



ENVIRONMENTAL AUDIT, INC.

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

714/632-8521 • FAX: 714/632-6754

January 8, 1993

Project No. 1233

Mr. Ravi Arulanantham
Alameda County Department of Environmental Health
80 Swan Way, #200
Oakland, CA 94621

**RE: QUARTERLY GROUND WATER MONITORING REPORT
Montgomery Ward Auto Service Center
7575 Dublin Boulevard, Dublin, CA**

Dear Mr. Arulanantham:

Enclosed herewith is a copy of our report titled "Quarterly Ground Water Monitoring Report, August 1992 through October 1992, Montgomery Ward Auto Service Center, 7575 Dublin Boulevard, Dublin, California", dated December 14, 1992.

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

Sincerely,

ENVIRONMENTAL AUDIT, INC.

Frank S. Muramoto, R.G.
Senior Geologist

FSM:SAB:ss

enclosure

cc: C. West, Montgomery Ward (w/enclosure)
P. Delk, Montgomery Ward (w/enclosure)
M. Gilmartin, Straw & Gilmartin (w/enclosure)
K. Pick, Alheimer & Gray (w/enclosure)

SAB:MWD5.6

**QUARTERLY GROUND WATER MONITORING REPORT
AUGUST 1992 THROUGH OCTOBER 1992
MONTGOMERY WARD AUTO SERVICE CENTER
7575 DUBLIN BOULEVARD
DUBLIN, CALIFORNIA**

Project No. 1233

December 14, 1992



ENVIRONMENTAL AUDIT, INC.

Planning, Environmental Analysis and Hazardous
Substances Management and Remediation

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

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SAB/WORD/MWD11-92.6

1.0 INTRODUCTION

This document constitutes a quarterly ground water monitoring report for the Montgomery Ward Auto Service Center property located at 7575 Dublin Boulevard, Dublin, California (see Figure 1). The monitoring period covered by this report is August 1992 through October 1992. The ground water sampling was conducted in October 1992.

A ground water extraction and treatment system (System) is operated and maintained at the site by others. Well B-12 is the only extraction well associated with the System (see Figure 2). All other wells function only as monitoring wells at this time.

2.0 FIELD WORK

2.1 GROUND WATER ELEVATION SURVEY

The System was temporarily shut down by a Montgomery Ward representative on October 19, 1992, in order for Environmental Audit, Inc. (EAI) to obtain ground water samples from the wells representative of the formation.

On October 22, 1992, EAI obtained ground water depth measurements from the wells associated with the site using an Oil Recovery Systems interface probe. No free-product was detected in the wells during gauging activities. The measured water levels were converted to elevations by subtracting the measured water level from the ground level datum for each well (see Table 1).

Ground water elevation data obtained from the wells were used to construct a ground water elevation map (see Figure 2). Interpretation of the elevation data indicates that at the time of measurement the ground water table near extraction well B-12 apparently had not fully reached equilibrium conditions as evidenced by the depressed water table around the extraction well.

2.2 GROUND WATER SAMPLING

On October 22, 1992, the wells were sampled. Prior to sampling, all wells except extraction well B-12, were purged using a Whale Supersub 88 submersible pump. Purging activities continued until the temperature, conductivity and pH of the extracted water had stabilized (see Table 2).

The 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 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 and time, and immediately placed into an ice chest chilled using frozen blue ice. The samples were kept chilled until delivered to the laboratory for analytical testing. All samples were logged on chain of custody record forms (see Appendix A).

2.3 SYSTEM OPERATION

EAI attempted to put the System back into operation following the completion of sampling activities. However, it was discovered that the pump down level control associated with the transfer pump used to convey water from the holding tank to the activated carbon canisters was malfunctioning. Montgomery Ward was notified of the problem, reportedly repaired it, and put the System back into operation on or about October 26, 1992.

2.4 SAMPLING EQUIPMENT CLEANING PROTOCOL

The submersible pump used only to purge the wells prior to sampling was decontaminated between each purging activity using the following procedure: 1) the pump was flushed in a solution of Alconox detergent and tap water; and 2) the pump was flushed with tap water. The vinyl tubing used as a discharge hose also was replaced with new tubing prior to purging each well.

2.5 EFFLUENT HANDLING

All effluent generated during purging, sampling and equipment decontamination activities was temporarily stored in a drum which was then emptied into the System for treatment.

