GeoStrategies Inc.
2140 WEST WINTON AVENUE
HAYWARD, CALIFORNIA 94545
(510) 352-4800

June 22, 1992

Alameda County Health Agency
Division of Hazardous Materials
Department of Environmental Health
80 Swan Way, Room 200
Oakland, California 94521

Attention: Ms. Pamela Evans

Reference: ARCO Service Station No. 5387
20200 Hesperian Blvd.
Hayward, California 94541

Ms. Evans:

As requested by ARCO Products Company, we are forwarding a copy of the Quarterly Monitoring Report dated June 19, 1992 for the above referenced location. The report presents ground-water sampling results for the first quarter, 1992.

If you have any questions or comments, please call.

Sincerely,

John F. Vargas
Senior Geologist

JFV/rcm

enlosure

cc: Mr. Michael Whelan, ARCO Products Company.
Mr. H.C. Winsor, ARCO Products Company.
Mr. Lester Feldman, RWQCB, San Francisco Bay Region.

GeoStrategies Inc.

QUARTERLY MONITORING REPORT

ARCO Service Station No. 5387
20200 Hesperian Boulevard
Hayward, California

792603-4

June 19, 1992

GeoStrategies Inc.
2140 WEST WINTON AVENUE
HAYWARD, CALIFORNIA 94545
(510) 352-4800

June 19, 1992

ARCO Products Company
P.O. Box 5811
San Mateo, California 94402

Attn: Mr. Michael Whelan

Re: QUARTERLY MONITORING REPORT
ARCO Service Station No. 5387
20200 Hesperian Boulevard
Hayward, California

Gentlemen:

This Quarterly Monitoring Report by GeoStrategies Inc. (GSI) presents the results of the 1992 first quarter sampling for the above referenced site (Plate 1). Sampling data were furnished by the ARCO Products Company contractor.

There are currently seven ground-water monitoring wells located at the site. Six wells are located on-site (Wells MW-1 through MW-3 and A-4 through A-6, Plate 2) and one well is located off-site (Well A-7). The wells were installed in 1986 and 1991 by Groundwater Technology Inc. and GSI, respectively, to evaluate the horizontal and vertical extent of petroleum hydrocarbons in soil and groundwater beneath the site.

CURRENT QUARTER SAMPLING RESULTS

Depth to water-level measurements were obtained in each monitoring well prior to sampling. Static ground-water levels were measured from the surveyed top of each well box and recorded to the nearest ± 0.01 foot. Water-level data were referenced to Mean Sea Level (MSL) datum and used to construct a quarterly potentiometric map (Plate 2). Shallow ground-water flow is to the southwest at an approximate hydraulic gradient of 0.005.

Each well was checked for the presence of floating product. Floating product was not observed in any well this quarter. Depth to groundwater and floating product measurements are summarized in the attached EMCON Associates (EMCON) ground-water sampling report (Appendix A). Historical water-level data and floating product measurements are presented in Table 1.

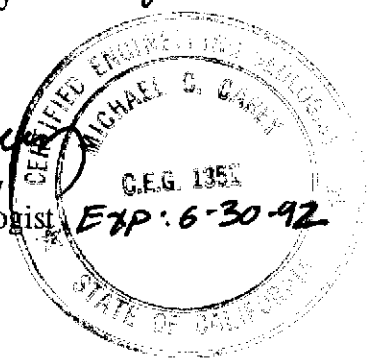
Ground-water samples were collected on March 10 and 11, 1992. Samples were analyzed for Total Petroleum Hydrocarbons calculated as Gasoline (TPH-Gasoline), according to EPA Method 8015 (Modified) and for Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) according to EPA Method 8020. The ground-water samples were analyzed by Sequoia Analytical (Sequoia), a California State-certified laboratory located in Redwood City, California. These data are summarized in Appendix A. Current chemical analytical data have been added to the Historical Groundwater Quality Database presented in Table 2. Chemical isoconcentration maps for benzene and TPH-Gasoline are presented on Plates 3 and 4, respectively.

If you have any questions, please call.

GeoStrategies Inc. by,

Robert C. Mallory
Geologist

Michael C. Carey
Engineering Geologist
C.E.G. 1351



RCM/MCC/shl

Plate 1. Vicinity Map
Plate 2. Site Plan/ Potentiometric Map
Plate 3. Benzene Isoconcentration Map
Plate 4. TPH-G Isoconcentration Map

Appendix A: EMCON Ground-water Sampling Report

QC Review: _____

TABLE 1

HISTORICAL WATER-LEVEL DATA

MONITORING DATE	WELL NUMBER	DEPTH TO WATER (FT)	WELL ELEVATION (FT)	STATIC WATER ELEVATION (FT)	FLOATING PRODUCT THICKNESS (FT)
24-Dec-91	MW-1	16.12	38.36	22.24	0.00
10-Mar-92	MW-1	13.34	38.36	25.02	0.00
24-Dec-91	MW-2	16.50	38.58	22.08	0.00
10-Mar-92	MW-2	13.50	38.58	25.08	0.00
24-Dec-91	MW-3	15.60	37.77	22.17	0.00
10-Mar-92	MW-3	12.90	37.77	24.87	0.00
24-Dec-91	A-4	17.60	39.86	22.26	0.00
10-Mar-92	A-4	14.76	39.86	25.10	0.00
24-Dec-91	A-5	16.85	38.94	22.09	0.00
10-Mar-92	A-5	13.83	38.94	25.11	0.00
24-Dec-91	A-6	16.88	39.07	22.19	0.00
10-Mar-92	A-6	13.73	39.07	25.34	0.00
24-Dec-91	A-7	18.11	39.95	21.84	0.00
10-Mar-92	A-7	15.30	39.95	24.65	0.00

Note: Static water elevations referenced to Mean Sea Level (MSL).

TABLE 2

HISTORICAL GROUND-WATER QUALITY DATABASE

WELL NO.	SAMPLE DATE	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
MW-1	24-Dec-91	2,200	190	8.5	6.9	2.6
MW-1	10-Mar-92	2,800	270	29	56	39
MW-2	24-Dec-91	23,000	1,500	1,100	480	1,400
MW-2	10-Mar-92	210,000	44,000	3,900	1,700	5,800
MW-3	24-Dec-91	6,800	450	10	610	45
MW-3	10-Mar-92	11,000	2,500	75	400	560
A-4	24-Dec-91	1,900	29	1.9	25	29
A-4	10-Mar-92	7,400	37	<0.60	11	73
A-5	24-Dec-91	1,600	35	<0.30	32	52
A-5	10-Mar-92	1,000	21	<1.5	43	100
A-6	24-Dec-91	<30	<0.30	<0.30	<0.30	<0.30
A-6	10-Mar-92	<30	<0.30	<0.30	<0.30	<0.30
A-7	24-Dec-91	10,000	88	16	170	610
A-7	10-Mar-92	320	9.3	0.54	8.8	34

