

12-185 - 03

# ENVIRONMENTAL AUDIT, INC.

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

714/632-8521 • FAX: 714/632-6754

12-185-03 3/21 AM 9:09

- ① Has GW extraction continued since shut down in early January? Yes back in operation mid Feb  
② Submit WP to advances BS to delineate extent of soil contour and flows to determine if overexcavation will be necessary.  
③ Analyze for TPH - BTEX

March 10, 1995

Project No. 1233

Ms. Eva Chu  
Hazardous Materials Specialist  
Alameda County Health Care Services  
Department of Environmental Health  
State Water Resources Control Board  
Division of Clean Water Programs  
UST Local Oversight Program  
80 Swan Way, #200  
Oakland, CA 94621

**RE: FIRST 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, First Quarter 1995, Montgomery Ward Auto Service Center, 7575 Dublin Boulevard, Dublin, California," dated March 10, 1995.

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

Sincerely,

ENVIRONMENTAL AUDIT, INC.

John R. Cimbricz  
Environmental Specialist

Frank S. Muramoto

FRANK S. MURAMOTO  
No. 4248  
REGISTERED GEOLOGIST  
STATE OF CALIFORNIA

JRC:FSM:SAB:jc

enclosure

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

JRC WORD 1233M95A

ENVIRONMENTAL  
AUDIT

SUMMER 21 AM 8:09

## QUARTERLY GROUND WATER MONITORING REPORT

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

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March 10, 1995

Project No. 1233

Prepared for:

### **Montgomery Ward**

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



**ENVIRONMENTAL AUDIT, INC.**®

Planning, Environmental Analyses and Hazardous  
Substances Management and Remediation

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## 1.0 INTRODUCTION

This document constitutes the first 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 January 18, 1995, Environmental Audit, Inc. obtained ground water depth measurements from the wells associated with the site and the Enea Properties using an Marine Moisture Control Company interface probe accurate to 0.01 feet. No free-product was detected in the wells during gauging activities. The measured water levels were converted 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 January 18 and 19, 1995, ground water samples were obtained from the wells for analytical testing. 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).

Since the System remained active during this quarter's monitoring event, purging of well B-12 prior to sampling was unnecessary. Well B-12 was sampled prior to sampling well B-5, and all other 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. 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 two 40-milliliter (ml) VOA vials with Teflon septa lined lids and in one-liter plastic bottles. 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 frozen

blue ice. The samples were chilled until delivered to the laboratory for analytical testing. All samples were logged on a chain of custody record form (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 six 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 period's testing. The laboratory reports are contained in Appendix C.

## **4.0 SYSTEM OPERATION/MAINTENANCE**

During the fourth quarter 1994, the ground water treatment system was inspected and routine maintenance of the system was undertaken once every two weeks or more often if required. Maintenance included replacement of bag filters due to plugging with particulate matter and spent carbon units with new 180-pound carbon units. Change out of the spent carbon units occurred on October 21 and December 2, 1994. The system was temporarily shut-down after completion of the first quarter 1995 ground water monitoring activities pending replacement and disposal of spent carbon units.

Table 3 presents the effluent flowmeter reading for the period from October 4, 1994 through January 3, 1995. Approximately 575,560 gallons of treated ground water were discharged into the Dublin-San Ramon Water Service Districts sanitary sewerage system during the October 4, 1994 through January 18, 1995 period. This discharge volume computes into an average ground water extraction rate during the fourth quarter of approximately 3.77 gallons per minute.

During the October 4, 1994 through January 18, 1995 period, approximately 24 pounds of TPH-G and 0.446 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:FSM:SAB:jc

JRC:WORD:1233M95A

# **TABLES**

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

Page 1 of 4

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
B-10	339.70				
04/16/92		10.32	-	0.00	329.38
07/24/92		11.69	-	0.00	328.01
10/22/92		12.67	-	0.00	327.03
01/15/93		09.48	-	0.00	330.22
04/15/93		09.49	-	0.00	330.21
05/14/93		09.87	-	0.00	329.83
07/14/93		10.64	-	0.00	329.06
10/14/93		11.80	-	0.00	327.90
01/13/94		11.94	-	0.00	327.76
04/04/94		11.00	-	0.00	328.70
07/05/94		12.08	-	0.00	327.62
10/04/94		12.69	-	0.00	327.01
01/18/95		09.89	-	0.00	329.81
B-12	339.10				
04/16/92		09.95	-	0.00	329.15
07/24/92		11.57	-	0.00	327.53
10/22/92		12.82	-	0.00	326.28
01/15/93		08.66	-	0.00	330.44
04/15/93		08.70	-	0.00	330.40
05/14/93		09.32	-	0.00	329.78
07/14/93		09.95	-	0.00	329.15
10/14/93		10.94	-	0.00	328.16
01/13/94		11.28	-	0.00	327.82

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

Page 2 of 4

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)
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
<b>B-15</b>					
	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
<b>B-16</b>					
	339.82				
04/16/92		10.63	-	0.00	329.19
07/24/92		11.90	-	0.00	327.92
10/22/92		12.88	-	0.00	326.94
01/15/93		09.79	-	0.00	330.03
04/15/93		09.83	-	0.00	329.99
05/14/93		10.20	-	0.00	329.62
07/14/93		10.92	-	0.00	328.90
10/14/93		11.99	-	0.00	327.83
01/13/94		12.16	-	0.00	327.66
04/04/94		11.28	-	0.00	328.54
07/05/94		12.28	-	0.00	327.54
10/04/94		12.89	-	0.00	326.93
01/18/95		10.21	-	0.00	329.61
<b>MW-100</b>					
	339.61				
05/14/93		10.34	-	0.00	329.27
07/14/93		11.00	-	0.00	328.61
10/14/93		12.12	-	0.00	327.49
01/13/94		12.25	-	0.00	327.36

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

Page 3 of 4

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)
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
<b>MW-101</b>					
	338.54				
05/14/93		09.91	-	0.00	328.63
07/14/93		10.38	-	0.00	328.16
10/14/93		11.30	-	0.00	327.24
01/13/94		11.21	-	0.00	327.33
04/04/94		10.69	-	0.00	327.85
07/05/94		11.39	-	0.00	327.15
10/04/94		11.98	-	0.00	326.56
01/18/95		09.84	-	0.00	328.70
<b>MW-102</b>					
	339.23				
05/14/93		09.60	-	0.00	329.63
07/14/93		10.31	-	0.00	328.92
10/14/93		11.57	-	0.00	327.66
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
<b>ENEA MW-1</b>					
	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
<b>ENEA MW-2</b>					
	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

