

3315 Almaden Expressway, Suite 34  
San Jose, CA 95118  
Phone: (408) 264-7723  
FAX: (408) 264-2435

**T R A N S M I T T A L**

DATE: May 5, 1993  
PROJECT NO.: 62019.04

TO: Alameda County Health Care Services Agency  
Department of Environmental Health  
80 Swan Way, Suite 200  
Oakland, California 94621

ATTENTION: ~~Mr. Rob Weston~~ *SCOTT STERN*

SUBJECT: ARCO Station No. 2162

**WE ARE SENDING YOU:**

COPIES	DATED	DESCRIPTION
1	4/30/93	Letter Report on First Quarter 1993 Groundwater Monitoring at ARCO Station No. 2162, 15135 Hesperian Boulevard, San Leandro, California.

THESE ARE TRANSMITTED as checked below:

For review and comment     As requested     For your files     For approval

REMARKS:

*[Signature]*  
James L. Nelson, C.E.G. 1463

3315 Almaden Expressway, Suite 34  
San Jose, CA 95118  
Phone: (408) 264-7723  
FAX: (408) 264-2435

LETTER REPORT  
QUARTERLY GROUNDWATER MONITORING  
First Quarter 1993  
at  
ARCO Station 2162  
15135 Hesperian Boulevard  
San Leandro, California

62019.04

*April 30, 1993*

3315 Almaden Expressway, Suite 34  
San Jose, CA 95118  
Phone: (408) 264-7723  
FAX: (408) 264-2435

April 30, 1993  
0428MWHE  
62019.04

Mr. Michael Whelan  
Environmental Engineer  
ARCO Products Company  
P.O. Box 5811  
San Mateo, California 94402

Subject: Letter Report on First Quarter 1993 Groundwater Monitoring at ARCO Station 2162, 15135 Hesperian Boulevard, San Leandro, California.

Mr. Whelan:

As requested by ARCO Products Company (ARCO), RESNA Industries Inc. (RESNA) prepared this letter report which summarizes the results of the first quarter 1993 groundwater monitoring performed by ARCO's contractor, EMCON Associates (EMCON) of San Jose, at the above-referenced site. The objectives of this quarterly groundwater monitoring are to evaluate changes in the groundwater flow direction and gradient, and changes in concentrations of petroleum hydrocarbons in the local groundwater associated with former gasoline underground-storage tanks at the site. Field work and laboratory analyses of groundwater samples during this quarter were performed under the direction of EMCON, and included measuring depths to water, subjectively analyzing groundwater for the presence of petroleum product, collecting groundwater samples from the wells for laboratory analyses, and directing a State-certified laboratory to analyze the groundwater samples. Field procedures and acquisition of field data were performed under the direction of EMCON; warrant of their field data and evaluation of their field protocols are beyond RESNA's scope of work. RESNA's scope of work was limited to interpretation of field and laboratory analyses data, which included evaluating trends in reported hydrocarbon concentrations in the local groundwater, the groundwater gradient, and direction of groundwater flow beneath the site.

ARCO Station 2162 is an operating auto repair and self-service gasoline station located in a residential area on the southwestern corner of the intersection of Hesperian Boulevard and Ruth Court in San Leandro, California. The location of the site is shown on the Site Vicinity Map, Plate 1. The locations of the existing tanks and other pertinent facilities at the site are shown on the Generalized Site Plan, Plate 2.

The results of previous environmental investigations at the site are presented in the reports listed in the references section. The locations of the groundwater and vadose monitoring wells and pertinent site features are shown on the Generalized Site Plan, Plate 2.

### Groundwater Sampling and Gradient Evaluation

Depth-to-water (DTW) measurements and groundwater sampling were performed in the four onsite wells by EMCON field personnel on January 14, 1993. DTW measurements and subjective analysis for product were performed by EMCON on February 24, and March 30, 1993. The results of EMCON's field work at the site EMCON's Field Reports included in Appendix A.

The DTW levels, wellhead elevations, groundwater elevations, and subjective observations for product in the groundwater from MW-1 through MW-4 for this quarter and previous quarterly groundwater monitoring at the site are summarized in Table 1, Cumulative Groundwater Monitoring Data. EMCON's DTW measurements were used to evaluate groundwater elevations. **Evidence of product or sheen was not reported on EMCON's Field Reports during this quarter (see Appendix A).** The groundwater gradients interpreted from the January, February, and March 1993 groundwater monitoring episodes are shown on Plates 3 through 5, Groundwater Gradient Maps. The interpreted groundwater gradient and flow direction was approximately 0.01 to the southwest.

EMCON's Water Sample Field Data Sheets, Field Reports, and Summary of Groundwater Monitoring Data are included in Appendix A. Purge water generated during purging and sampling of the monitoring wells was transported to Gibson Environmental in Redwood City, California for recycling.

### Laboratory Methods and Analyses

Under the direction of EMCON, water samples collected from the wells were analyzed by Columbia Analytical Services, Inc. located in San Jose, California (Hazardous Waste Testing Laboratory Certification No. 1426). The water samples from MW-1 through MW-4 were analyzed for total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene, and total xylenes (BTEX) using modified Environmental Protection Agency (EPA) Methods 5030/8020/California Department of Health Services (DHS) leaking underground fuel tank (LUFT) Method. Concentrations of TPHg and benzene in the groundwater are shown on Plate 4, TPHg/Benzene Concentrations in Groundwater. The Chain of Custody Records and Laboratory Analysis Reports are included in Appendix A.

Quarterly Groundwater Monitoring Report  
ARCO Station 2162, San Leandro, California

April 30, 1993  
62019.04

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Results of these and previous water analyses are summarized in Table 2, Cumulative Results of Laboratory Analyses of Groundwater Samples.

Since last quarter, concentrations of TPHg have decreased in monitoring well MW-1, and have increased in monitoring wells MW-2, MW-3, and MW-4. Concentrations of benzene have decreased in wells MW-1 and MW-4, remained the same in well MW-3, and increased in well MW-2.