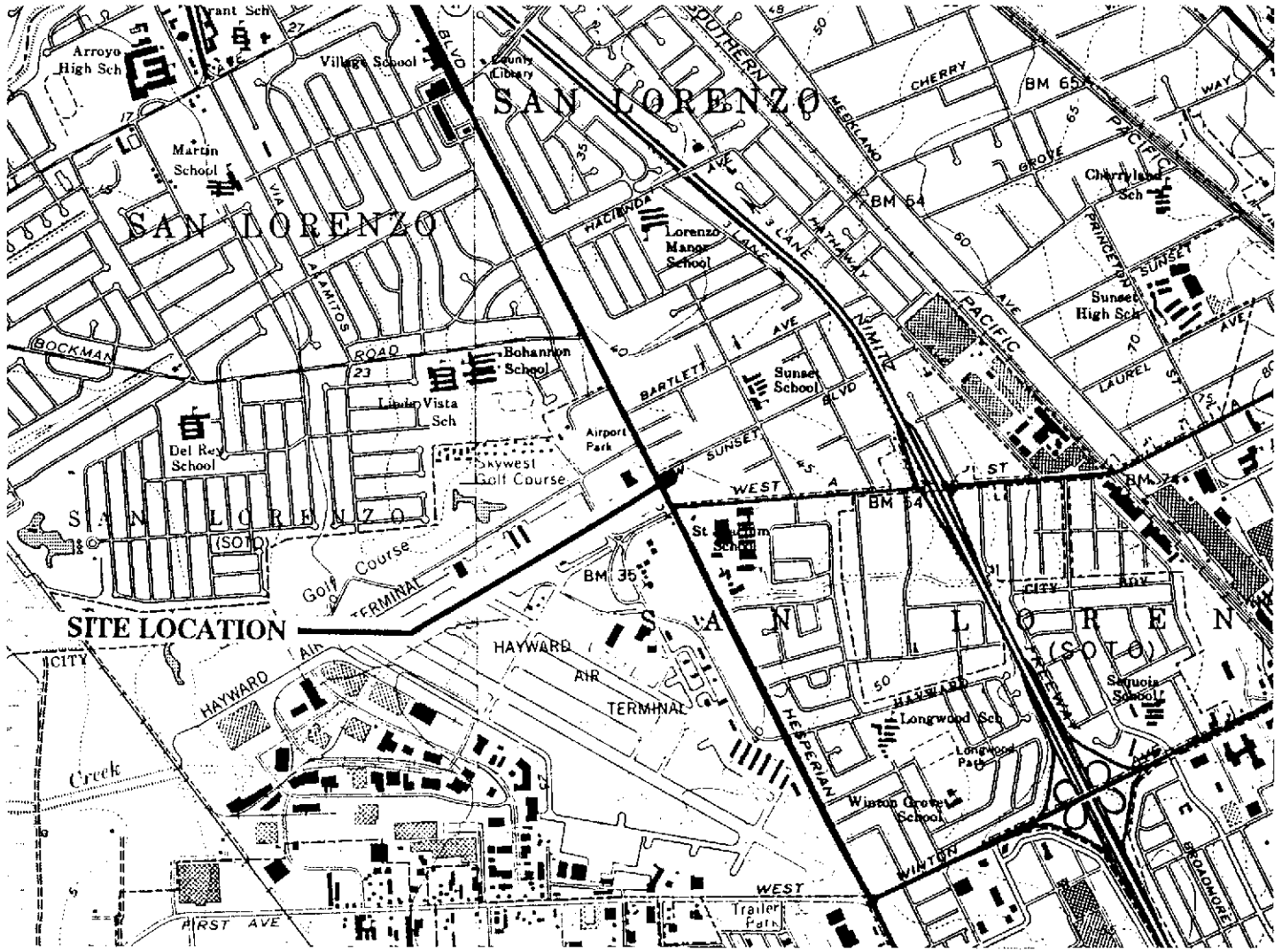
Current Regional Water Quality Control Board Maximum Contaminant Level
Benzene 1. ppb Xylenes 1750. ppb Ethylbenzene 680. ppb

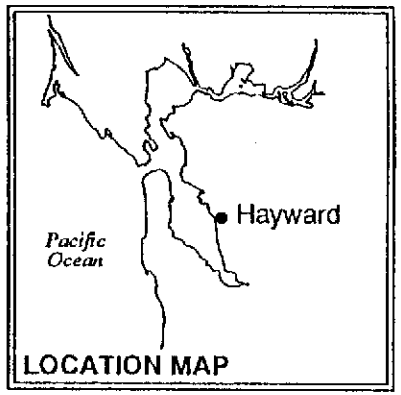
Current DHS Action Levels Toluene 100.0 ppb

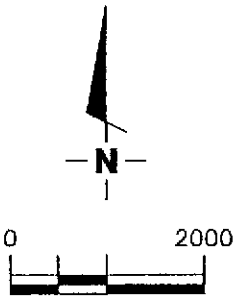
TPH-G = Total Petroleum Hydrocarbons calculated as Gasoline
PPB = Parts Per Billion

NOTES: 1. DHS Action levels and MCL's are subject to change pending State of California review.
2. All data shown as <X are reported as ND (none detected).