**TABLE 1**  
**GROUND WATER ELEVATIONS**

Montgomery Ward Auto Service Center  
 Enea Properties  
 Dublin, California

Page 4 of 4

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		07.01	-	0.00	328.60
<b>ENEA MW-3</b>					
	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
<b>ENEA MW-4</b>					
	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
<b>ENEA EW-1</b>					
	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
<b>NOTES:</b>					
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)

Page 1 of 4

Compounds	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Lead
<b>Well B-5</b>						
04-16-92	4400	670	160	280	320	ND
07-24-92	31000	5400	2600	2200	5800	ND
10-22-92	9100	1100	190	520	740	ND
01-15-93	2300	530	160	300	470	7.9
04-15-93	4900	600	160	470	390	ND
07-14-93	8800	590	210	840	1100	9.9
10-14-93	4500	530	46	490	350	ND
01-13-94	120	15	1.9	12	11	ND
04-04-94	5700	450	39	350	400	ND
07-05-94	2200	69	13	150	95	ND
10-03-94	4700	190	38	510	570	ND
01-18-95	2200	53	27	120	280	ND
<b>Well B-10</b>						
04-16-92	7300	1400	640	880	1100	ND
07-24-92	27000	3800	1600	2000	4000	ND
10-22-92	16000	2300	340	1100	1200	ND
01-15-93	10000	1400	310	730	1100	13
04-15-93	8100	580	270	810	580	19
07-14-93	6400	840	120	750	800	7.1
10-14-93	100000	720	120	930	1100	ND
01-13-94	18000	990	180	1300	2400	ND
04-04-94	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
<b>Well B-12</b>						
04-16-92	12000	1300	1100	510	1200	ND
07-24-92	12000	1000	630	520	1000	ND
10-22-92	11000	370	230	400	940	ND
01-15-93	120	2.8	ND	1.6	3.6	11
04-15-93	7100	730	240	350	570	ND
07-14-93	4500	540	97	380	610	ND
10-14-93	11000	710	170	650	1600	ND
01-13-94	6000	330	100	330	620	24
04-04-94	8700	350	58	350	660	ND
07-05-94	8800	250	340	370	920	ND
10-03-94	1300	63	42	110	140	ND
01-18-95	5000	93	65	190	510	ND
<b>Well B-15</b>						
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

**TABLE 2**  
**ANALYTICAL TESTING RESULTS**  
Montgomery Ward Auto Service Center  
ENEA Properties  
Dublin, California  
Parts per billion (ppb)

Page 2 of 4

Compounds	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Lead
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
<b>Well B-16</b>						
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
<b>Well MW-100</b>						
05-13-93	13000	83	ND	960	820	NA
07-14-93	13000	32	ND	1400	790	8
10-14-93	7500	48	16	900	520	22
01-13-94	7000	51	ND	590	330	ND
04-04-94	9800	69	ND	540	410	ND
07-05-94	5900	31	8.7	190	190	ND
10-03-94	3900	ND	ND	220	200	ND
01-18-95	3700	48	31	190	120	2.8
<b>Well MW-101</b>						
05-13-93	ND	ND	ND	ND	ND	NA
07-14-93	ND	ND	ND	ND	ND	11
10-14-93	ND	0.65	0.89	ND	1.1	ND
01-13-94	ND	ND	ND	ND	ND	28
04-04-94	ND	ND	ND	ND	ND	ND
07-05-94	ND	ND	ND	ND	ND	ND
10-03-94	ND	ND	ND	ND	ND	ND
01-18-95	ND	ND	ND	ND	ND	2.6

**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	Page 3 of 4
<b>Well MW-102</b>							
05-13-93	3600	17	ND	130	63	NA	
07-14-93	1500	13	ND	64	4.9	ND	
10-14-93	24000	9.6	5.2	60	60	ND	
01-13-94	2000	22	ND	26	55	ND	
04-04-94	2100	16	2.5	15	35	ND	
07-05-94	1300	7	2.9	10	23	ND	
10-03-94	620	5.1	ND	5.2	11	ND	
01-18-95	440	ND	ND	3.0	5.3	3.7	
<b>EFFLUENT</b>							
04-15-93	ND	ND	ND	ND	ND	ND	
07-14-93	ND	ND	ND	ND	ND	ND	
10-14-93	ND	ND	ND	ND	0.97	48	
01-13-94	ND	ND	ND	ND	ND	ND	
04-04-94	ND	ND	ND	ND	ND	33	
07-05-94	ND	ND	ND	ND	ND	ND	
10-03-94	ND	ND	ND	ND	ND	ND	
01-18-95	ND	ND	ND	ND	ND	ND	
<b>ENEA MW-1</b>							
10-14-93	5700	76	19	160	460	ND	
04-04-94	7000	27	ND	260	49	ND	
07-05-94	5100	23	ND	260	50	ND	
10-03-94	4400	8.1	ND	170	50	ND	
01-18-95	2000	7.1	2.4	47	5.5	2.2	
<b>ENEA MW-2</b>							
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	
<b>ENEA MW-3</b>							
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	
<b>ENEA MW-4</b>							
04-04-94	ND	ND	ND	ND	ND	23	
07-05-94	ND	ND	0.5	ND	0.62	ND	

**TABLE 2**  
**ANALYTICAL TESTING RESULTS**  
Montgomery Ward Auto Service Center  
ENEA Properties  
Dublin, California  
Parts per billion (ppb)

Page 4 of 4

Compounds	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Lead
10-03-94	ND	ND	ND	ND	ND	ND
01-18-95	ND	ND	0.87	ND	ND	7.2

NOTE:

ND	Not Detected
NA	Not Analyzed

DTP:1233:ANALYTIC.DOC

**TABLE 3**

**FLOW METER READINGS**  
Montgomery Ward Auto Service Center  
Dublin, California

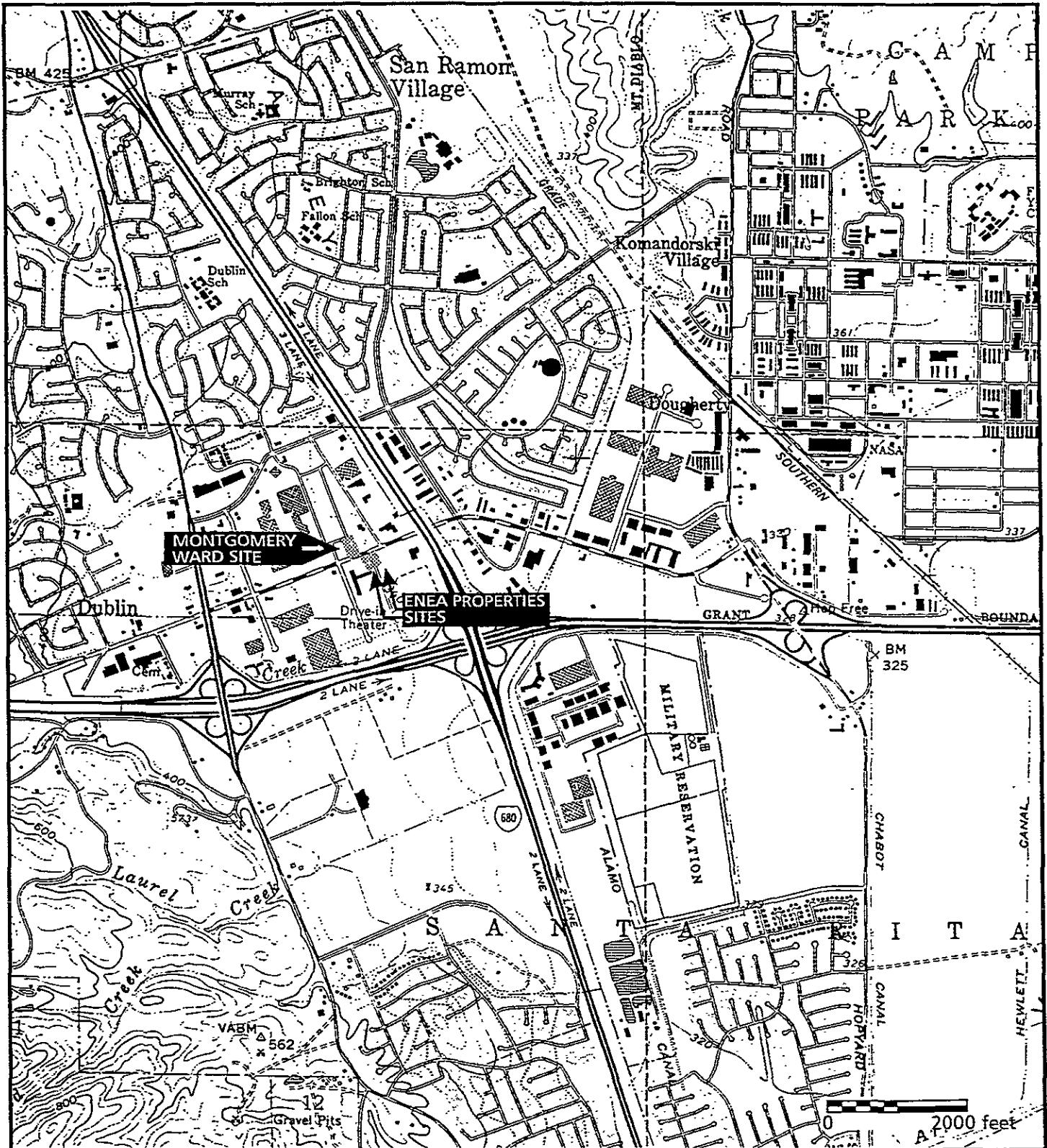
DATE	FLOW METER READING (in gallons)	AVERAGE GPM
04/15/94	402,210	
04/22/94	458,320	5.57
04/26/94	488,950	5.32
05/03/94	491,750	0.28
05/20/94	639,200	6.02
06/03/94	759,790	5.98
06/29/94	941,580	4.86
07/06/94	999,750	5.77
07/12/94	999,906	0.02
07/19/94	1,006,600	0.66
07/22/94	1,032,828	6.07
08/02/94	1,102,920	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	3.73
AVERAGE		3.98

VOLUME SINCE 04/15/1994 = 1,592,460 Gal

GPM- Gallons per minute

JRC:WORD:1233FLOW

# **FIGURES**



Environmental Audit, Inc.

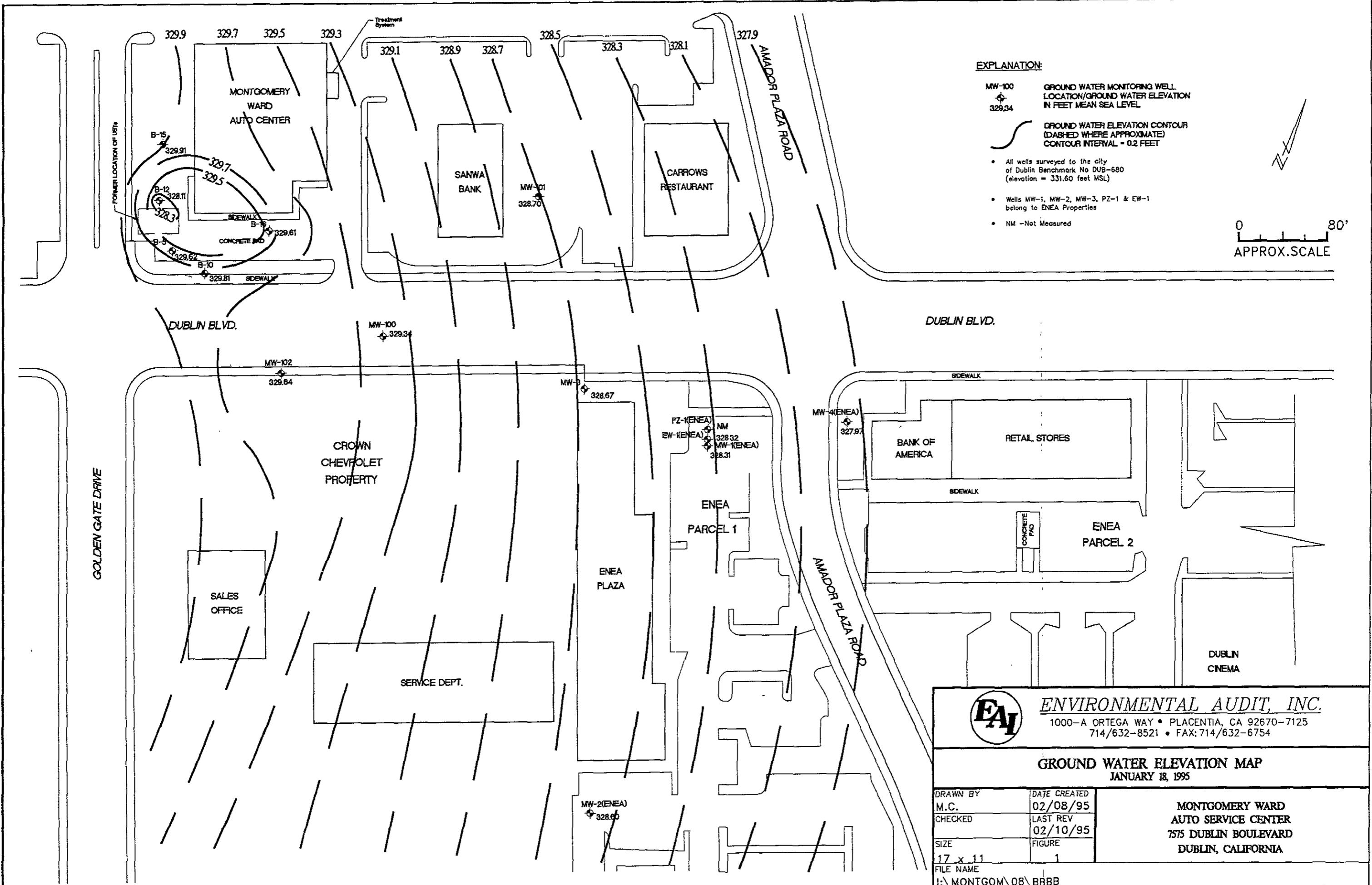
**LOCATION MAP**  
**Montgomery Ward Auto Service Center**  
**Enea Properties**  
**Dublin, California**

