 → 16.67

DEPTH TO FREE PRODUCT (ft. bgs): —

16.67 x .65 (WELL VOLUME VOLUME FACTOR) = 10.84 (ONE CASING VOLUME OF WATER (GALLONS))

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

PURGE TIME (hrs.): START 10:28 STOP 10:53

METHOD: DOWN HOLE PUMP [x] DEDICATED PUMP [ ] BAILER [ ] OTHER [ ]

TYPE/MODEL: Whale Supersub 921

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) x 10[3]	pH	TURBIDITY (NTU)	DISSOLVED OXYGEN	REMARKS
5	58.1	1.11	7.60	7.71		
10	62.6	1.19	7.26	4.23		
15	64.6	1.23	7.19	5.31		
20	65.6	1.24	7.16	2.89		
25	65.8	1.23	7.22	4.21		
30	64.8	1.24	7.23	2.20		
35	65.3	1.24	7.24	1.50		
40	64.9	1.23	7.24	1.83		
45	64.8	1.23	7.22	1.26		

WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.): 11:15

METHOD: DOWN HOLE PUMP [ ] DEDICATED PUMP [ ] BAILER [x] 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 96
PROJECT NO.:	1233
CLIENT:	Montgomery Ward, Dublin
WELL NO.:	ENE- MW-1
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)				
15.10	−	8.52	→	6.58	X	.65	=	4.28
						WELL VOLUME VOLUME FACTOR		ONE CASING VOLUME OF WATER (GALLONS)

WELL VOLUME FACTORS

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

PURGE TIME (hrs.): START 11:40 STOP 11:57

METHOD: DOWN HOLE PUMP [X] DEDICATED PUMP [ ] BAILER [ ] OTHER [ ]

TYPE/MODEL: Whale Supersub 921

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) x 10 [3]	pH	TURBIDITY (NTU)	DISSOLVED OXYGEN	REMARKS
5	60.1	1.13	7.92	4.36		
10	63.8	1.25	7.46	2.47		
15	64.1	1.28	7.16	2.82		
20	64.0	1.28	7.11	1.81		

WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.): 12:05

METHOD: DOWN HOLE PUMP [ ] DEDICATED PUMP [ ] BAILER [X] 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 96
PROJECT NO.:	1233
CLIENT:	Montgomery Ward, Dublin
WELL NO.:	EWA MW-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)				
15.10	—	9.32		—	=	5.78	x .65 (WELL VOLUME FACTOR)	= 3.76 (ONE CASING VOLUME OF WATER (GALLONS))

WELL VOLUME FACTORS

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

PURGE TIME (hrs.): START 11:43 STOP 11:58

METHOD: DOWN HOLE PUMP [x] 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	63.1	1.00×10^3	7.27	10.88		
10	62.1	9.24×10^2	7.26	6.05		
15	62.6	9.47×10^2	7.28	5.83		

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

G9601218 PAGE 1 of 1

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

Chain of Custody Record

SAMPLING REQUIREMENTS: RCRA ☐ NPDES ☐ SDWA ☐ _____ ☐

WRITTEN QC REPORT
ROUTINE QC ☒
RWQCB QC ☐

TURNAROUND TIME:
SAME DAY ☐ 24hr ☐ 48hr ☐ NORMAL ☒

PROJECT NO.	PROJECT NAME
1233	Montgomery Ward-Dublin

SAMPLER (Signature with Printed Name): John R. Cabrera

PROJECT MANAGER: Ed Leonhardt

SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION	GLASS	PLASTIC	BRASS/SS TUBE	TPH-D 8015M	TPH-G 8015M	TRPH 418.1	BTEX 8020	VOC 8240	EOC 8270	OIL & GREASE	CAM METALS TOT WET	LEAD	HVOC 8010	NUMBER OF CONTAINERS	REMARKS
B-12	1/12/96	9:45		/	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 MW-3	1/12/96	12:15		/	"	/	/			/		/					/		3	-7

TOTAL NUMBER OF CONTAINERS: 21

RELINQUISHED BY: (Signature/Name) John Cabrera
RELINQUISHED BY: (Signature/Name)
DATE/TIME: 1/12/96 13:15
DATE/TIME: 1/15/96 0700

RECEIVED BY: (Signature/Name)
RECEIVED BY: (Signature/Name)

SHIPPED BY: (Signature/Name)
AIRBILL #:

RELINQUISHED BY: (Signature/Name)
COURIER: (Signature/Name)

DATE/TIME
DATE/TIME

RECEIVED BY: (Signature/Name)
RECEIVED BY: (Signature/Name)

RECEIVED FOR BY: (Signature/Name)
LAB:
DATE/TIME

SAMPLES SHIPPED VIA:
FEDEX ☐ UPS ☐ AIRBORNE ☐
HAND ☐ AIRFREIGHT ☐ _____ ☐

ANALYTICAL REPORT

B C Analytical

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

AMENDED REPORT

LOG NO: G96-01-218

Received: 12 JAN 96
Mailed : 24 JAN 96

RECEIVED

FEB - 1996

ENVIRONMENTAL AUDIT

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

Project: 1233

REPORT OF ANALYTICAL RESULTS

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
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

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

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

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

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

Jane Freemyer, Laboratory Director

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

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

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

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

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	88	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

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

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