792603-4







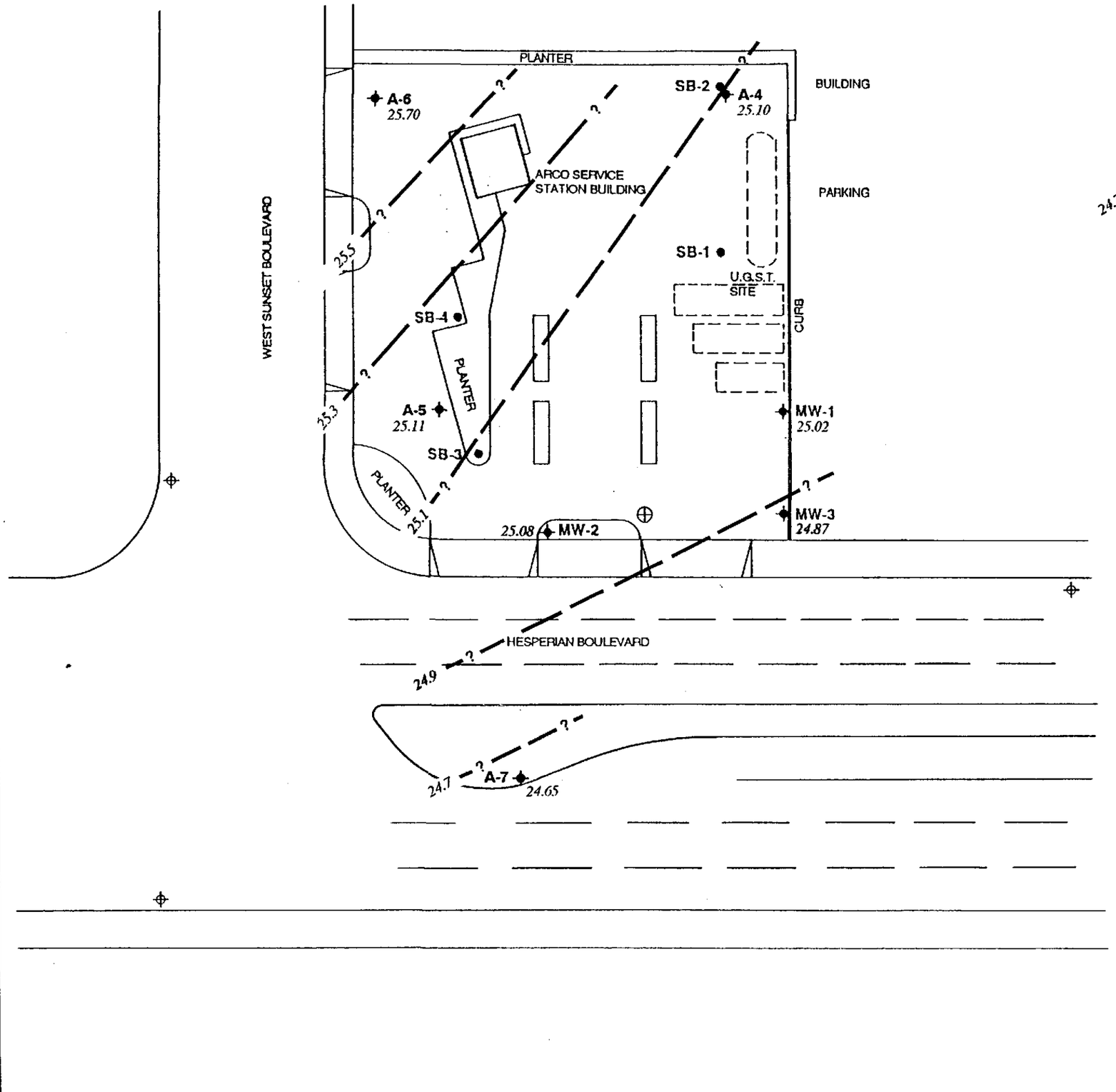
Base Map: USGS Topographic Map

GeoStrategies Inc.

VICINITY MAP
ARCO Service Station #5387
20200 Hesperian Boulevard
Hayward, California

PLATE
1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
7926		11/91	



EXPLANATION

- Ground-water monitoring well
- Soil boring
- 24.7 — Ground-water elevation contour Approximate Gradient = 0.005
- *24.65* Ground-water elevation in feet referenced to Mean Sea Level (MSL) measured on March 10, 1992
- Proposed ground-water monitoring well
- Proposed ground-water recovery well

Note: Contours may be influenced by irrigation practices and/or site construction activities

N

0 30

Scale in Feet

PLATE 2

SITE PLAN/POTENTIOMETRIC MAP

ARCO Service Station #5387
20200 Hesperian Boulevard
Hayward, California

REVISED DATE

REVISED DATE

GeoStrategies Inc.