SOURCE: USGS TOPOGRAPHIC 7.5 MINUTE SERIES  
DUBLIN, CALIFORNIA QUADRANGLE

**Project No.**

Figure 1

Project No. 1233  
KU1233-1233-LM-003



Job No. 1233

# **APPENDICES**

## **APPENDIX A**





# **GROUND WATER Sampling Log**



# ENVIRONMENTAL AUDIT, INC.

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

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

DATE:	1/19 195
PROJECT NO.:	1233
CLIENT:	Montgomery Ward, Dublin
WELL NO.:	B-15
WELL DIAMETER (INCHES):	4"
SAMPLED BY:	CPD KJC

# **WELL PURGING INFORMATION**

ONE CASING VOLUME OF WATER CALCULATED USING THE FOLLOWING:

**TOTAL DEPTH OF  
WELL (ft.)**

**DEPTH TO WATER  
LEVEL (ft. bgs)**

DEPTH TO FREE  
PRODUCT (ft. bgs)

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

**PURGETIME (hrs.).**

START

STOP

METHOD: DOWN HOLE PUMP  DEDICATED PUMP  BAILER  OTHER

**TYPE/MODEL:**

Whale Supersub 921

# **WELL SAMPLING INFORMATION**

**TIMESAMPLED (hrs.):**

12430

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

(714) 632-6754

DATE:	1/18 /95
PROJECTNO.:	1233
CLIENT:	Montgomery Ward, Dublin
WELL NO.:	B-16
WELLDIAMETER(INCHES):	4"
SAMPLED BY:	(PD) JC

## WELL PURGING INFORMATION

ONE CASING VOLUME OF WATER CALCULATED USING THE FOLLOWING:

TOTAL DEPTH OF WELL (ft.):

23.35

DEPTH TO WATER LEVEL (ft. bgs)

10.21

DEPTH TO FREE PRODUCT (ft. bgs)

—

### WELL VOLUME FACTORS

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

PURGE TIME (hrs.):

START

16:13

STOP

16:35

→

13.14

X

0.65

 WELL VOLUME  
VOLUME FACTOR

8.54

 ONE CASING  
VOLUME OF WATER (GALLONS)

 METHOD: DOWN HOLE PUMP  DEDICATED PUMP  BAILER  OTHER 

TYPE/MODEL:

Whale Supersub 921

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) $\times 10^2$	pH	TURBIDITY (NTU)	REMARKS
5	65.1	8.27	6.54	30.8	
10	64.3	8.68	6.65	3.24	
15	65.4	8.82	6.64	1.81	
20	63.4	8.79	6.63	0.98	
25	64.4	8.84	6.64	0.89	
30	64.7	8.85	6.63	0.69	

## WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.):

19:10

 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

(714) 632 - 6754

DATE:	1/18 /95
PROJECT NO.:	1233
CLIENT:	Montgomery Ward, Dublin
WELL NO.:	MW-100
WELL DIAMETER (INCHES):	4"
SAMPLED BY:	CPD (A-H)

## 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	10.27	—

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

→ 11.73 X 0.65 = 11.52

WELL VOLUME  
VOLUME FACTOR

ONE Casing  
VOLUME OF WATER (GALLONS)

PURGE TIME (hrs.): START 16:30 STOP 16:50

METHOD: DOWN HOLE PUMP  DEDICATED PUMP  BAILER  OTHER

TYPE/MODEL: Whale Supersub 921

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) × 10³	pH	TURBIDITY (NTU)	REMARKS
5	64.0	8.38 × 10²	6.58	3.40	
10	64.8	8.63 × 10²	6.57	3.65	
15	65.1	8.80 × 10²	6.60	3.43	
20	61.3	8.48 × 10²	6.64	2.66	
25	60.7	8.47 × 10²	6.67	2.41	
30	62.9	8.44 × 10²	6.55	2.07	
35	63.7	8.76 × 10²	6.61	1.99	
40	64.4	8.70 × 10²	6.54	1.60	
45	64.4	8.80 × 10²	6.55	1.38	

## WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.): 19:20

METHOD: DOWN HOLE PUMP  DEDICATED PUMP  BAILER  OTHER

TYPE/MODEL: Voss Technologies Disposable

COMMENTS:

# **GROUND WATER Sampling Log**



# ENVIRONMENTAL AUDIT, INC.

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

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

DATE:	1/19 195
PROJECT NO.:	1233
CLIENT:	Montgomery Ward, Dublin
WELL NO.:	MW-101
WELL DIAMETER (INCHES):	4"
SAMPLED BY:	(PD) 152

# **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<sup>3</sup>)

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 10/19

STOP

11.80  
ONECASING  
VOLUME OF WATER (GALLONS)

#### METHOD: DOW

METHOD: DOWN HOLE PUMP  DEDICATED PUMP  BAIL

## DEDICATED PUMP

BAILER

**OTHER**

**TYPE/MODEL:**

**Whale Supersub 921**

## **WELL SAMPLING INFORMATION**

**TIME SAMPLED (hrs.):**

1110

METHOD: DOWN HOLE PUMP  DEDICATED PUMP  BAILER  OTHER

**TYPE/MODEL:** Voss Technologies Disposable

COMMENTS: PH meter did not have reading

# 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  
    (714) 632 - 6754

DATE:	1/18/95
PROJECT NO.:	1233
CLIENT:	Montgomery Ward, Dublin
WELL NO.:	MW-102
WELL DIAMETER (INCHES):	4"
SAMPLED BY:	OPD (AH)