3.0 ANALYTICAL TESTING

All samples were delivered for analytical testing to Sequoia Analytical, a state certified hazardous waste testing laboratory (Certificate No. 1271) 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 602, and total lead using EPA Method 7420. The results of the testing are shown in Table 3. The laboratory reports are contained in Appendix B.

4.0 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 information contained in this report.

SAB:FSM:ss

SAB/WORD/MWD11-92

TABLES

TABLE 1

GROUND WATER ELEVATIONS FROM DATA
OBTAINED ON OCTOBER 22, 1992
MONTGOMERY WARD AUTO SERVICE CENTER
7575 DUBLIN BOULEVARD, DUBLIN, CA

WELL NUMBER	ELEVATION OF TOP SURFACE OF PVC WELL CASING*	MEASURED DEPTH OF GROUND WATER (IN FT. BGS)**	GROUND WATER ELEVATION (FT)
B-5	100.95	12.97	87.98
B-10	100.60	12.67	87.93
B-12	100.00	12.82	87.18
B-15	101.50	13.25	88.25
B-16	100.70	12.88	87.82

NOTES: bgs = below ground surface

* An arbitrary reference elevation of 100 feet for well MW-12 was used.

** Measured from top of PVC well casing.

FSM:PFS:MWD11.921

TABLE 2

TEMPERATURE, CONDUCTIVITY, AND pH READINGS
DURING PURGING ACTIVITIES
MONTGOMERY WARD AUTO SERVICE CENTER
7575 DUBLIN BOULEVARD, DUBLIN, CA

WELL NUMBER	CUMULATIVE PURGED (Gallons)	TEMPERATURE (Fahrenheit)	CONDUCTIVITY (Micromhos/cm)	pH
B-5	5	79.7	12.86×10^2	7.61
	10	76.3	12.36×10^2	7.60
	15	73.6	12.17×10^2	7.39
	20	72.0	12.01×10^2	7.37
	25	72.0	12.00×10^2	7.36
B-10	5	74.1	12.00×10^2	7.50
	10	72.6	11.76×10^2	7.35
	15	71.6	11.76×10^2	7.33
	20	71.3	11.64×10^2	7.31
	25	71.2	11.69×10^2	7.34
B-15	5	75.0	12.20×10^2	8.17
	10	73.2	11.98×10^2	7.83
	15	70.7	11.79×10^2	7.77
	20	70.4	11.72×10^2	7.82
	25	70.2	11.66×10^2	7.80
	30	69.9	11.63×10^2	7.74
	35	69.7	11.63×10^2	7.73
	40	69.5	11.59×10^2	7.74
B-16	5	73.4	12.37×10^2	7.98
	10	71.6	12.23×10^2	7.59
	15	71.1	12.08×10^2	7.55
	20	70.7	12.10×10^2	7.53
	25	70.5	12.08×10^2	7.54
	30	70.2	12.04×10^2	7.52

NOTE: Measurements were made using a Hydac conductivity, temperature, pH tester.

FSM:PFS:MWD11.922

TABLE 3

ANALYTICAL TESTING RESULTS FOR GROUND
WATER SAMPLES
MONTGOMERY WARD AUTO SERVICE CENTER
7575 DUBLIN BOULEVARD, DUBLIN, CA