GSI

JOB NUMBER 792604-6

REVIEWED BY

DATE 6/92

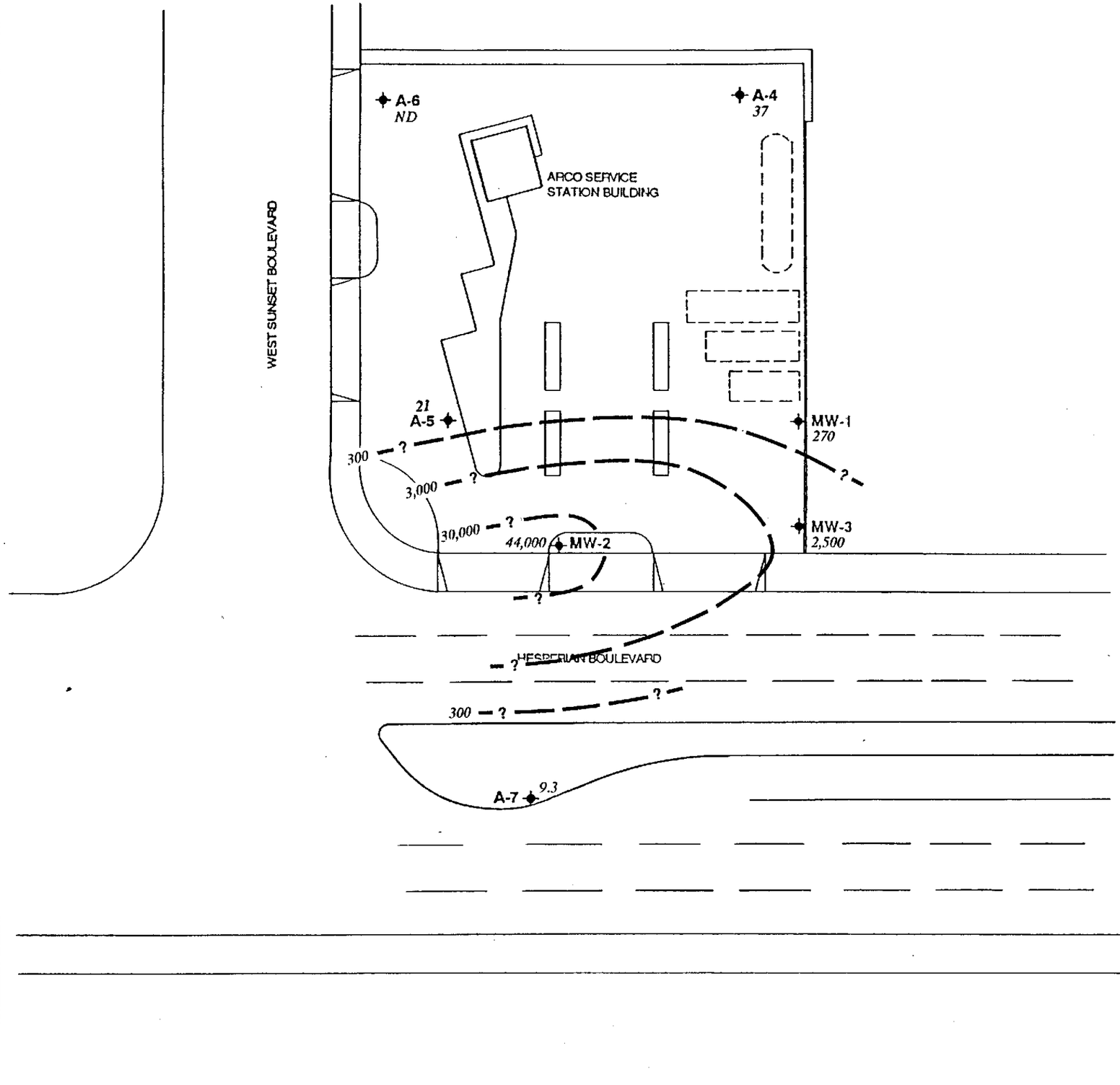


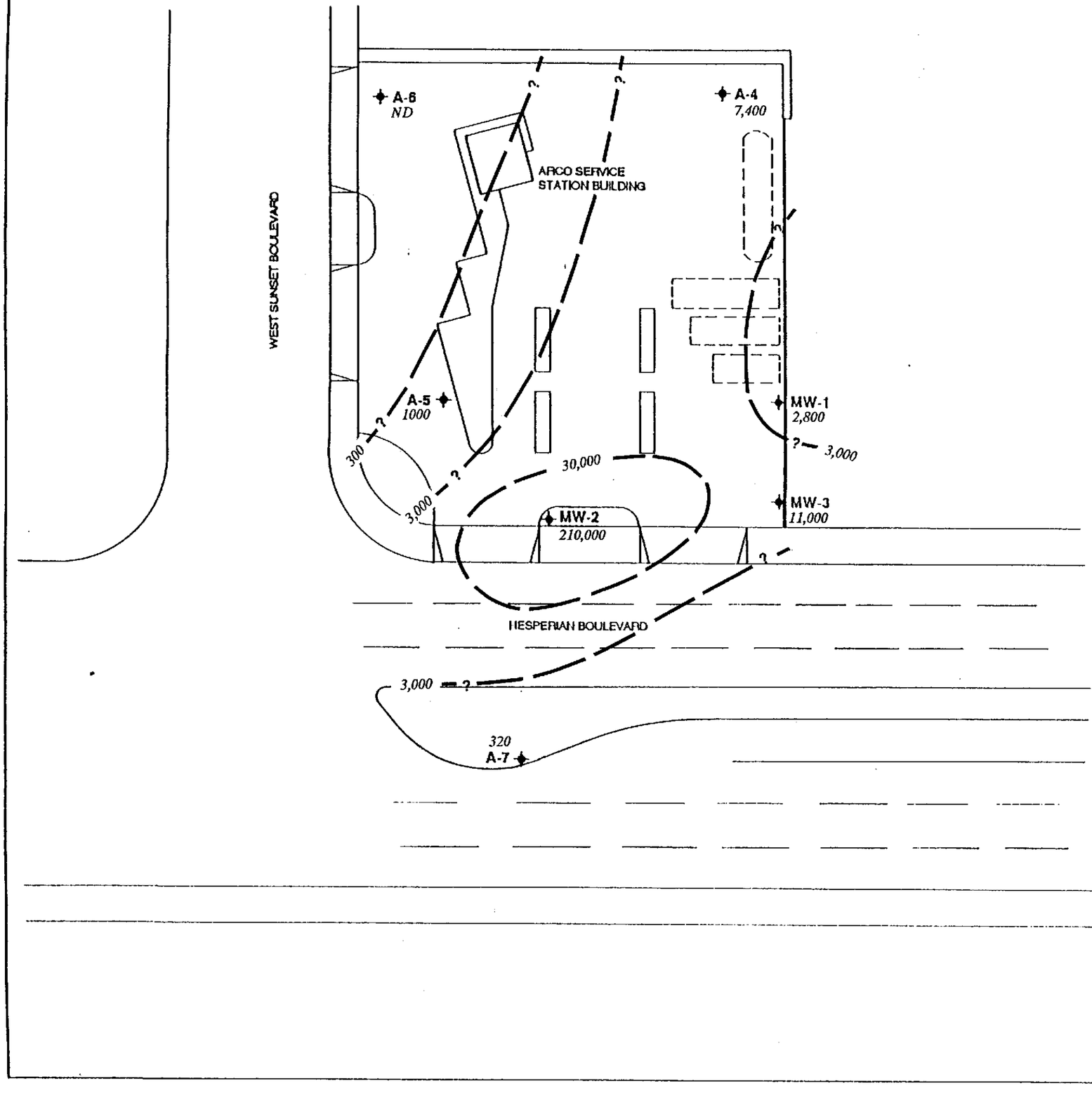
PLATE 3

BENZENE ISOCONCENTRATION MAP
ARCO Service Station #5387
20200 Hesperian Boulevard
Hayward, California

REVISED DATE
REVISED DATE

GeoStrategies Inc.

JOB NUMBER 792604-6
REVIEWED BY MCM
DATE 6/92



EXPLANATION

- Ground-water monitoring well
- 300 — TPH-G isoconcentration contour
- *320* TPH-G (Total Petroleum Hydrocarbons calculatrd as Gasoline) concentrations in ppb sampled on March 10 & 11, 1992
- *ND* Not Detected (see laboratory reports for detection limits)

N

0 30

Scale in Feet

PLATE 4

TPH-G ISOCONCENTRATION MAP
ARCO Service Station #5387
20200 Hesperian Boulevard
Hayward, California

DATE 6/92 REVISED DATE REVISED DATE

GeoStrategies Inc.

REVIEWED BY

JOB NUMBER 792603-4

EMCON ASSOCIATES
Consultants in Wastes Management and Environmental Control

Date March 27, 1992
Project G70-34.01

To:
Mr. John Vargas
GeoStrategies Inc.
2140 West Winton Avenue
Hayward, California 94545

We are enclosing:

Copies	Description
1	Depth To Water / Floating Product Survey Results
1	Summary of Groundwater Monitoring Data
1	Certified Analytical Reports with Chain-of-Custody
7	Water Sample Field Data Sheets

For your: X Information Sent by: X Mail

Comments:

Enclosed are the data from the first quarter 1992 monitoring event at ARCO service station 5387, 20200 Hesperian Boulevard, San Lorenzo, California. Please call if you have any questions: (408) 453-2266.

Mark Knuttel MK

Reviewed by:

Robert C Porter

Robert Porter, Senior Project Engineer.

1938 Junction Avenue, San Jose, California 95131-2102, (408) 453-0719, Fax (408) 453-0452

FIELD REPORT
DEPTH TO WATER / FLOATING PRODUCT SURVEY

PROJECT # : G70-34.01 STATION ADDRESS : 20200 Hesperian Blvd.,San Lorenzo DATE : 3-10-92

ARCO STATION # : 5387 FIELD TECHNICIAN : S. Horton / J. Williams DAY : Tuesday

DTW Order	WELL ID	Well Box Seal	Well Lid Secure	Gasket	Lock	Locking Well Cap	FIRST DEPTH TO WATER (feet)	SECOND DEPTH TO WATER (feet)	DEPTH TO FLOATING PRODUCT (feet)	FLOATING PRODUCT THICKNESS (feet)	WELL TOTAL DEPTH (feet)	COMMENTS
1	A-6	✓	✓	✓	✓	2268	13.73	13.73	ND	ND	34.73	—
2	MW-2	✓	✓	✓	✓	2268	13.50	13.50	ND	ND	26.63	—
3	A-7	✓	✓	✓	✓	2268	15.30	15.30	ND	ND	35.53	—
4	MW-3	✓	✓	✓	✓	2268	12.90	12.90	ND	ND	25.40	—
5	MW-1	✓	✓	✓	✓	2268	13.34	13.34	ND	ND	27.79	—
6	A-4	✓	✓	✓	✓	2268	14.76	14.76	ND	ND	34.98	—
7	A-5	✓	✓	✓	✓	2268	13.83	13.83	ND	ND	30.04	—

Summary of Groundwater Monitoring Data
First Quarter 1992
ARCO Service Station 5387
20200 Hesperian Boulevard, San Lorenzo, California
micrograms per liter (µg/l) or parts per billion (ppb)

Well ID and Sample Depth	Sampling Date	Depth To Water (feet)	Floating Product Thickness (feet)	TPH[1] as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Total Xylenes (ppb)
MW-1(27)	03/10/92	13.34	ND.[2]	2,800	270	29	56	39
MW-2(26)	03/10/92	13.50	ND.	210,000	44,000	3,900	1,700	5,800
MW-3(25)	03/10/92	12.90	ND.	11,000	2,500	75	400	560
A-4(34)	03/11/92	14.76	ND.	7,400	37	<0.60*	11	73
A-5(30)	03/11/92	13.83	ND.	1000	21	<1.5*	43	100
A-6(34)	03/10/92	13.37	ND.	<30	<0.30	<0.30	<0.30	<0.30
A-7(35)	03/10/92	15.30	ND.	320	9.3	0.54	8.8	34
TB-1[3]	03/11/92	NA.[4]	NA.	<30	<0.30	<0.30	<0.30	<0.30