## 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	9.59	—

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



18.41

X

0.65

11.97

=

ONE CASING VOLUME OF WATER (GALLONS)

PURGE TIME (hrs.):      START      15:35      STOP      16:05

METHOD: DOWN HOLE PUMP  DEDICATED PUMP  BAILER  OTHER

TYPE/MODEL:      Whale Supersub 921

GALLONS PURGED	TEMP (°F)	CONDUCTIVITY (Micro-ohms/cm) $\times 10^3$	pH	TURBIDITY (NTU)	REMARKS
5	67.2	$8.20 \times 10^2$	6.72	14.20	
10	66.9	$8.21 \times 10^2$	6.65	1.94	
15	66.1	$8.04 \times 10^2$	6.65	1.90	
20	66.1	$8.26 \times 10^2$	6.76	3.10	
25	65.5	$8.21 \times 10^2$	6.73	2.32	
30	64.9	$8.20 \times 10^2$	6.71	2.09	
35	64.3	$8.16 \times 10^2$	6.72	1.55	
40	63.9	$8.15 \times 10^2$	6.71	1.41	
45	63.6	$8.15 \times 10^2$	6.69	2.06	

## WELL SAMPLING INFORMATION

TIME SAMPLED (hrs.):      19:00

METHOD: DOWN HOLE PUMP  DEDICATED PUMP  BAILER  OTHER

TYPE/MODEL:      Voss Technologies Disposable

COMMENTS: \_\_\_\_\_

# **GROUND WATER Sampling Log**



# **ENVIRONMENTAL AUDIT, INC.**

---

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

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

DATE:	1/15/95
PROJECT NO.:	1233
CLIENT:	Montgomery Ward, Dublin
WELL NO.:	EWEA MLI
WELLDIAMETER (INCHES):	4"
SAMPLED BY:	(PD) 150

# **WELL PURGING INFORMATION**

ONE CASING VOLUME OF WATER CALCULATED USING THE FOLLOWING:

**TOTAL DEPTH OF  
WELL (ft.)**

DEPTH TO WATER  
LEVEL (ft. bgs)

**DEPTH TO FREE  
PRODUCT (ft. bgs)**

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

PURGETIME(hrs.):

**START**

17:20

STOP

17:34

### METHOD: DOW

**WholeSupersub921**

## **WELL SAMPLING INFORMATION**

**TIME SAMPLED (hrs.):**

19:50

## METHOD: DOWN HOLE PUMP

#### **DEDICATED PUMP**

**BAILER**

**OTHER**

TYPE/MODEL :

Voss Technologies Disposable

**COMMENTS:**







## **APPENDIX B**



# 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	CONTR TYPE	ANALYSES REQUESTED										REMARKS		
			GLASS	PLASTIC	BRASS/SS TUBE	TPH-D 8015M	TPH-G 8015M	TPH-H 418.1	BTEX 8020	VOC 8240	EOC 8270	OIL & GREASE	CAM METALS TOT WET		
B-10	11/18/95 18:25	GRAB	Water	/	/	/	/	/	/	/	/	/	/	3	One 1-Liter Plastic Bottle (lead) Two 40-ml VOA Vials (BTEX/TPH)
B-5	" 18:50	GRAB	"	/	/	/	/	/	/	/	/	/	/	3	
MW-102	" 19:00	GRAB	"	/	/	/	/	/	/	/	/	/	/	3	
B-16	" 19:10	GRAB	"	/	/	/	/	/	/	/	/	/	/	3	
MW-100	" 19:20	GRAB	"	/	/	/	/	/	/	/	/	/	/	3	
ENEA MW-3	" 19:40	GRAB	"	/	/	/	/	/	/	/	/	/	/	3	
ENEA mw-1	" 19:50	GRAB	"	/	/	/	/	/	/	/	/	/	/	3	

TOTAL NUMBER  
OF CONTAINERS 21

RELINQUISHED BY: (Signature/Name) <i>John R. Cimberiz</i>	DATE/TIME 11/19/95 12:30	RECEIVED BY: (Signature/Name) <i>John R. Cimberiz</i>	RELINQUISHED BY: (Signature/Name) <i>John R. Cimberiz</i>	DATE/TIME 11/19/95 12:30	RECEIVED BY: (Signature/Name) <i>John R. Cimberiz</i>
RELINQUISHED BY: (Signature/Name) <i>John R. Cimberiz</i>	DATE/TIME 11/19/95 5:25	RECEIVED BY: (Signature/Name) <i>John R. Cimberiz</i>	RELINQUISHED BY: (Signature/Name) <i>John R. Cimberiz</i>	DATE/TIME 11/20/95 1:00	RECEIVED BY: (Signature/Name) <i>John R. Cimberiz</i>
SAMPLES SHIPPED VIA: FEDEX <input type="checkbox"/> UPS <input type="checkbox"/> AIRBORNE <input type="checkbox"/> HAND <input checked="" type="checkbox"/> AIRFREIGHT <input type="checkbox"/>	AIRBILL #:	SHIPPED BY: (Signature/Name) <i>John R. Cimberiz</i>	COURIER: (Signature/Name) <i>John R. Cimberiz</i>	RECEIVED FOR BY: (Signature/Name) <i>X</i>	DATE/TIME
				LAB: BC Analytical	



# 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 <input checked="" type="checkbox"/> RWQCB QC <input type="checkbox"/>	TURNAROUND TIME: SAME DAY <input type="checkbox"/> 24hr <input type="checkbox"/> 48hr <input type="checkbox"/> NORMAL <input checked="" type="checkbox"/>
--	--

PROJECT NO. 1233	PROJECT NAME Montgomery Ward, Dublin	CONTR TYPE	ANALYSES REQUESTED												REMARKS						
			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	H-VOC
SAMPLE NUMBER	DATE	TIME	CMP	GRAB	SAMPLE DESCRIPTION												NUMBER OF CONTAINERS				
EWEA mw-4	1/18/95	20:00			Water												3			One 1-Liter Plastic Bottle (lead) Two 40-ml VOA Vials (BTEX/TPH)	
EWEA mw-2	1/19/95	10:10			" "												3			Sample vials labeled mw-3	
MW-101	1/19/95	11:10			" "												3				
Effluent	1/19/95	11:30			" "												3				
B-15	1/19/95	12:30			" "												3				
B-12	1/19/95	12:40			" "												3				