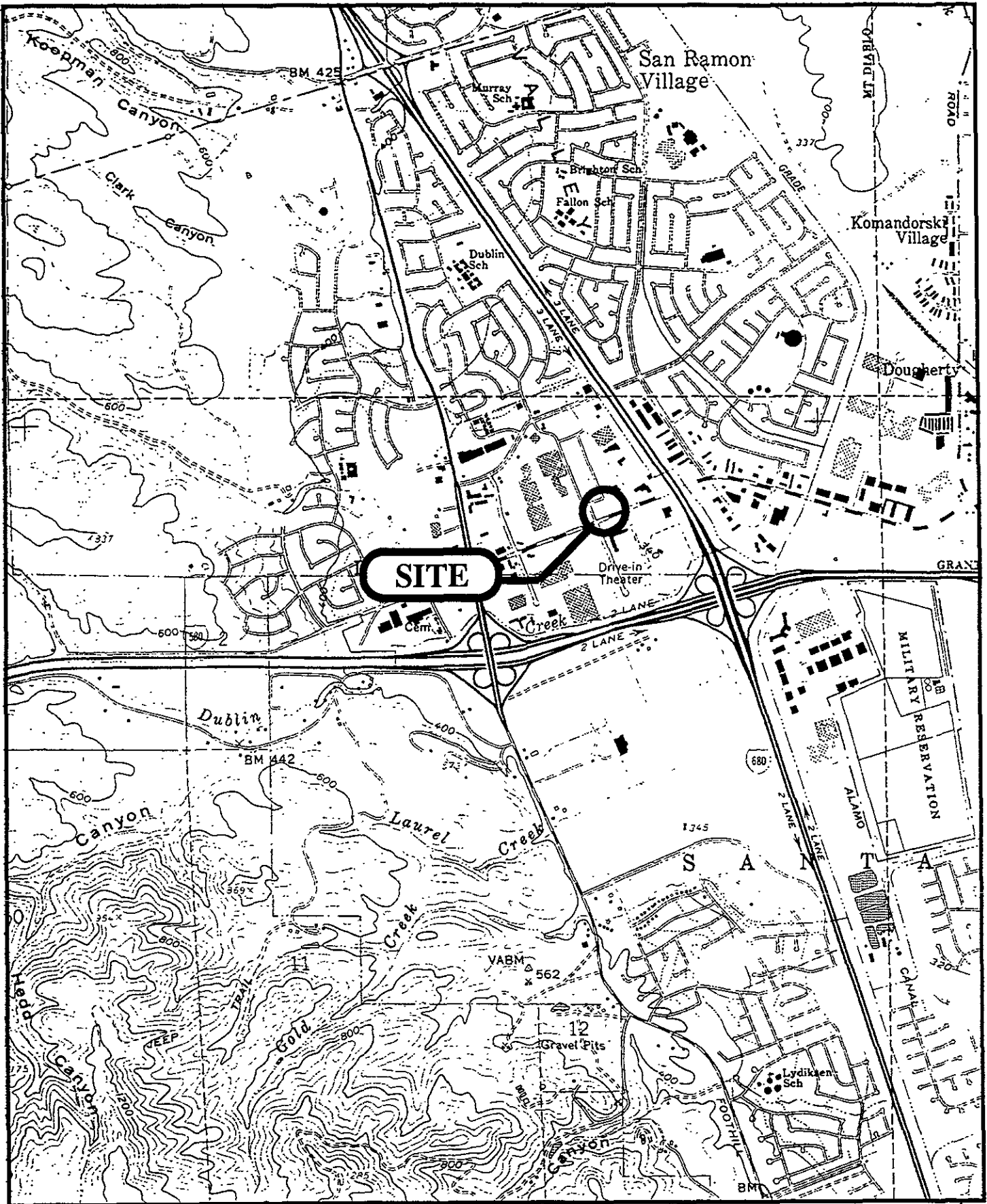
CONCENTRATIONS IN PARTS PER BILLION (ppb)

Well I.D.	Date	TPH-G	Benzene	Toluene	Total Xylenes	Ethyl- Benzene	Lead
B-5	04/16/92	4,400	670	160	320	280	ND*
	07/24/92	31,000	5,400	2,600	5,800	2,200	ND
	10/22/92	9,100	1,100	190	740	520	ND
B-10	04/16/92	7,300	1,400	640	1,100	880	ND
	07/24/92	27,000	3,800	1,600	4,000	2,000	ND
	10/22/92	16,000	2,300	340	1,200	1,100	ND
B-12	04/17/92	12,000	1,300	1,100	1,200	510	ND
	07/24/92	12,000	1,000	630	1,000	520	ND
	10/22/92	11,000	370	230	940	400	ND
B-15	04/17/92	65	4.4	2.4	2.8	6.1	ND
	07/24/92	ND	3.6	1.5	1.6	3.1	ND
	10/22/92	ND	1.7	0.89	0.88	0.78	ND
B-16	04/17/92	1,300	390	1.7	9.3	35	ND
	07/24/92	1,600	120	5.7	410	120	ND
	10/22/92	1,000	76	ND	130	55	ND

* ND = Not Detected

FSM:PFS:MWDT11.923

FIGURES



ENVIRONMENTAL AUDIT, INC.