1. TPH. = Total petroleum hydrocarbons
2. ND. = Not detected
3. TB. = Trip blank
4. NA. = Not applicable
*. = Because matrix effects and/or other factors required additional sample dilution,detection limits for this sample have been raised

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
Attention: Mark Knuttel

Project: Arco, #5387

Enclosed are the results from 8 water samples received at Sequoia Analytical on March 12,1992. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
2032022	Water, A-6, (34)	3/10/92	EPA 5030/8015/8020
2032023	Water, MW-2, (26)	3/10/92	EPA 5030/8015/8020
2032024	Water, A-7, (35)	3/10/92	EPA 5030/8015/8020
2032025	Water, MW-3, (25)	3/10/92	EPA 5030/8015/8020
2032026	Water, MW-1, (27)	3/10/92	EPA 5030/8015/8020
2032027	Water, A-4, (34)	3/11/92	EPA 5030/8015/8020
2032028	Water, TB-1	3/11/92	EPA 5030/8015/8020
2032029	Water, A-5, (30)	3/11/92	Lead EPA 5030/8015/8020 Hazardous Waste Bioassay

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates	Client Project ID:	Arco, #5387	Sampled:	3/10-11/92
1938 Junction Ave.	Matrix Descript:	Water	Received:	Mar 12, 1992
San Jose, CA 95131	Analysis Method:	EPA 5030/8015/8020	Analyzed:	3/14-17/92
Attention: Mark Knuttel	First Sample #:	203-2022	Reported:	Mar 25, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons µg/L (ppb)	Benzene µg/L (ppb)	Toluene µg/L (ppb)	Ethyl Benzene µg/L (ppb)	Xylenes µg/L (ppb)
203-2022	A-6, (34)	N.D.	N.D.	N.D.	N.D.	N.D.
203-2023	MW-2, (26)	210,000	44,000	3,900	1,700	5,800
203-2024	A-7, (35)	320	9.3	0.54	8.8	34
203-2025	MW-3, (25)	11,000	2,500	75	400	560
203-2026	MW-1, (27)	2,800	270	29	56	39
203-2028	TB-1	N.D.	N.D.	N.D.	N.D.	N.D.
Detection Limits:		**30**	**0.30**	**0.30**	**0.30**	**0.30**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates	Client Project ID:	Arco, #5387	Sampled:	Mar 11, 1992
1938 Junction Ave.	Matrix Descript:	Water	Received:	Mar 12, 1992
San Jose, CA 95131	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Mar 15, 1992
Attention: Mark Knuttel	First Sample #:	203-2027	Reported:	Mar 25, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons µg/L (ppb)	Benzene µg/L (ppb)	Toluene µg/L (ppb)	Ethyl Benzene µg/L (ppb)	Xylenes µg/L (ppb)
203-2027	A-4, (34)	7,400	37	N.D.	11	73
Detection Limits:		**60**	**0.60**	**0.60**	**0.60**	**0.60**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

2032022.EEE <2>

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates	Client Project ID:	Arco, #5387	Sampled:	Mar 11, 1992
1938 Junction Ave.	Matrix Descript:	Water	Received:	Mar 12, 1992
San Jose, CA 95131	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Mar 16, 1992
Attention: Mark Knuttel	First Sample #:	203-2029	Reported:	Mar 25, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons µg/L (ppb)	Benzene µg/L (ppb)	Toluene µg/L (ppb)	Ethyl Benzene µg/L (ppb)	Xylenes µg/L (ppb)
203-2029	A-5, (30)	1,000	21	N.D.	43	100
Detection Limits:		**150**	**1.5**	**1.5**	**1.5**	**1.5**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates	Client Project ID:	Arco, #5387	Sampled: Mar 11, 1992
1938 Junction Ave.	Sample Descript:	Water, A-5, (30)	Received: Mar 12, 1992
San Jose, CA 95131			Analyzed: Mar 17, 1992
Attention: Mark Knuttel	Lab Number:	203-2029	Reported: Mar 25, 1992

LABORATORY ANALYSIS

Analyte	Detection Limit mg/L	Sample Results mg/L
Lead	0.0050	N.D.

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

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
Attention: Mark Knuttel

Client Project ID: Arco, #5387

QC Sample Group: 2032022, 24

Reported: Mar 25, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	A.Miraftab	A.Miraftab	A.Miraftab	A.Miraftab
Reporting Units:	µg/L	µg/L	µg/L	µg/L
Date Analyzed:	Mar 15, 1992	Mar 15, 1992	Mar 15, 1992	Mar 15, 1992
QC Sample #:	GBLK031592	GBLK031592	GBLK031592	GBLK031592
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	10	30
Conc. Matrix Spike:	8.7	8.5	8.6	26
Matrix Spike % Recovery:	87	85	86	87
Conc. Matrix Spike Dup.:	8.7	8.5	8.5	26
Matrix Spike Duplicate % Recovery:	87	85	85	87
Relative % Difference:	0.0	0.0	1.2	0.0

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

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

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

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
Attention: Mark Knuttel

Client Project ID: Arco, #5387

QC Sample Group: 203-2023

Reported: Mar 25, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	A.Miraftab	A.Miraftab	A.Miraftab	A.Miraftab
Reporting Units:	µg/L	µg/L	µg/L	µg/L
Date Analyzed:	Mar 14, 1992	Mar 14, 1992	Mar 14, 1992	Mar 14, 1992
QC Sample #:	GBLK031492	GBLK031492	GBLK031492	GBLK031492
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	10	30
Conc. Matrix Spike:	9.1	9.3	9.1	27
Matrix Spike % Recovery:	91	93	91	90
Conc. Matrix Spike Dup.:	9.9	10	9.9	30
Matrix Spike Duplicate % Recovery:	99	100	99	100
Relative % Difference:	8.4	7.3	8.4	10

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

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

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

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
Attention: Mark Knuttel

Client Project ID: Arco, #5387

QC Sample Group: 203-2025

Reported: Mar 25, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	L.Laikhtman	L.Laikhtman	L.Laikhtman	L.Laikhtman
Reporting Units:	µg/L	µg/L	µg/L	µg/L
Date Analyzed:	Mar 17, 1992	Mar 17, 1992	Mar 17, 1992	Mar 17, 1992
QC Sample #:	BLK031792	BLK031792	BLK031792	BLK031792
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	10	30
Conc. Matrix Spike:	11	10	11	31
Matrix Spike % Recovery:	110	100	110	103
Conc. Matrix Spike Dup.:	10	9.9	10	30
Matrix Spike Duplicate % Recovery:	100	99	100	100
Relative % Difference:	9.5	1.0	9.5	3.3

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

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

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

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
Attention: Mark Knuttel

Client Project ID: Arco, #5387

QC Sample Group: 2032026 - 27

Reported: Mar 25, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	A.Miraftab	A.Miraftab	A.Miraftab	A.Miraftab
Reporting Units:	µg/L	µg/L	µg/L	µg/L
Date Analyzed:	Mar 15, 1992	Mar 15, 1992	Mar 15, 1992	Mar 15, 1992
QC Sample #:	GBLK031592	GBLK031592	GBLK031592	GBLK031592
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	10	30
Conc. Matrix Spike:	9.0	8.8	8.8	26
Matrix Spike % Recovery:	90	88	88	87
Conc. Matrix Spike Dup.:	8.8	8.7	8.6	26
Matrix Spike Duplicate % Recovery:	88	87	86	87
Relative % Difference:	2.2	1.1	2.3	0.0