RELINQUISHED BY: [Signature/Name] <i>Jill C. G.</i>	DATE/TIME 1/19/95 12:50	RECEIVED BY: [Signature/Name] <i>K. J. Johnson</i>	RELINQUISHED BY: [Signature/Name] <i>X</i>	DATE/TIME 1/19/95 2:00	RECEIVED BY: [Signature/Name] <i>B. C. Analytical</i>
RELINQUISHED BY: [Signature/Name] <i>Bill Segars</i>	DATE/TIME 1/19/95 5:25	RECEIVED BY: [Signature/Name] <i>J. W. W.</i>	RELINQUISHED BY: [Signature/Name] <i>X</i>	DATE/TIME 1/20/95 1:00	RECEIVED BY: [Signature/Name]
SAMPLES SHIPPED VIA: FEDEX <input type="checkbox"/> UPS <input type="checkbox"/> AIRBORNE <input type="checkbox"/> HAND <input checked="" type="checkbox"/> AIRFREIGHT <input type="checkbox"/>	AIRBILL #: _____	SHIPPED BY: [Signature/Name] <i>J. W. W.</i>	COURIER: [Signature/Name] <i>J. W. W.</i>	RECEIVED FOR BY: [Signature/Name] <i>X</i>	DATE/TIME
				LAB: BC Analytical	

## **APPENDIX C**

# ANALYTICAL REPORT

**B C Analytical**

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

LOG NO: G95-01-333

Received: 19 JAN 95  
Mailed : 06 FEB 95

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

Project: 1233

## REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	01-333-1	01-333-2	01-333-3
DATE SAMPLED	18 JAN 95	18 JAN 95	18 JAN 95
SAMPLE DESCRIPTION	B-10	B-5	MW-102
AQUEOUS			
Lead (7421/239.2), mg/L	0.0029	<0.002	0.0037
Furnace Digestion (3020), Date	01/24/95	01/24/95	01/24/95
TPH-gas/BTEX (CADHS/8020)			
Date Analyzed	01/26/95	01/26/95	01/26/95
Dilution Factor, Times	5	5	1
Benzene, ug/L	38	53	<0.5
Toluene, ug/L	28	27	<0.5
Ethylbenzene, ug/L	160	120	3.0
Total Xylene Isomers, ug/L	450	280	5.3
TPH (as Gasoline), ug/L	3300	2200	440

**BCA**

# B C Analytical

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

LOG NO: G95-01-333

Received: 19 JAN 95  
Mailed : 06 FEB 95

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

Project: 1233

## REPORT OF ANALYTICAL RESULTS

Page 2

LOG NO	01-333-4	01-333-5	01-333-6
DATE SAMPLED	18 JAN 95	18 JAN 95	18 JAN 95
SAMPLE DESCRIPTION	B-16	MW-100	EWEA MW-2
AQUEOUS			
Lead (7421/239.2), mg/L	0.0027	0.0028	0.0024
Furnace Digestion (3020), Date	01/24/95	01/24/95	01/24/95
TPH-gas/BTEX (CADHS/8020)			
Date Analyzed	01/26/95	01/26/95	01/26/95
Dilution Factor, Times	1	50	1
Benzene, ug/L	<0.5	48	<0.5
Toluene, ug/L	0.94	31	<0.5
Ethylbenzene, ug/L	<0.5	190	<0.5
Total Xylene Isomers, ug/L	1.3	120	<0.5
TPH (as Gasoline), ug/L	<50	3700	<50

BCA

# B C Analytical

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

LOG NO: G95-01-333

Received: 19 JAN 95  
Mailed : 06 FEB 95

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

Project: 1233

## REPORT OF ANALYTICAL RESULTS

Page 3

LOG NO	01-333-7	01-333-8	01-333-9
DATE SAMPLED	18 JAN 95	18 JAN 95	19 JAN 95
SAMPLE DESCRIPTION	EWEA MW-1	EWEA MW-4	EWEA MW-3
AQUEOUS			
Lead (7421/239.2), mg/L	0.0022	0.0072	0.0021
Furnace Digestion (3020), Date	01/24/95	01/24/95	01/24/95
TPH-gas/BTEX (CADHS/8020)			
Date Analyzed	01/26/95	01/26/95	01/26/95
Dilution Factor, Times	1	1	1
Benzene, ug/L	7.1	<0.5	5.1
Toluene, ug/L	2.4	0.87	1.6
Ethylbenzene, ug/L	47	<0.5	2.9
Total Xylene Isomers, ug/L	5.5	<0.5	18
TPH (as Gasoline), ug/L	2000	<50	2300

BCA

# B C Analytical

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

LOG NO: G95-01-333

Received: 19 JAN 95  
Mailed : 06 FEB 95

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

Project: 1233

## REPORT OF ANALYTICAL RESULTS

Page 4

LOG NO	01-333-10	01-333-11	01-333-12
DATE SAMPLED	19 JAN 95	19 JAN 95	19 JAN 95
SAMPLE DESCRIPTION	MW-101	Effluent	B-15
AQUEOUS			
Lead (7421/239.2), mg/L	0.0026	<0.002	<0.002
Furnace Digestion (3020), Date	01/24/95	01/24/95	01/24/95
TPH-gas/BTEX (CADHS/8020)			
Date Analyzed	01/26/95	01/26/95	01/26/95
Dilution Factor, Times	1	1	1
Benzene, ug/L	<0.5	<0.5	<0.5
Toluene, ug/L	<0.5	<0.5	0.69
Ethylbenzene, ug/L	<0.5	<0.5	<0.5
Total Xylene Isomers, ug/L	<0.5	<0.5	2.2
TPH (as Gasoline), ug/L	<50	<50	<50

BCA

# B C Analytical

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

LOG NO: G95-01-333

Received: 19 JAN 95  
Mailed : 06 FEB 95

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

Project: 1233

## REPORT OF ANALYTICAL RESULTS

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LOG NO 01-333-13

DATE SAMPLED 19 JAN 95  
SAMPLE DESCRIPTION B-12  
AQUEOUS

Lead (7421/239.2), mg/L <0.002

Furnace Digestion (3020), Date 01/24/95

TPH-gas/BTEX (CADHS/8020)

Date Analyzed 01/26/95

Dilution Factor, Times 1

Benzene, ug/L 93

Toluene, ug/L 65

Ethylbenzene, ug/L 190

Total Xylene Isomers, ug/L 510

TPH (as Gasoline), ug/L 5000

Amended Report: Samples EWEA MW-2 and EWEA MW-3  
were mistagged. These samples results have been  
amended.