RESNA recommends that copies of this report be forwarded to:

Mr. John Jang  
Regional Water Quality Control Board  
San Francisco Bay Region  
2101 Webster Street, Suite 500  
Oakland, California 94612

Mr. Rob Weston  
Alameda County Health Care Services Agency  
Department of Environmental Health  
80 Swan Way, Room 200  
Oakland, California 94621

Mr. Mike Bakaldin  
City of San Leandro Fire Department  
Hazardous Materials Division  
835 East 14th Street  
San Leandro, California 94577

Quarterly Groundwater Monitoring Report  
ARCO Station 2162, San Leandro, California


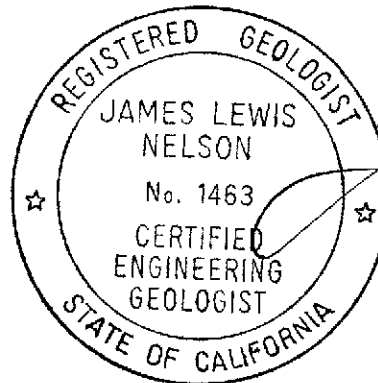
April 30, 1993  
62019.04

If you have any questions or comments, please call us at (408) 264-7723.

Sincerely,  
RESNA Industries Inc.



Erin McLucas  
Staff Geologist



James L. Nelson  
Certified Engineering  
Geologist No. 1463

Enclosures: References

- Plate 1, Site Vicinity Map
- Plate 2, Generalized Site Plan
- Plate 3, Groundwater Gradient Map, January 14, 1993
- Plate 4, Groundwater Gradient Map, February 24, 1993
- Plate 5, Groundwater Gradient Map, March 30, 1993
- Plate 6, TPHg/Benzene Concentrations in Groundwater, January 14, 1993

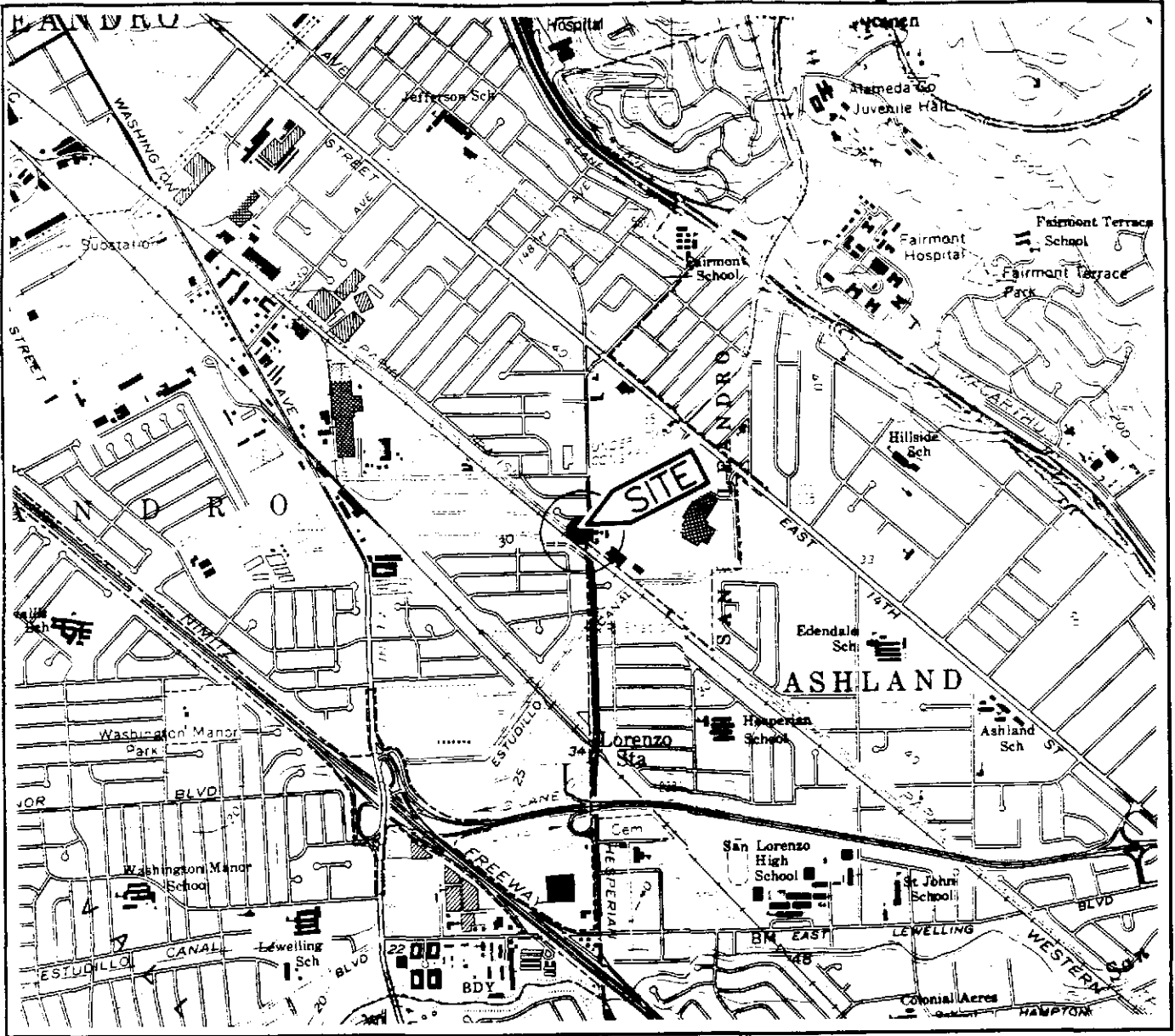
Table 1, Cumulative Groundwater Monitoring Data

Table 2, Cumulative Results of Laboratory Analyses of Groundwater  
Samples

Appendix A: EMCON's Field Reports Depth to Water/Floating Product  
Survey Results, Summary of Groundwater Monitoring Data,  
Certified Analytical Reports with Chain-of-Custody, and Water  
Sample Field Data Sheets.