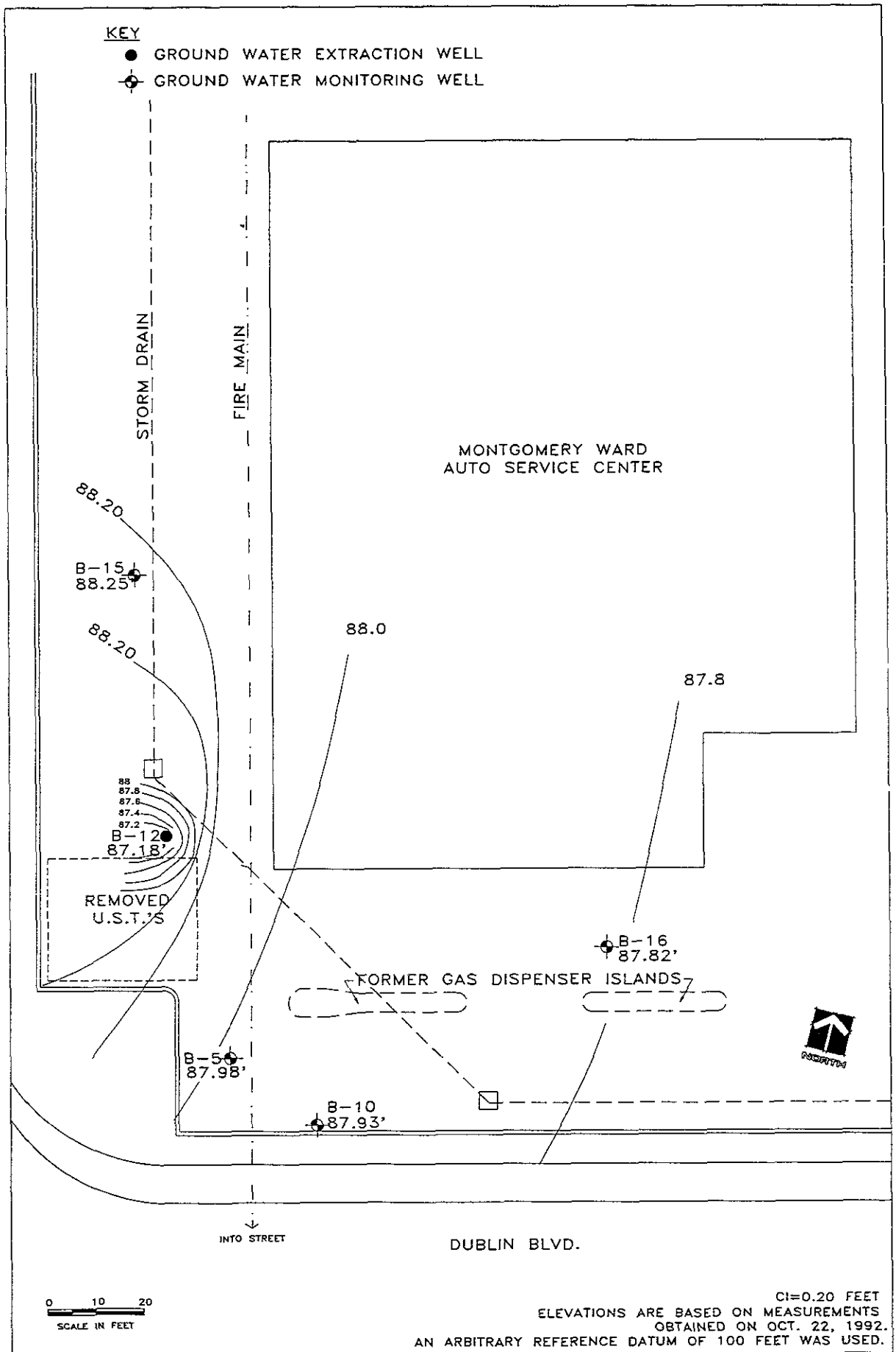
LOCATION MAP
MONTGOMERY WARD AUTO SERVICES CENTER
7575 DUBLIN BOULEVARD, DUBLIN, CA

USGS DUBLIN 7.5 MINUTE QUADRANGLE,
 1961, PHOTOREVISED 1980.



DATE: 5-92
 FNM-1233LM01

FIGURE: 1



ENVIRONMENTAL AUDIT, INC.

GROUND WATER ELEVATION MAP
MONTGOMERY WARD AUTO SERVICE CENTER
7575 DUBLIN BOULEVARD
DUBLIN, CA

FIGURE: 2

APPENDIX A
CHAIN OF CUSTODY RECORD FORMS



Environmental Audit, Inc.