M. Adriance 2/7/95

  
Mark A. Valentini, PhD, Laboratory Director

BCA

SAMPLES...		SAMPLE DESCRIPTION..	DETERM.....	DATE.....	METHOD.....	EQUIP.	BATCH..	ID.NO
					ANALYZED			
501333*1	8-10	PB,GFA DIG,AQ,GFA GAS.BTX.TESNC		01.24.95 7421 01.24.95 3020 01.26.95 8015M.TX		534-07 516-24 534-07	95132 957159 95132	7396 8658 7396
501333*2	B-5	PB,GFA DIG,AQ,GFA GAS.BTX.TESNC		01.24.95 7421 01.24.95 3020 01.26.95 8015M.TX		534-07 516-24 534-07	95132 957159 95132	7620 8658 7396
501333*3	MW-102	PB,GFA DIG,AQ,GFA GAS.BTX.TESNC		01.24.95 7421 01.24.95 3020 01.26.95 8015M.TX		534-07 516-24 534-07	95132 957159 95132	7620 8658 7396
501333*4	B-16	PB,GFA DIG,AQ,GFA GAS.BTX.TESNC		01.24.95 7421 01.24.95 3020 01.26.95 8015M.TX		534-07 516-24 534-07	95132 957159 95132	7396 8658 7396
501333*5	MW-100	PB,GFA DIG,AQ,GFA GAS.BTX.TESNC		01.24.95 7421 01.24.95 3020 01.26.95 8015M.TX		534-07 516-24 534-07	95132 957159 95132	7620 8658 7396
501333*6	EWEA MW-2	PB,GFA DIG,AQ,GFA GAS.BTX.TESNC		01.24.95 7421 01.24.95 3020 01.26.95 8015M.TX		534-07 516-24 534-07	95132 957159 95132	7620 8658 7396
501333*7	EWEA MW-1	PB,GFA DIG,AQ,GFA GAS.BTX.TESNC		01.24.95 7421 01.24.95 3020 01.26.95 8015M.TX		534-07 516-24 534-07	95132 957159 95132	7620 8658 7396
501333*8	EWEA MW-4	PB,GFA DIG,AQ,GFA GAS.BTX.TESNC		01.24.95 7421 01.24.95 3020 01.26.95 8015M.TX		534-07 516-24 534-07	95132 957159 95132	7620 8658 7396
501333*9	EWEA MW-3	PB,GFA DIG,AQ,GFA GAS.BTX.TESNC		01.24.95 7421 01.24.95 3020 01.26.95 8015M.TX		534-07 516-20 534-07	95132 958085 95132	7620 8658 7396
501333*10	MW-101	PB,GFA DIG,AQ,GFA GAS.BTX.TESNC		01.24.95 7421 01.24.95 3020 01.26.95 8015M.TX		534-07 516-20 534-07	95132 958085 95132	7620 8658 7396
501333*11	Effluent	PB,GFA DIG,AQ,GFA GAS.BTX.TESNC		01.25.95 7421 01.24.95 3020 01.26.95 8015M.TX		534-07 516-20 534-07	95132 958085 95132	7620 8658 7396
501333*12	B-15	PB,GFA DIG,AQ,GFA GAS.BTX.TESNC		01.25.95 7421 01.24.95 3020 01.26.95 8015M.TX		534-07 516-20 534-07	95132 958085 95132	7620 8658 7396
501333*13	B-12	PB,GFA DIG,AQ,GFA GAS.BTX.TESNC		01.25.95 7421 01.24.95 3020 01.26.95 8015M.TX		534-07 516-20 516-20	95132 958085 95132	7620 8658 7396

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 G9501333

DATE REPORTED : 02/06/95

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LABORATORY CONTROL STANDARDS  
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
Lead (7421/239.2) C5012193*1	01.25.95	95132	0.0466	0.0500	mg/L	93
TPH-gas/BTEX (CADHS/80 C5012649*1)						
Date Analyzed	01.26.95	957159	01/26/95	01/26/95	Date	N/A
Pentene	01.26.95	957159	14.1	12.5	ug/L	113
Toluene	01.26.95	957159	52.2	55.5	ug/L	94
Ethylbenzene	01.26.95	957159	13.3	12.5	ug/L	106
Total Xylene Isomers	01.26.95	957159	58.6	66.5	ug/L	88
TPH (as Gasoline)	01.26.95	957159	1090	1000	ug/L	109
TPH-gas/BTEX (CADHS/80 C5012247*1)						
Date Analyzed	01.26.95	958085	01/26/95	01/26/95	Date	N/A
Pentene	01.26.95	958085	15.4	12.5	ug/L	123
Toluene	01.26.95	958085	54.3	55.5	ug/L	98
Ethylbenzene	01.26.95	958085	12.4	12.5	ug/L	99
Total Xylene Isomers	01.26.95	958085	62.7	66.5	ug/L	94
TPH (as Gasoline)	01.26.95	958085	1030	1000	ug/L	103

## BC ANALYTICAL

## ORDER QC REPORT FOR G9501333

DATE REPORTED : 02/06/95

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MATRIX QC PRECISION (DUPLICATE SPIKES)  
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS RESULT	MSD RESULT	UNIT	RELATIVE % DIFF
1 Lead (7421/239.2)	9501315*1	01.24.95	95132	0.0213	0.0230	mg/L	8
2 TPH-gas/BTEX (CADHS/80	9501293*1						
Date Analyzed		01.26.95	957159	01/26/95	01/26/95	Date	N/A
Benzene		01.26.95	957159	14.7	14.9	ug/L	1
Toluene		01.26.95	957159	52.5	53.7	ug/L	2
Ethylbenzene		01.26.95	957159	13.6	13.9	ug/L	2
Total Xylene Isomers		01.26.95	957159	59.0	60.0	ug/L	2
TPH (as Gasoline)		01.26.95	957159	875	917	ug/L	5
3 TPH-gas/BTEX (CADHS/80	9501333*10						
Date Analyzed		01.27.95	958085	01/27/95	01/27/95	Date	N/A
Benzene		01.27.95	958085	14.8	14.8	ug/L	0
Toluene		01.27.95	958085	54.5	55.0	ug/L	1
Ethylbenzene		01.27.95	958085	12.3	12.1	ug/L	2
Total Xylene Isomers		01.27.95	958085	62.6	64.0	ug/L	2
TPH (as Gasoline)		01.27.95	958085	969	941	ug/L	3