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

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

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

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
Attention: Mark Knuttel

Client Project ID: Arco, #5387

QC Sample Group: 202-2028

Reported: Mar 25, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	M.Nipp	M.Nipp	M.Nipp	M.Nipp
Reporting Units:	µg/L	µg/L	µg/L	µg/L
Date Analyzed:	Mar 16, 1992	Mar 16, 1992	Mar 16, 1992	Mar 16, 1992
QC Sample #:	GBLK031692	GBLK031692	GBLK031692	GBLK031692
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	10	30
Conc. Matrix Spike:	9.6	9.6	9.6	29
Matrix Spike % Recovery:	96	96	96	97
Conc. Matrix Spike Dup.:	10	10	10	30
Matrix Spike Duplicate % Recovery:	100	100	100	100
Relative % Difference:	4.1	4.1	4.1	3.4

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

% Recovery:	Conc. of M.S. - Conc. of Sample / Spike Conc. Added	x 100
Relative % Difference:	Conc. of M.S. - Conc. of M.S.D. / (Conc. of M.S. + Conc. of M.S.D.) / 2	x 100

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
Attention: Mark Knuttel

Client Project ID: Arco, #5387

QC Sample Group: 203-2029

Reported: Mar 25, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes	Lead
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 239.2
Analyst:	M.Nipp	M.Nipp	M.Nipp	M.Nipp	S.Chin
Reporting Units:	µg/L	µg/L	µg/L	µg/L	mg/L
Date Analyzed:	Mar 16, 1992	Mar 16, 1992	Mar 16, 1992	Mar 16, 1992	Mar 17, 1992
QC Sample #:	GBLK031692	GBLK031692	GBLK031692	GBLK031692	203-2029
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	10	30	0.10
Conc. Matrix Spike:	12	12	12	35	0.11
Matrix Spike % Recovery:	120	120	120	117	110
Conc. Matrix Spike Dup.:	12	12	12	35	0.11
Matrix Spike Duplicate % Recovery:	120	120	120	117	110
Relative % Difference:	0.0	0.0	0.0	0.0	0.0

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

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

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

2032022.EEE <10>

ARCO Products Company
Division of AtlanticRichfieldCompany

Task Order No. EMCGC-92-1

COPY

Chain of Custody

ARCO Facility no. 5387 | City (Facility) San Lorenzo | Project manager (Consultant) Mark Knuttel

ARCO engineer Kyle Christie | Telephone no. (ARCO) 415-571-2434 | Telephone no. (Consultant) 408-453-0719 | Fax no. (Consultant) 408-453-0452

Consultant name Emcon Associates | Address (Consultant) 1938 Junction Ave. San Jose, CA.

Laboratory name: SEQUOIA

Contract number: 07-073

Method of shipment: Courier

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH gas EPA M602/8020/8015	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals ☐ VOA ☐ Semi VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org/DHS ☐ Lead EPA 7420/7421 ☐	Toxicity Test Title 22	
A-6(34)				X		X	HCl	3/10/92	14:50		X					2032022						
MW-2(26)				X		X	HCl	3/10/92	15:14		X							23				
A-7(35)				X		X	HCl	3/10/92	15:47		X							24				
MW-3(25)				X		X	HCl	3/10/92	16:15		X							25				
MW-1(27)				X		X	HCl	3/10/92	16:38		X							26				
A-4(34)				X		X	HCl	3/11/92	11:45		X							27				
A-5(30)				X		X	HCl	3/11/92	12:25		X							29				
TB-1				X		X	HCl	3/11/92	12:25		X							28				
A-5(30)				X		X	HNO_3	3/11/92	12:25									29		X		
A-5(30)				X		X	NP	3/11/92	12:25									29			X	

Special detection Limit/reporting: Lowest possible

Special QA/QC: as normal

Remarks:
TPH-G/BTXE
2 40ml VOAs HCl
TOTAL LEAD
1 liter LPE HNO_3 NOT FILTERED
TOXICITY TEST
1 liter LPE NP

Lab number:

Turnaround time:
- Priority Rush 1 Business Day ☐
- Rush 2 Business Days ☐
- Expedited 5 Business Days ☐
- Standard 10 Business Days ☑

Condition of sample: good | Temperature received: cool

Relinquished by	Date	Time	Received by	Date	Time
Relinquished by sampler: [signature]	3/12/92	8:46	Received by: Mark Knuttel		
Relinquished by: Mark Knuttel	3/12/92	10:45	Received by: [signature]		
Relinquished by: [signature]	3/12/92	1200	Received by laboratory: [signature]	3-12	1200

Distribution: White copy — Laboratory; Canary copy — ARCO Environmental Engineering; Pink copy — Consultant

WATER SAMPLE FIELD DATA SHEET

Rev. 2, 5/91

EMCON ASSOCIATES

PROJECT NO: 270-34.01 | SAMPLE ID: MW-1

PURGED BY: J. Williams | CLIENT NAME: ARCO #6367

SAMPLED BY: S. Horton | LOCATION: San Lorenzo, CA

TYPE: Ground Water X | Surface Water ___ | Treatment Effluent ___ | Other ___

CASING DIAMETER (inches): 2 X | 3 ___ | 4 ___ | 4.5 ___ | 6 ___ | Other ___

CASING ELEVATION (feet/MSL): ___ | VOLUME IN CASING (gal.): 2.67

DEPTH TO WATER (feet): 13.34 | CALCULATED PURGE (gal.): 14.45

DEPTH OF WELL (feet): 27.76 | ACTUAL PURGE VOL. (gal.): 15.00

DATE PURGED: 3/10/97 | Start (2400 Hr) 16:20 | End (2400 Hr) 16:26

DATE SAMPLED: 3/10/97 | Start (2400 Hr) 16:35 | End (2400 Hr) 16:35

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
16:22	3	6.68	555	66.7	dark gray	heavy
16:29	6	6.71	602	67.3	"	"
16:24	9	6.81	603	69.1	"	"
16:25	12	6.76	617	67.5	"	"
16:26	15	6.77	624	67.4	"	"

D. O. (ppm): NR | ODOR: strong | NR (COBALT 0 - 100) | NR (NTU 0 - 200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1): NR

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
___ 2" Bladder Pump	___ Bailer (Teflon®)	___ 2" Bladder Pump	X Bailer (Teflon®)
X Centrifugal Pump	___ Bailer (PVC)	___ DDL Sampler	___ Bailer (Stainless Steel)
___ Submersible Pump	___ Bailer (Stainless Steel)	___ Dipper	___ Submersible Pump
___ Well Wizard™	___ Dedicated	___ Well Wizard™	___ Dedicated
Other: ___		Other: ___	

WELL INTEGRITY: Good | LOCK #: 2765

REMARKS: ___

Meter Calibration: Date: ___ Time: ___ Meter Serial #: ___ Temperature °F: ___

(EC 1000 ___ / ___) (DI ___) (pH 7 ___ / ___) (pH 10 ___ / ___) (pH 4 ___ / ___)