Planning, Environmental Analyses and Hazardous Substances Management and Remediation

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

CHAIN OF CUSTODY RECORD

SAMPLING REQUIREMENTS: RCRA NPDES SDWA

WRITTEN OC REPORT TURNAROUND TIME: _____

ROUTINE OCC SAME DAY 24hr 48hr NORMAL

RWOCB OCC

PROJECT NO.			PROJECT NAME			CONTR TYPE	ANALYSES REQUESTED										REMARKS						
1233			Montgomery Ward Dublin																				
SAMPLER: (Signature) J.S. Muamote					PROJECT MANAGER: S.M. Mortazavi					GLASS 2-40ml VOA	PLASTIC 1-ltr plastic	BRASS/SS TUBE	TPHD 8015M	TPHG 8015M	TRPH 418.1	BTEX 602 8020	VOCs 624 8240	EOCs 625 8270	OIL & GREASE	CAM METALS TOT WET	Total Lead	NUMBER OF CONTAINERS	
SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION	GLASS	PLASTIC	BRASS/SS TUBE	TPHD	TPHG	TRPH	BTEX	VOCs	EOCs	OIL & GREASE	CAM METALS	Total Lead	NUMBER OF CONTAINERS	REMARKS				
B-15	10/22/92	11:25 hrs		✓	Water (clear)	✓	✓		✓	✓	✓	✓					✓	2100755AC	3	2 40ml VOAs for TPH-G/DTEX 1 Plastic 1-liter for total lead			
B-16	"	12:40 hrs		✓	Water (clear)	✓	✓		✓	✓	✓	✓					✓	75AC	3	" " " "			
B-10	"	13:35 hrs		✓	Water (clear)	✓	✓		✓	✓	✓	✓					✓	75AC	3	" " " "			
B-5	"	14:10 hrs		✓	Water (clear)	✓	✓		✓	✓	✓	✓					✓	75AC	3	" " " "			
TOTAL NUMBER OF CONTAINERS																		12					

RELINQUISHED BY: (Signature) J.S. Muamote	DATE/TIME 10/22/92 16:00 hrs	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME 10-22-92 4:50	RECEIVED BY: (Signature)
SAMPLES SHIPPED VIA: FEDEX <input type="checkbox"/> UPS <input type="checkbox"/> AIRBORNE <input type="checkbox"/> BUS <input type="checkbox"/> HAND <input checked="" type="checkbox"/>		SHIPPED BY: (Signature)	COURIER: (Signature) John Sking	RECEIVED FOR BY: (Signature)	DATE/TIME 10/22/92 4:50
				LAB: Sequoia Analytical.	

APPENDIX B
LABORATORY REPORTS



SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

RECEIVED

NOV - 6 1992

Environmental Audit, Inc.
1000-A Ortega Way
Placentia, CA 92670-7125
Attention: S.M. Mortazavi

Client Project ID: #1233 / Montgomery Ward, Dublin
Sample Matrix: Water
Analysis Method: EPA 5030/8015/8020
First Sample #: 210-0831

Sampled: Oct 22, 1992
Received: Oct 23, 1992
Reported: Nov 3, 1992

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

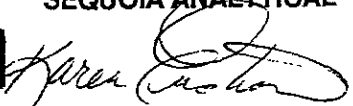
Analyte	Reporting Limit µg/L	Sample I.D. 210-0831 B-12
Purgeable Hydrocarbons	50	11,000
Benzene	0.5	370
Toluene	0.5	230
Ethyl Benzene	0.5	400
Total Xylenes	0.5	940
Chromatogram Pattern:		Gasoline

Quality Control Data

Report Limit Multiplication Factor:	20
Date Analyzed:	10/28/92
Instrument Identification:	HP-4
Surrogate Recovery, %: (QC Limits = 70-130%)	101

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL


Karen L. Enstrom
Project Manager



SEQUOIA ANALYTICAL

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(510) 686-9600 • FAX (510) 686-9689

Environmental Audit, Inc.
1000-A Ortega Way
Placentia, CA 92670-7125
Attention: S.M. Mortazavi

Client Project ID: #1233 / Montgomery Ward, Dublin
Sample Descript: Water
Analysis for: Total Lead
First Sample #: 210-0831

Sampled: Oct 22, 1992
Received: Oct 23, 1992
Extracted: Oct 29, 1992
Analyzed: Oct 30, 1992
Reported: Nov 3, 1992

LABORATORY ANALYSIS FOR: Total Lead

Sample Number	Sample Description	Detection Limit mg/L	Sample Result mg/L
210-0831	B-12	0.0050	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL


Karen L. Enstrom
Project Manager



SEQUOIA ANALYTICAL

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Environmental Audit, Inc.
1000-A Ortega Way
Placentia, CA 92670-7125
Attention: S.M. Mortazavi

Client Project ID: #1233 / Montgomery Ward, Dublin

QC Sample Group: 210-0831

Reported: Nov 3, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes	Total Lead
---------	---------	---------	---------------	---------	------------

Method:	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	EPA 7421
Analyst:	J.F.	J.F.	J.F.	J.F.	K.V.S.
Reporting Units:	µg/L	µg/L	µg/L	µg/L	mg/L
Date Analyzed:	Oct 28, 1992	Oct 28, 1992	Oct 28, 1992	Oct 28, 1992	Oct 30, 1992
QC Sample #:	Matrix Blank	Matrix Blank	Matrix Blank	Matrix Blank	210-0831

Sample Conc.: N.D. N.D. N.D. N.D. N.D.