**REFERENCES**

- Department of Health Services, State of California. October 24, 1990. Summary of Drinking Water Standards.
- Hickenbottom, Kelvin and Muir, Kenneth, June 1988. Geohydrology and Groundwater Quality Overview of the East Bay Plain Area, Alameda County, California. Alameda County Flood Control and Water Conservation District, Report 205 (j).
- Maslonkowski, D.P. 1984. Groundwater in the San Leandro and San Lorenzo Alluvial Cones of the East Bay Plan of Alameda County. Alameda County Flood control and Water Conservation District, California
- RESNA. July 7, 1992. Work Plan for Subsurface Investigation at ARCO Station 2162, 15135 Hesperian Boulevard, San Leandro, California. 62019.01
- RESNA. September 6, 1992. Site Safety Plan Subsurface Environmental Investigation at ARCO Station 2162, 15135 Hesperian Boulevard, San Leandro, California. 62019.02
- RESNA. February 4, 1993. Letter Report Quarterly Groundwater Monitoring, Fourth Quarter 1992, at ARCO Station 2162, 15135 Hesperian Boulevard, San Leandro, California. 62019.04
- RESNA. March 10, 1993. Subsurface Investigation at ARCO 2162, 15135 Hesperian Boulevard, San Leandro, California. 62019.02
- Roux Associates, August 28, 1991. Letter Report - Limited Soil Performance Test, ARCO Facility No. 2162, 15135 Hesperian Boulevard, San Leandro, California. Doc #A101W02.1.1
- Roux Associates, August 28, 1991. Preliminary Tank Replacement Assessment, ARCO Facility No. 2162, 15135 Hesperian Boulevard, San Leandro, California. #A101W01.1.5
- Roux Associates, August 28, 1991. Letter Report Limited Soil Performance Test, ARCO Facility No. 2162, 15135 Hesperian Boulevard, San Leandro, California. #A101W02.1.1
- Roux Associates, July 7, 1992. Underground Storage Tank Replacement and Soil Sampling, ARCO Facility No. 2162, 15135 Hesperian Boulevard, San Leandro, California. #A117W01.1.8



Base: U.S. Geological Survey  
 7.5-Minute Quadrangles  
 San Leandro, California  
 Photorevised 1980

LEGEND

● = Site Location

Approximate Scale



**RESNA**  
 Working to Restore Nature

PROJECT 62019.04

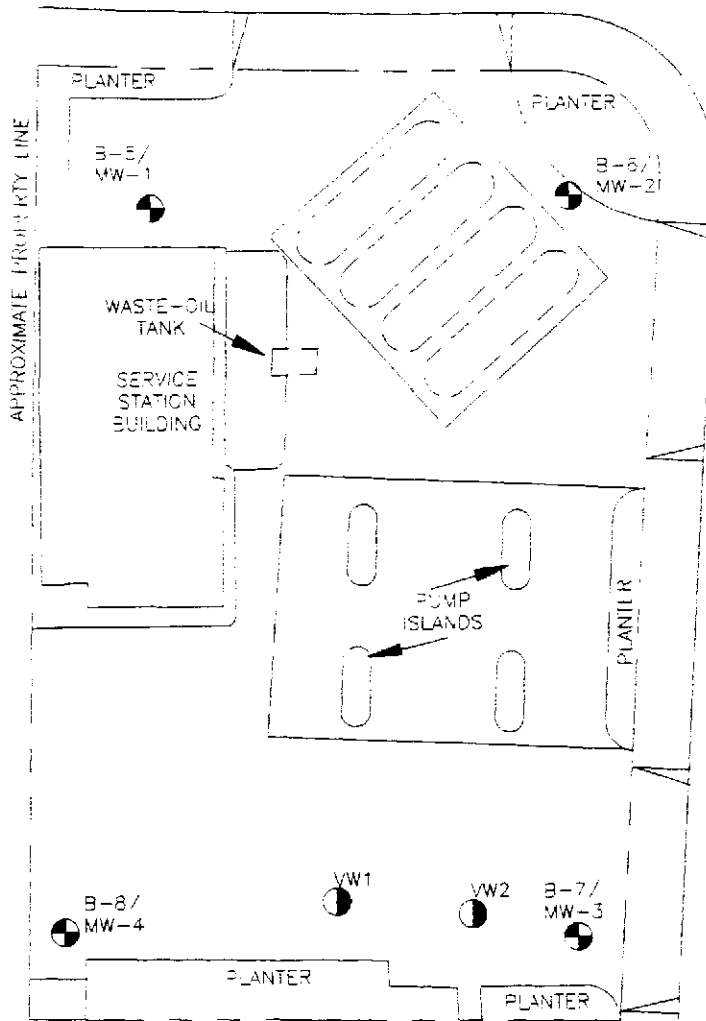
**SITE VICINITY MAP**  
**ARCO Station 2162**  
**15135 Hesperian Boulevard**  
**San Leandro, California**

PLATE

1



RUTH COURT



HESPERIAN BOULEVARD

EXPLANATION

B-8/  
MW-4 = Monitoring well RESNA September 1992

VW2 = Vapor extraction well  
(Roux Associates, Inc., 1991)

= Existing underground storage tank



Approximate Scale



Source: Modified from site plan provided by Roux Associates and survey data from John Koch, licensed land surveyor (9/16/92)