Location of previous calibration: A-6

Signature: [signature] | Reviewed By: MK | Page 1 of 7

WATER SAMPLE FIELD DATA SHEET

Rev. 2, 5/91

EMCON ASSOCIATES

PROJECT NO: 670-24.01 SAMPLE ID: MW-2

PURGED BY: Steve Hunter CLIENT NAME: ARCO #5357

SAMPLED BY: Steve Hunter LOCATION: San Lorenzo, CA

TYPE: Ground Water X Surface Water ___ Treatment Effluent ___ Other ___

CASING DIAMETER (inches): 2 X 3 ___ 4 ___ 4.5 ___ 6 ___ Other ___

CASING ELEVATION (feet/MSL): — VOLUME IN CASING (gal.): 7.16

DEPTH TO WATER (feet): 13.50 CALCULATED PURGE (gal.): 10.71

DEPTH OF WELL (feet): 26.62 ACTUAL PURGE VOL. (gal.): 11.00

DATE PURGED: 3/10/92 Start (2400 Hr) 14:59 End (2400 Hr) 15:05

DATE SAMPLED: 3/10/92 Start (2400 Hr) 15:11 End (2400 Hr) 15:14

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
15:01	2.5	6.72	591	72.6	dk gry	heavy
15:03	5	6.65	595	71.6	"	"
15:09	7	6.70	594	71.1	"	"
15:12	9	6.67	594	70.5	"	"
15:05	11	6.69	606	70.9	"	"

D. O. (ppm): ND ODOR: strong N.R (COBALT 0 - 100) N.R (NTU 0 - 200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1): ___

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
___ 2" Bladder Pump	___ Bailer (Teflon®)	___ 2" Bladder Pump	X Bailer (Teflon®)
X Centrifugal Pump	___ Bailer (PVC)	___ DDL Sampler	___ Bailer (Stainless Steel)
___ Submersible Pump	___ Bailer (Stainless Steel)	___ Dipper	___ Submersible Pump
___ Well Wizard™	___ Dedicated	___ Well Wizard™	___ Dedicated
Other: ___		Other: ___	

WELL INTEGRITY: Good LOCK #: 2265

REMARKS: ___

Meter Calibration: Date: ___ Time: ___ Meter Serial #: ___ Temperature °F: ___

(EC 1000 ___ / ___) (DI ___) (pH 7 ___ / ___) (pH 10 ___ / ___) (pH 4 ___ / ___)

Location of previous calibration: A-6

Signature: [signature] Reviewed By: MK Page 2 of 7

WATER SAMPLE FIELD DATA SHEET

Rev. 2, 5/91

EMCON ASSOCIATES

PROJECT NO: 610-34.01 SAMPLE ID: MW-3

PURGED BY: J. Williams CLIENT NAME: ARCO #4357

SAMPLED BY: J. Williams LOCATION: San Lorenzo, CA

TYPE: Ground Water X Surface Water ___ Treatment Effluent ___ Other ___

CASING DIAMETER (inches): 2 X 3 ___ 4 ___ 4.5 ___ 6 ___ Other ___

CASING ELEVATION (feet/MSL): ___ VOLUME IN CASING (gal.): 2.91

DEPTH TO WATER (feet): 12.90 CALCULATED PURGE (gal.): 14.87

DEPTH OF WELL (feet): 25.40 ACTUAL PURGE VOL. (gal.): 15.00

DATE PURGED: 3/16/92 Start (2400 Hr) 14:35 End (2400 Hr) 16:05

DATE SAMPLED: 3/16/92 Start (2400 Hr) 16:16 End (2400 Hr) 16:15

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
16:55	3	7.76	594	70.1	dark gry	heavy
16:00	6	7.10	628	71.5	"	"
16:02	9	6.78	628	71.5	"	"
16:03	12	6.76	618	71.5	brown	"
16:05	15	6.77	624	71.9	"	"

D. O. (ppm): NR ODOR: strong

COLOR (COBALT 0 - 100): NR

TURBIDITY (NTU 0 - 200): NR

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1): ___

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
___ 2" Bladder Pump	___ Bailer (Teflon®)	___ 2" Bladder Pump	X Bailer (Teflon®)
___ Centrifugal Pump	___ Bailer (PVC)	___ DDL Sampler	___ Bailer (Stainless Steel)
X Submersible Pump	___ Bailer (Stainless Steel)	___ Dipper	___ Submersible Pump
___ Well Wizard™	___ Dedicated	___ Well Wizard™	___ Dedicated
Other: ___		Other: ___	

WELL INTEGRITY: Good LOCK #: 2268

REMARKS: ___

Meter Calibration: Date: ___ Time: ___ Meter Serial #: ___ Temperature °F: ___

(EC 1000 ___ / ___) (DI ___) (pH 7 ___ / ___) (pH 10 ___ / ___) (pH 4 ___ / ___)

Location of previous calibration: A-6

Signature: [illegible] Reviewed By: MK Page 3 of 7

WATER SAMPLE FIELD DATA SHEET

Rev. 2, 5/91

EMCON ASSOCIATES

PROJECT NO: 670-34.01 SAMPLE ID: A-4

PURGED BY: J. Williams CLIENT NAME: ARCO #5347

SAMPLED BY: S. Horton LOCATION: San Lorenzo, CA

TYPE: Ground Water X Surface Water ___ Treatment Effluent ___ Other ___

CASING DIAMETER (inches): 2 ___ 3 X 4 ___ 4.5 ___ 6 ___ Other ___

CASING ELEVATION (feet/MSL): ___ VOLUME IN CASING (gal.): 7.60

DEPTH TO WATER (feet): 14.54 CALCULATED PURGE (gal.): 38.01

DEPTH OF WELL (feet): 34.98 ACTUAL PURGE VOL. (gal.): 38.50

DATE PURGED: 3/11/92 Start (2400 Hr) 11:31 End (2400 Hr) 11:36

DATE SAMPLED: 3/11/92 Start (2400 Hr) 11:42 End (2400 Hr) 11:45

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
11:32	8	6.63	1159	68.7	brown	heavy
11:32	16	6.53	1166	69.1	cloudy	med
11:34	23 <	6.53	1169	69.4	"	"
11:35	31	6.62	1217	68.2	"	"
11:36	39 <	6.61	1225	69.1	"	"

D. O. (ppm): NR ODOR: strong

NR (COBALT 0 - 100) NR (NTU 0 - 200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1): NR

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
___ 2" Bladder Pump	___ Bailer (Teflon®)	___ 2" Bladder Pump	X Bailer (Teflon®)
X Centrifugal Pump	___ Bailer (PVC)	___ DDL Sampler	___ Bailer (Stainless Steel)
___ Submersible Pump	___ Bailer (Stainless Steel)	___ Dipper	___ Submersible Pump
___ Well Wizard™	___ Dedicated	___ Well Wizard™	___ Dedicated
Other: ___		Other: ___	

WELL INTEGRITY: Good LOCK #: 2265

REMARKS: ___

Meter Calibration: Date: 3/11/92 Time: 10:47 Meter Serial #: 9011 Temperature °F: 72.9

(EC 1000 1239 / 1000) (DI ___) (pH 7 6.96 / 7.00) (pH 10 10.01 / 10.00) (pH 4 4.00 / ___)