Spike Conc. Added: 20 20 20 60 0.025

Conc. Matrix Spike: 19 21 22 68 0.024

Matrix Spike % Recovery: 95 105 110 113 96

Conc. Matrix Spike Dup.: 19 20 21 66 0.024

Matrix Spike Duplicate % Recovery: 95 100 105 110 96

Relative % Difference: 0.0 4.8 4.6 3.0 0.0

SEQUOIA ANALYTICAL


Karen L. Enstrom
Project Manager

% Recovery: $\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$

Relative % Difference: $\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



SEQUOIA ANALYTICAL

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NOV 12 1992

Environmental Audit, Inc.
1000-A Ortega Way
Placentia, CA 92670-7125
Attention: S.M. Mortazavi

Client Project ID: #1233 / Montgomery Ward, Dublin
Sample Matrix: Water
Analysis Method: EPA 5030/8015/8020
First Sample #: 210-0755

Sampled: Oct 22, 1992
Received: Oct 22, 1992
Reported: Nov 9, 1992

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 210-0755 B-15	Sample I.D. 210-0756 B-16	Sample I.D. 210-0757 B-10	Sample I.D. 210-0758 B-5
Purgeable Hydrocarbons	50	N.D.	1,000	16,000	9,100
Benzene	0.5	1.7	76	2,300	1,100
Toluene	0.5	0.89	N.D.	340	190
Ethyl Benzene	0.5	0.78	55	1,100	520
Total Xylenes	0.5	0.88	130	1,200	740
Chromatogram Pattern:		--	Gasoline	Gasoline	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	1.0	10	200	200
Date Analyzed:	10/27/92	10/28/92	10/27/92	10/27/92
Instrument Identification:	HP-2	HP-4	HP-2	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	101	101	101	100

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Karen L. Enstrom
Project Manager



SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
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Environmental Audit, Inc.
1000-A Ortega Way
Placentia, CA 92670-7125
Attention: S.M. Mortazavi

Client Project ID: #1233 / Montgomery Ward, Dublin
Sample Descript: Water
Analysis for: Total Lead
First Sample #: 210-0755

Sampled: Oct 22, 1992
Received: Oct 22, 1992
Extracted: Oct 29, 1992
Analyzed: Oct 30, 1992
Reported: Nov 9, 1992

LABORATORY ANALYSIS FOR: Total Lead

Sample Number	Sample Description	Detection Limit mg/L	Sample Result mg/L
210-0755	B-15	0.0050	N.D.
210-0756	B-16	0.0050	N.D.
210-0757	B-10	0.0050	N.D.
210-0758	B-5	0.0050	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL


Karen L. Enstrom
Project Manager



SEQUOIA ANALYTICAL

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Environmental Audit, Inc.
1000-A Ortega Way
Placentia, CA 92670-7125
Attention: S.M. Mortazavi

Client Project ID: #1233 / Montgomery Ward, Dublin

QC Sample Group: 2100755-758

Reported: Nov 9, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes	Lead
Method:	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	EPA 7421
Analyst:	J.F.	J.F.	J.F.	J.F.	K.V.S.
Reporting Units:	µg/L	µg/L	µg/L	µg/L	mg/L
Date Analyzed:	Oct 27, 1992	Oct 27, 1992	Oct 27, 1992	Oct 27, 1992	Oct 30, 1992
QC Sample #:	Matrix Blank	Matrix Blank	Matrix Blank	Matrix Blank	210-0831
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	20	20	20	60	0.025
Conc. Matrix Spike:	20	20	21	68	0.024
Matrix Spike % Recovery:	100	100	105	113	96
Conc. Matrix Spike Dup.:	20	22	22	70	0.024
Matrix Spike Duplicate % Recovery:	100	110	110	116	96
Relative % Difference:	0.0	9.5	4.6	2.8	0.0

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Karen L. Enstrom
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$