**RESNA**  
*Working to Restore Nature*

**GENERALIZED SITE PLAN**  
**ARCO Station 2162**  
**15135 Hesperian Boulevard**  
**San Leandro, California**

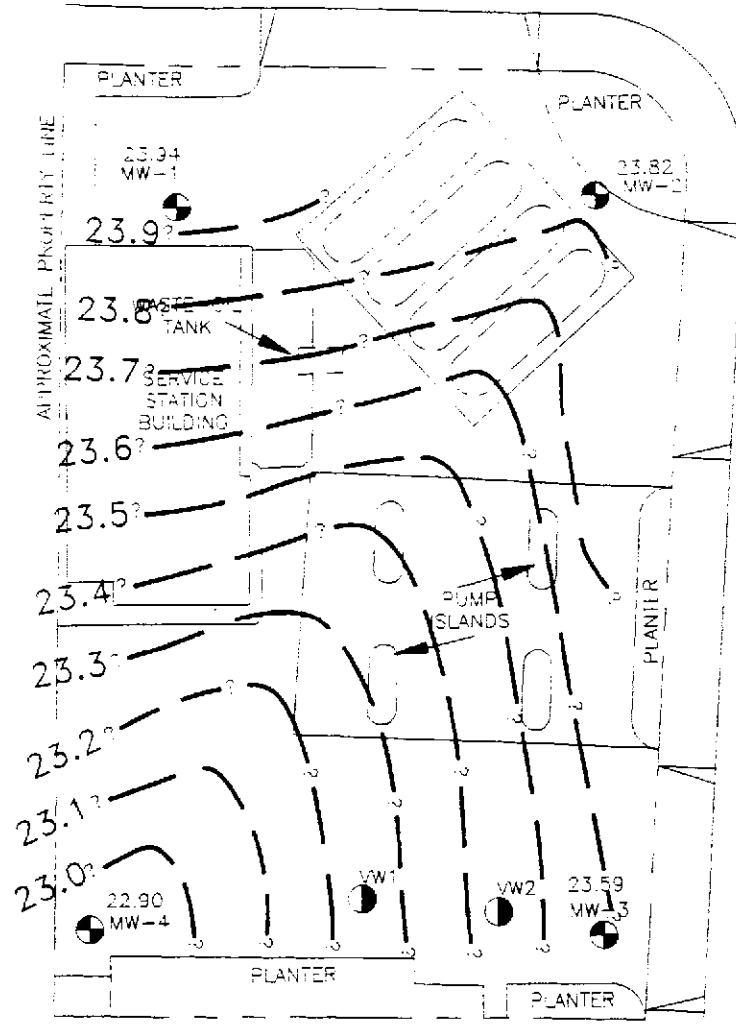
**PLATE**

**2**

**PROJECT 62019.04**

# RUTH COURT

APPROXIMATE  
DIRECTION OF  
GROUNDWATER FLOW  
(January 14, 1993)



HESPERIAN BOULEVARD

### EXPLANATION

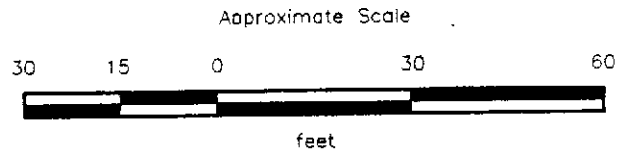
MW-4 = Monitoring well RESNA September 1992

VW2 = Vapor extraction well (Roux Associates, Inc., 1991)

= Existing underground storage tank

23.9 = Line of equal elevation of groundwater in feet above mean sea level (MSL)

23.94 = Elevation of groundwater in feet above MSL, January 14, 1993



Source: Modified from site plan provided by Roux Associates, and survey data from John Koch, licensed land surveyor (9/16/92)

**RESNA**  
Working to Restore Nature

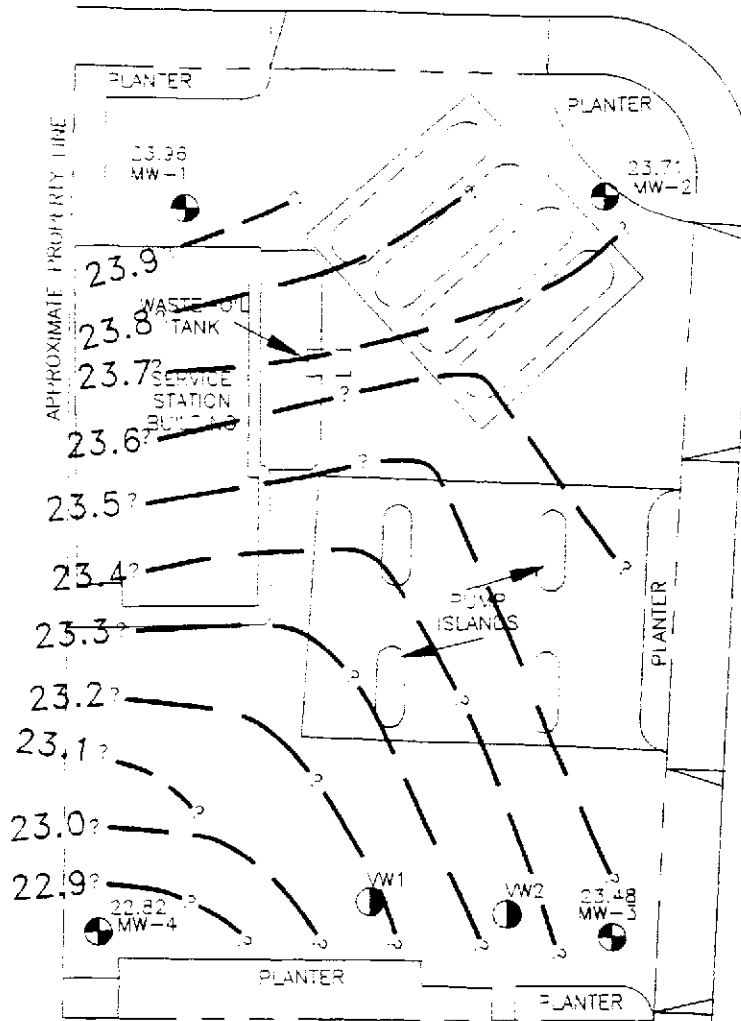
**GROUNDWATER GRADIENT MAP**  
**ARCO Station 2162**  
**15135 Hesperian Boulevard**  
**San Leandro, California**

**PLATE**  
**3**

**PROJECT 62019.04**

# RUTH COURT

APPROXIMATE  
DIRECTION OF  
GROUNDWATER FLOW  
(February 24, 1993)