BC ANALYTICAL  
ORDER QC REPORT FOR G9501333

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MATRIX QC ACCURACY (SPIKES)  
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS %	MSD %	TRUE RESULT	UNIT
1 Lead (7421/239.2)	9501315*1	01.24.95	95132	95	104	0.0223	mg/L
2 TPH-gas/BTEX (CADHS/80	9501293*1						
Benzene		01.26.95	957159	118	119	12.5	ug/L
Toluene		01.26.95	957159	92	95	56.7	ug/L
Ethylbenzene		01.26.95	957159	102	105	13.3	ug/L
Total Xylene Isomers		01.26.95	957159	87	89	67.6	ug/L
TPH (as Gasoline)		01.26.95	957159	88	92	1000	ug/L
3 TPH-gas/BTEX (CADHS/80	9501333*10						
Benzene		01.26.95	958085	118	118	12.5	ug/L
Toluene		01.26.95	958085	98	99	55.5	ug/L
Ethylbenzene		01.26.95	958085	98	97	12.5	ug/L
Total Xylene Isomers		01.26.95	958085	94	96	66.5	ug/L
TPH (as Gasoline)		01.26.95	958085	97	94	1000	ug/L

BC ANALYTICAL  
ORDER QC REPORT FOR G9501333

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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 (7421/239.2) B5011161*1	01.24.95	95132	0	0.002	mg/L	7421
2 TPH-gas/BTEX (CADHS/80 B5011416*1						
Date Analyzed	01.25.95	957159	01/25/95	NA	Date	8015M.TX
Benzene	01.25.95	957159	0.14	0.5	ug/L	8015M.TX
Toluene	01.25.95	957159	0.32	0.5	ug/L	8015M.TX
Ethylbenzene	01.25.95	957159	0.0	0.5	ug/L	8015M.TX
Total Xylene Isomers	01.25.95	957159	0.22	0.5	ug/L	8015M.TX
TPH (as Gasoline)	01.25.95	957159	8.3	50	ug/L	8015M.TX
TPH-gas/BTEX (CADHS/80 B5011471*1						
Date Analyzed	01.26.95	958085	01/26/95	NA	Date	8015M.TX
Benzene	01.26.95	958085	0	0.5	ug/L	8015M.TX
Toluene	01.26.95	958085	0	0.5	ug/L	8015M.TX
Ethylbenzene	01.26.95	958085	0	0.5	ug/L	8015M.TX
Total Xylene Isomers	01.26.95	958085	0	0.5	ug/L	8015M.TX
TPH (as Gasoline)	01.26.95	958085	34	50	ug/L	8015M.TX

## : SURROGATE RECOVERIES :

: BC ANALYTICAL : GLEN LAB : 13:16:59 06 FEB 1995 - P. 1 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
9501333*1							
8015M.TX <sub>a,a</sub> -Trifluorotoluene		957159	01/26/95	50.1	50.0	100	
9501333*2							
8015M.TX <sub>a,a</sub> -Trifluorotoluene		957159	01/26/95	46.7	50.0	93	
9501333*3							
8015M.TX <sub>a,a</sub> -Trifluorotoluene		957159	01/26/95	48.0	50.0	96	
9501333*4							
8015M.TX <sub>a,a</sub> -Trifluorotoluene		957159	01/26/95	43.9	50.0	88	
9501333*5							
8015M.TX <sub>a,a</sub> -Trifluorotoluene		957159	01/26/95	43.7	50.0	87	
9501333*6							
8015M.TX <sub>a,a</sub> -Trifluorotoluene		957159	01/26/95	44.2	50.0	88	
9501333*7							
8015M.TX <sub>a,a</sub> -Trifluorotoluene		957159	01/26/95	39.6	50.0	79	
9501333*8							
8015M.TX <sub>a,a</sub> -Trifluorotoluene		958085	01/26/95	47.2	50.0	94	
9501333*9							
8015M.TX <sub>a,a</sub> -Trifluorotoluene		958085	01/26/95	50.1	50.0	100	
9501333*10							
8015M.TX <sub>a,a</sub> -Trifluorotoluene		958085	01/26/95	45.3	50.0	91	
9501333*11							
8015M.TX <sub>a,a</sub> -Trifluorotoluene		958085	01/26/95	46.7	50.0	93	
9501333*12							
8015M.TX <sub>a,a</sub> -Trifluorotoluene		958085	01/26/95	46.4	50.0	93	
9501333*13							
8015M.TX <sub>a,a</sub> -Trifluorotoluene		958085	01/26/95	49.9	50.0	100	

: SURROGATE RECOVERIES :  
: BC ANALYTICAL : GLEN LAB : 13:17:03 06 FEB 1995 - P. 1 :  
=====

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
9501293*1*R1							
8015M.TXa,a,a-Trifluorotoluene		957159	01/26/95	43.7	50.0	87	
9501293*1*S1							
8015M.TXa,a,a-Trifluorotoluene		957159	01/26/95	67.2	50.0	134	
9501293*1*S2							
8015M.TXa,a,a-Trifluorotoluene		957159	01/26/95	57.2	50.0	114	
9501293*1*T							
8015M.TXa,a,a-Trifluorotoluene		957159	01/26/95	50.0	50.0	100	
9501333*10*R1							
8015M.TXa,a,a-Trifluorotoluene		958085	01/26/95	45.3	50.0	91	
9501333*10*S1							
8015M.TXa,a,a-Trifluorotoluene		958085	01/27/95	41.4	50.0	83	
9501333*10*S2							
8015M.TXa,a,a-Trifluorotoluene		958085	01/27/95	43.4	50.0	87	
9501333*10*T							
8015M.TXa,a,a-Trifluorotoluene		958085	01/27/95	50.0	50.0	100	
8011416*1*MB							
8015M.TXa,a,a-Trifluorotoluene		957159	01/25/95	45.3	50.0	91	
85011471*1*MB							
8015M.TXa,a,a-Trifluorotoluene		958085	01/26/95	46.0	50.0	92	
C5012247*1*LC							
8015M.TXa,a,a-Trifluorotoluene		958085	01/26/95	48.3	50.0	97	
85012247*1*LT							
8015M.TXa,a,a-Trifluorotoluene		958085	01/26/95	50.0	50.0	100	
8012649*1*LC							
8015M.TXa,a,a-Trifluorotoluene		957159	01/26/95	59.1	50.0	118	
8012649*1*LT							
8015M.TXa,a,a-Trifluorotoluene		957159	01/26/95	50.0	50.0	100	