Location of previous calibration: ___

Signature: [signature] Reviewed By: MK Page 4 of 7

WATER SAMPLE FIELD DATA SHEET

Rev. 2, 5/91

EMCON ASSOCIATES

PROJECT NO: 670-34.01 SAMPLE ID: A-5

PURGED BY: J. Williams CLIENT NAME: ARCO #9357

SAMPLED BY: S. Horton LOCATION: San Lorenzo, CA

TYPE: Ground Water X Surface Water ___ Treatment Effluent ___ Other ___

CASING DIAMETER (inches): 2 ___ 3 X 4 ___ 4.5 ___ 6 ___ Other ___

CASING ELEVATION (feet/MSL): ___ VOLUME IN CASING (gal.): 7.96

DEPTH TO WATER (feet): 13.53 CALCULATED PURGE (gal.): 39.33

DEPTH OF WELL (feet): 34.98 ACTUAL PURGE VOL. (gal.): 40 CC

DATE PURGED: 3/11/92 Start (2400 Hr) 11:57 End (2400 Hr) 12:06

DATE SAMPLED: 3/11/92 Start (2400 Hr) 12:20 End (2400 Hr) 12:25

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
11:59	5	6.72	13.86	71.3	brown	heavy
12:00	16	6.74	1783	69.9	"	"
12:02	24	6.76	1798	68.6	"	"
12:04	32	6.72	1332	67.5	"	"
12:06	40	6.70	1338	67.3	"	"

D. O. (ppm): N.R. ODOR: moderate

COLOR (COBALT 0 - 100): NR TURBIDITY (NTU 0 - 200): NR

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1): NR

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
___ 2" Bladder Pump	___ Bailer (Teflon®)	___ 2" Bladder Pump	X Bailer (Teflon®)
X Centrifugal Pump	___ Bailer (PVC)	___ DDL Sampler	___ Bailer (Stainless Steel)
___ Submersible Pump	___ Bailer (Stainless Steel)	___ Dipper	___ Submersible Pump
___ Well Wizard™	___ Dedicated	___ Well Wizard™	___ Dedicated
Other: ___		Other: ___	

WELL INTEGRITY: Good LOCK #: 2768

REMARKS: ___

Meter Calibration: Date: ___ Time: ___ Meter Serial #: ___ Temperature °F: ___

(EC 1000 ___ / ___) (DI ___) (pH 7 ___ / ___) (pH 10 ___ / ___) (pH 4 ___ / ___)

Location of previous calibration: A-2

Signature: S. Horton Reviewed By: MK Page 5 of 7

WATER SAMPLE FIELD DATA SHEET

Rev. 2, 5/91

EMCON ASSOCIATES

PROJECT NO: 070-34.01 SAMPLE ID: A-6

PURGED BY: S. Horton CLIENT NAME: ARCC # 5357

SAMPLED BY: S. Horton LOCATION: San Lorenzo

TYPE: Ground Water X Surface Water ___ Treatment Effluent ___ Other ___

CASING DIAMETER (inches): 2 ___ 3 X 4 ___ 4.5 ___ 6 ___ Other ___

CASING ELEVATION (feet/MSL): ___ VOLUME IN CASING (gal.): 7.51

DEPTH TO WATER (feet): 13.73 CALCULATED PURGE (gal.): 39.06

DEPTH OF WELL (feet): 34.73 ACTUAL PURGE VOL. (gal.): 40.00

DATE PURGED: 3/16/92 Start (2400 Hr) 14:35 End (2400 Hr) 14:46

DATE SAMPLED: 3/16/92 Start (2400 Hr) 14:47 End (2400 Hr) 14:50

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
14:40	8	6.56	402	67.6	brown	heavy
14:42	16	6.68	403	66.3	"	"
14:44	24	6.69	402	65.9	cloudy	moderate
14:45	32	6.72	407	65.8	clear	slight
14:46	40	6.75	407	65.4	clear	slight

D. O. (ppm): NR ODOR: none NR (COBALT 0 - 100) NR (NTU 0 - 200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1): NR

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
___ 2" Bladder Pump	___ Bailer (Teflon®)	___ 2" Bladder Pump	X Bailer (Teflon®)
X Centrifugal Pump	___ Bailer (PVC)	___ DDL Sampler	___ Bailer (Stainless Steel)
___ Submersible Pump	___ Bailer (Stainless Steel)	___ Dipper	___ Submersible Pump
___ Well Wizard™	___ Dedicated	___ Well Wizard™	___ Dedicated
Other: ___		Other: ___	

WELL INTEGRITY: Good LOCK #: 2265

REMARKS: ___

Meter Calibration: Date: 3/16/92 Time: 13:25 Meter Serial #: 9010 Temperature °F: 70.3

(EC 1000 TC / 1000) (DI ___) (pH 7 5.99 / TC) (pH 10 9.16 / 1000) (pH 4 4.00 / ___)

Location of previous calibration: ___

Signature: [signature] Reviewed By: MK Page 6 of 7

WATER SAMPLE FIELD DATA SHEET

Rev. 2, 5/91

EMCON ASSOCIATES

PROJECT NO: 670-36 9 | SAMPLE ID: A-7

PURGED BY: J. Williams | CLIENT NAME: ARCO #6357

SAMPLED BY: S. Horton | LOCATION: San Lorenzo, CA

TYPE: Ground Water X | Surface Water ___ | Treatment Effluent ___ | Other ___

CASING DIAMETER (inches): 2 ___ | 3 X | 4 ___ | 4.5 ___ | 6 ___ | Other ___

CASING ELEVATION (feet/MSL): — | VOLUME IN CASING (gal.): 7.52

DEPTH TO WATER (feet): 15.30 | CALCULATED PURGE (gal.): 37.62

DEPTH OF WELL (feet): 35.53 | ACTUAL PURGE VOL (gal.): 38.00

DATE PURGED: 3/10/97 | Start (2400 Hr) 15:29 | End (2400 Hr) 15:39

DATE SAMPLED: 3/10/97 | Start (2400 Hr) 15:45 | End (2400 Hr) 15:47

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
15:31	8	6.95	553	68.7	brown	heavy
15:33	15.5	6.57	568	68.1	"	"
15:35	~~23~~	6.56	561	68.6	"	"
15:37	30.5	6.59	555	69.6	"	"
15:39	38	6.59	559	68.7	"	"

D. O. (ppm): NR | ODOR: moderate | NR (COBALT 0 - 100) | NR (NTU 0 - 200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1): NR

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
___ 2" Bladder Pump	___ Bailer (Teflon®)	___ 2" Bladder Pump	X Bailer (Teflon®)
X Centrifugal Pump	___ Bailer (PVC)	___ DDL Sampler	___ Bailer (Stainless Steel)
~~X~~ Submersible Pump	___ Bailer (Stainless Steel)	___ Dipper	___ Submersible Pump
___ Well Wizard™	___ Dedicated	___ Well Wizard™	___ Dedicated
Other: ___		Other: ___	

WELL INTEGRITY: Good | LOCK #: 2268

REMARKS: ___

Meter Calibration: Date: ___ Time: ___ Meter Serial #: ___ Temperature °F: ___

(EC 1000 ___ / ___) (DI ___) (pH 7 ___ / ___) (pH 10 ___ / ___) (pH 4 ___ / ___)

Location of previous calibration: A-6

Signature: [signature] | Reviewed By: MK | Page 7 of 7