HESPERIAN BOULEVARD

**EXPLANATION**

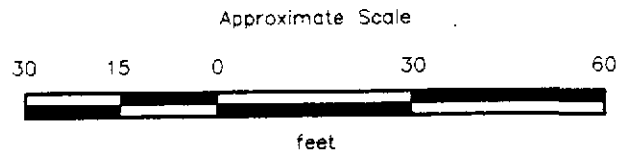
MW-4 = Monitoring well RESNA September 1992

VW2 = Vapor extraction well (Roux Associates, Inc., 1991)

= Existing underground storage tank

23.9 = Line of equal elevation of groundwater in feet above mean sea level (MSL)

23.96 = Elevation of groundwater in feet above MSL February 24, 1993



Source: Modified from site plan provided by Roux Associates, and survey data from John Koch, licensed land surveyor (9/16/92)

**RESNA**  
Working to Restore Nature

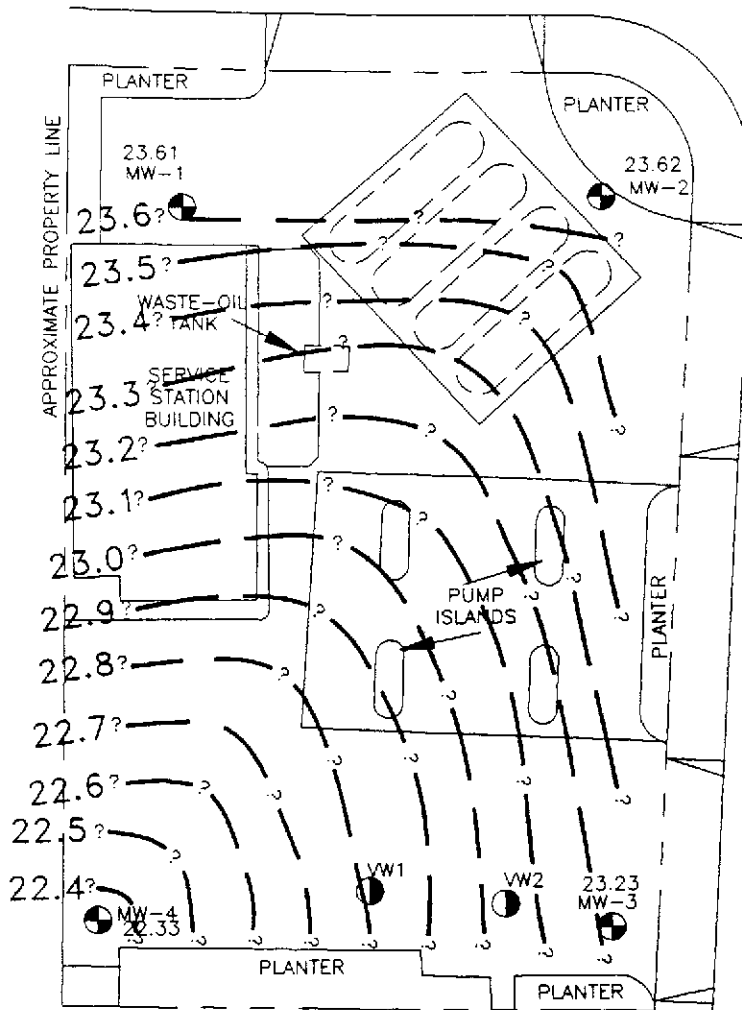
PROJECT 62019.04

**GROUNDWATER GRADIENT MAP**  
ARCO Station 2162  
15135 Hesperian Boulevard  
San Leandro, California

**PLATE**  
**4**

# RUTH COURT

APPROXIMATE  
DIRECTION OF  
GROUNDWATER FLOW  
(March 30, 1993)



HESPERIAN BOULEVARD

EXPLANATION

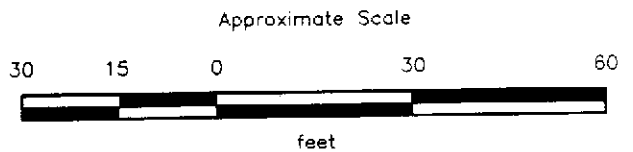
MW-4 = Monitoring well RESNA September 1992

VW2 = Vapor extraction well  
(Roux Associates, Inc., 1991)

= Existing underground storage tank

23.6 = Line of equal elevation of groundwater  
in feet above mean sea level (MSL)

23.62 = Elevation of groundwater in feet above MSL,  
March 30, 1993



Source: Modified from site plan provided by Roux Associates,  
and survey data from John Koch, licensed  
land surveyor (9/16/92)

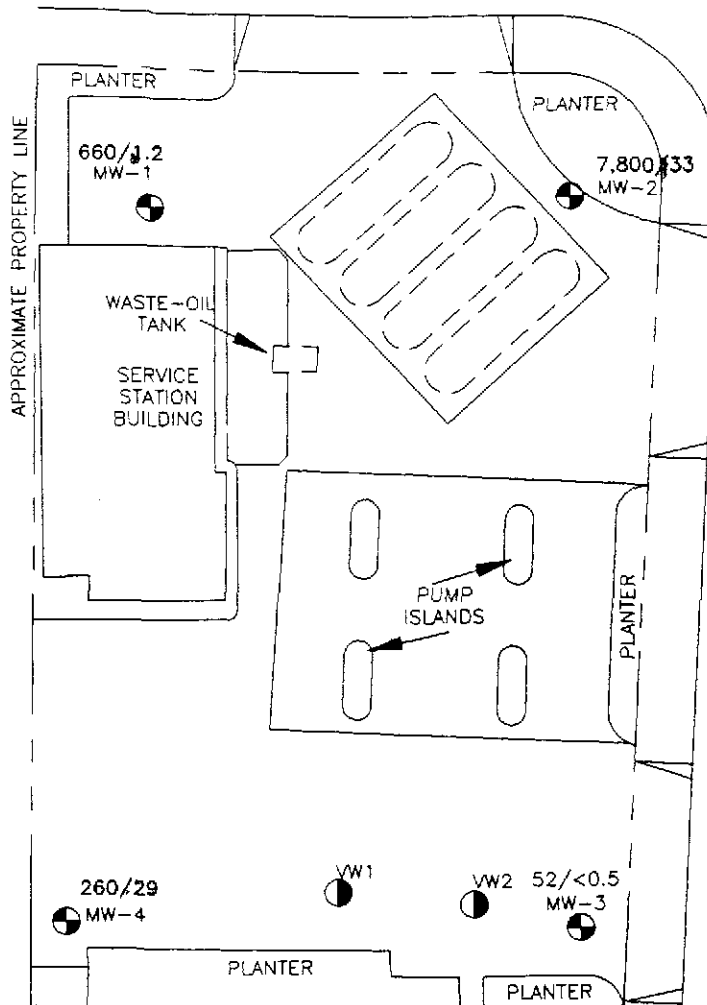
**RESNA**  
Working to Restore Nature

**GROUNDWATER GRADIENT MAP**  
**ARCO Station 2162**  
**15135 Hesperian Boulevard**  
**San Leandro, California**

**PLATE**  
**5**

**PROJECT 62019.04**

# RUTH COURT



HESPERIAN BOULEVARD

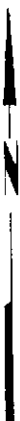
### EXPLANATION

7,800/33 = Concentration of TPHg/Benzene in groundwater, in ppb, January 14, 1993

MW-4 = Monitoring well RESNA September 1992

VW2 = Vapor extraction well (Roux Associates, Inc., 1991)

= Existing underground storage tank



Approximate Scale



Source: Modified from site plan provided by Roux Associates, and survey data from John Koch, licensed land surveyor (9/16/92)

**RESNA**  
Working to Restore Nature

PROJECT 62019.04

**TPHg/BENZENE CONCENTRATIONS  
IN GROUNDWATER  
ARCO Station 2162  
15135 Hesperian Boulevard  
San Leandro, California**

**PLATE  
6**

Quarterly Groundwater Monitoring Report  
ARCO Station 2162, San Leandro, California

April 30, 1993  
62019.04

TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
ARCO Station 2162  
15135 Hesperian Boulevard  
San Leandro, California

Well Date	Well Elevation	Depth to Water	Water Elevation	Floating Product
<u>MW-1</u>				
09/30/92	31.19	10.68	20.51	None
10/16/92		10.83	20.36	None
01/14/93		7.25	23.94	None
02/24/93		7.23	23.96	None
03/30/93		7.58	23.61	None
<u>MW-2</u>				
09/30/92	30.38	9.74	20.64	None
10/16/92		9.91	20.47	None
01/14/93		6.56	23.82	None
02/24/93		6.67	23.71	None
03/30/93		6.76	23.62	None
<u>MW-3</u>				
09/30/92	30.30	9.93	20.37	None
10/16/92		10.13	20.17	None
01/14/93		6.71	23.59	None
02/24/93		6.82	23.48	None
03/30/93		7.07	23.23	None
<u>MW-4</u>				
09/30/92	30.39	11.15	19.24	None
10/16/92		11.33	19.06	None
01/14/93		7.49	22.90	None
02/24/93		7.57	22.82	None
03/30/93		8.06	22.33	None

All measurements in feet.

Well elevation datum is top of casing (TOC) if feet above mean sea level (msl). Survey datum is City of San Leandro = 1973 Adjusted National Geodetic Vertical Datum.

Depth-to-water (DTW) = measured from top of casing.

Water elevation = TOC minus DTW.

Floating product = Subjective evidence of floating product noted.

Wells surveyed by John Koch, Licensed Surveyor, on 9/16/92.

DTW decreased by ~ 3'

Quarterly Groundwater Monitoring Report  
 ARCO Station 2162, San Leandro, California

TABLE 2  
 CUMULATIVE RESULTS OF LABORATORY ANALYSES  
 OF GROUNDWATER SAMPLES  
 ARCO Station 2162  
 15135 Hesperian Boulevard  
 San Leandro, California

Well Date	TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes
<u>MW-1</u>					
09/30/92	1,100	6.2	<0.50	6.9	<0.50
10/16/92	790	3.0	0.8	5.6	2.9
01/14/93	660	1.2	<1*	15	4.6
<u>MW-2</u>					
09/30/92	1,000	9.6	<0.50	45	110
10/16/92	630	8.0	<1.0*	37	64
01/14/93	7,800	33	5	340	920
<u>MW-3</u>					
09/30/92	<50	<0.50	<0.50	<0.50	<0.50
10/16/92	<50	<0.50	<0.50	<0.50	<0.50
01/14/93	52	<0.5	<0.5	<0.5	<0.5
<u>MW-4</u>					
09/30/92	330	81	<0.50	<0.50	<0.50
10/16/92	250	44	<0.5	<0.5	0.7
01/14/93	260	29	0.6	<0.5	1.1
MCL:	---	1	---	680	1,750
DWAL:	---	---	100	---	---

Results in micrograms per liter ( $\mu/L$ ) = parts per billion (ppb).

TPHg: Total petroleum hydrocarbons as gasoline by EPA method 5030/8020/California DHS LUFT.  
 BTEX:B: Benzene, T: Toluene, E: Ethylbenzene, X: Total Xylene isomers; measured by EPA method 5030/8020/California DHS LUFT Method

<: Results reported as less than the detection limit.

\*: Raised method reporting limit (MRL) due to high analyte concentration requiring sample dilution.

MCL: State Maximum Contaminant Level (DHS October 1990).

DWAL: State recommended Drinking Water Action Level (DHS October 1990).

**APPENDIX A**

**EMCON'S FIELD REPORTS  
DEPTH TO WATER/FLOATING PRODUCT SURVEY RESULTS,  
SUMMARY OF GROUNDWATER MONITORING DATA,  
CERTIFIED ANALYTICAL REPORTS WITH CHAIN-OF-CUSTODY,  
AND WATER SAMPLE FIELD DATA SHEETS**





**EMCON**  
ASSOCIATES

Consultants in Wastes  
Management and  
Environmental Control

RECEIVED  
FEB 5 1993

Date February 4, 1993  
Project OG70-055.01

To:  
Mr. Joel Coffman  
RESNA/ Applied Geosystems  
3315 Almaden Expressway, Suite 34  
San Jose, California 95118

We are enclosing:

Copies	Description
<u>1</u>	<u>Depth To Water / Floating Product Survey Results</u>
<u>1</u>	<u>Summary of Groundwater Monitoring Data</u>
<u>1</u>	<u>Certified Analytical Reports with Chain-of-Custody</u>
<u>4</u>	<u>Water Sample Field Data Sheets</u>

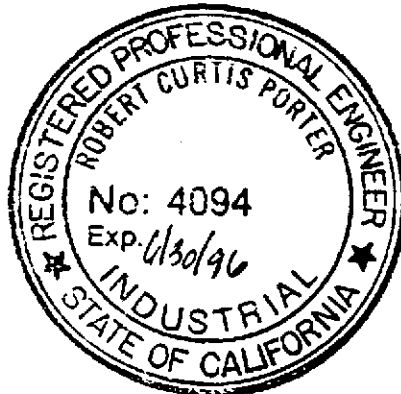
For your:  X  Information Sent by:  X  Mail

Comments:

Enclosed are the data from the first quarter 1993 monitoring event at ARCO service station 2162, 15135 Hesperian Blvd, San Lorenzo, CA. Groundwater monitoring is conducted consistent with applicable regulatory guidelines. Please call if you have any questions: (408) 453-2266.

Jim Butera *yB*

Reviewed by:



Robert Porter  
Robert Porter, Senior Project  
Engineer.



**FIELD REPORT**  
**DEPTH TO WATER / FLOATING PRODUCT SURVEY**

PROJECT # : 0G70-055.01      STATION ADDRESS : 15135 Hesperian Blvd, San Leandro      DATE : 1-11-93  
 ARCO STATION # : 2162      FIELD TECHNICIAN : L. RATH      DAY : Thursday

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	MW-1	good	OK	OK	3259	OK	<del>7.25</del> 6.74	<del>7.23</del> 6.74	ND	ND	16.0	-
2	MW-2	OK	OK	OK	3259	OK	6.56	6.55	ND	ND	16.0	-
3	MW-3	OK	OK	OK	3259	OK	6.71	6.70	ND	ND	15.0	-
4	MW-4	OK	OK	OK	3259	OK	7.49	7.48	ND	ND	17.1	-

**SURVEY POINTS ARE TOP OF WELL CASINGS**

Summary of Groundwater Monitoring Data  
 First Quarter 1993  
 ARCO Service Station 2162  
 15135 Hesperian Boulevard, San Leandro, California  
 micrograms per liter ( $\mu\text{g/l}$ ) or parts per billion (ppb)

Well ID and Sample Depth	Sampling Date	Depth To Water (feet)	Floating Product Thickness (feet)	TPH <sup>1</sup> as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)
MW-1(15)	01/14/93	7.25	ND. <sup>2</sup>	660.	1.2	<1.	15.	4.6
MW-2(15)	01/14/93	6.56	ND.	7,800.	33.	5.	340.	920.
MW-3(14)	01/14/93	6.71	ND.	52.	<0.5	<0.5	<0.5	<0.5
MW-4(16)	01/14/93	7.49	ND.	260.	29.	0.6	<0.5	1.1

1. TPH. = Total petroleum hydrocarbons  
 2. ND. = Not detected



January 27, 1993

Service Request No. SJ93-0052

Jim Butera  
EMCON Associates  
1921 Ringwood Avenue  
San Jose, CA 95131

Re: EMCON Project No. 0G70-055.01  
ARCO Facility No. 2162

Dear Mr. Butera:

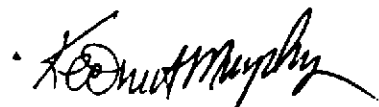
Attached are the results of the water samples submitted to our lab on January 14, 1993. For your reference, these analyses have been assigned our service request number SJ93-0052.


All analyses were performed consistent with our laboratory's quality assurance program. All results are intended to be considered in their entirety, and CAS is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions.

Respectfully submitted:

COLUMBIA ANALYTICAL SERVICES, INC.

  
Keoni A. Murphy  
Laboratory Manager

  
Annelise J. Bazar  
Regional QA Coordinator

KAM/kt

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON Associates  
 Project: EMCON Project No. 0G70-055.01  
 ARCO Facility No. 2162

Date Received: 01/14/93  
 Service Request No.: SJ93-0052  
 Sample Matrix: Water

BTEX and TPH as Gasoline  
 EPA Methods 5030/8020/California DHS LUFT Method  
 µg/L (ppb)

Sample Name:	<u>MW-1 (15)</u>	<u>MW-2 (15)</u>	<u>MW-3 (14)</u>
Date Analyzed:	01/20/93	01/21/93	01/20/93

<u>Analyte</u>	<u>MRL</u>			
Benzene	0.5	1.2	33.	ND
Toluene	0.5	<1. *	5.	ND
Ethylbenzene	0.5	15.	340.	ND
Total Xylenes	0.5	4.6	920.	ND
TPH as Gasoline	50	660.	7,800.	52.

TPH • Total Petroleum Hydrocarbons  
 MRL Method Reporting Limit  
 ND None Detected at or above the method reporting limit  
 \* Raised MRL due to high analyte concentration requiring sample dilution.

Approved by: *Kenneth Murphy* Date: January 27, 1993

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON Associates  
 Project: EMCON Project No. OG70-055.01  
 ARCO Facility No. 2162

Date Received: 01/14/93  
 Service Request No.: SJ93-0052  
 Sample Matrix: Water

BTEX and TPH as Gasoline  
 EPA Methods 5030/8020/California DHS LUFT Method  
 µg/L (ppb)

Sample Name: MW-4 (16)      Method Blank      Method Blank  
 Date Analyzed: 01/20/93      01/20/93      01/21/93

<u>Analyte</u>	<u>MRL</u>			
Benzene	0.5	29.	ND	ND
Toluene	0.5	0.6	ND	ND
Ethylbenzene	0.5	ND	ND	ND
Total Xylenes	0.5	1.1	ND	ND
TPH as Gasoline	50	260.	ND	ND

TPH      Total Petroleum Hydrocarbons  
 MRL      Method Reporting Limit  
 ND      None Detected at or above the method reporting limit

Approved by: *Kenneth Murphy*      Date: January 27, 1993

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON Associates  
 Project: EMCON Project No. 0G70-055.01  
 ARCO Facility No. 2162

Date Received: 01/14/93  
 Service Request No.: SJ93-0052

Initial Calibration Verification  
 BTEX and TPH as Gasoline  
 EPA Methods 5030/8020/DHS LUFT Method  
 Nanograms

Date Analyzed: 01/20/93

<u>Analyte</u>	<u>True Value</u>	<u>Result</u>	<u>Percent Recovery</u>	<u>CAS Percent Recovery Acceptance Criteria</u>
Benzene	250.	244.	98.	85-115
Toluene	250.	252.	101.	85-115
Ethylbenzene	250.	232.	93.	85-115
Total Xylenes	750.	684.	91.	85-115
TPH as Gasoline	2,500.	2,708.	108.	90-110

Date Analyzed: 01/21/93

<u>Analyte</u>	<u>True Value</u>	<u>Result</u>	<u>Percent Recovery</u>	<u>CAS Percent Recovery Acceptance Criteria</u>
Benzene	250.	252.	101.	85-115
Toluene	250.	258.	103.	85-115
Ethylbenzene	250.	239.	96.	85-115
Total Xylenes	750.	687.	92.	85-115
TPH as Gasoline	2,500.	2,273.	91.	90-110

TPH Total Petroleum Hydrocarbons

Approved by: \_\_\_\_\_

*Kevin Murphy*

Date: \_\_\_\_\_

*January 23, 1993*

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON Associates  
Project: EMCON Project No. 0G70-055.01  
ARCO Facility No. 2162

Date Received: 01/14/93  
Service Request No.: SJ93-0052  
Sample Matrix: Water

Surrogate Recovery Summary  
BTEX and TPH as Gasoline  
EPA Methods 5030/8020/California DHS LUFT Method

<u>Sample Name</u>	<u>Date Analyzed</u>	<u>Percent Recovery</u> <i>a,a,a</i> -Trifluorotoluene
MW-1 (15)	01/20/93	118.
MW-2 (15)	01/21/93	116.
MW-3 (14)	01/20/93	113.
MW-4 (16)	01/20/93	118.
MS	01/20/93	113.
DMS	01/20/93	113.
Method Blank	01/20/93	102.
Method Blank	01/21/93	104.

CAS Acceptance Criteria

70-130

TPH Total Petroleum Hydrocarbons

Approved by:

*K. O. Murphy*

Date:

*January 27, 1993*



COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON Associates  
Project: EMCON Project No. 0G70-055.01  
ARCO Facility No. 2162

Date Received: 01/14/93  
Service Request No.: SJ93-0052  
Sample Matrix: Water

Matrix Spike/Duplicate Matrix Spike Summary  
BTE  
EPA Methods 5030/8020  
 $\mu\text{g/L}$  (ppb)

Date Analyzed: 01/20/93

Percent Recovery

<u>Analyte</u>	<u>Spike Level</u>	<u>Sample Result</u>	<u>Spike Result</u>		<u>MS</u>		<u>DMS</u>	<u>CAS Acceptance Criteria</u>
			<u>MS</u>	<u>DMS</u>	<u>MS</u>	<u>DMS</u>		
Benzene	25.	ND	25.2	25.4	101.	102.	39-150	
Toluene	25.	ND	25.1	25.3	100.	101.	46-148	
Ethylbenzene	25.	ND	24.5	24.5	98.	98.	32-160	

ND None Detected at or above the method reporting limit

Approved by:

*Kenneth Murphy*

Date:

*January 27, 1993*

**ARCO Products Company**

Division of AtlanticRichfieldCompany

Task Order No. **EMCGC-92-1**

**Chain of Custody**

ARCO Facility no. <b>216B</b>	City (Facility) <b>San Leandro</b>	Project manager (Consultant) <b>Jim Buteva</b>
ARCO engineer <b>Kyle Christie</b>	Telephone no. (ARCO) <b>415 571-2434</b>	Telephone no. (Consultant) <b>453-0719</b>
Consultant name <b>EMCON Associates</b>	Address (Consultant) <b>1938 Junction Ave San Jose</b>	
		Fax no. (Consultant) <b>453-0452</b>

Laboratory name  
**CAS**

Contract number  
**07077**

Sample I.D.	Lab no.	Container no.	Matrix			Preservation		Sampling date	Sampling time	BTEX EPA 802/803/804/806/814	BTEX/TPH EPA 802/803/804/806/814	TPH Modified 8015 Gas <input type="checkbox"/> Diesel <input type="checkbox"/>	Oil and Grease 413.1 <input type="checkbox"/> 413.2 <input type="checkbox"/>	TPH EPA 418.1/SM/509E	EPA 801/8010	EPA 824/8240	EPA 825/8270	TC/TP Metals <input type="checkbox"/> VOC <input type="checkbox"/> VOA <input type="checkbox"/>	Semi Metals <input type="checkbox"/> VOA <input type="checkbox"/> VOA <input type="checkbox"/>	Cadmium EPA 8010/7000 TTL <input type="checkbox"/> STL <input type="checkbox"/>	Lead Org./DHS Lead EPA 7420/7421 <input type="checkbox"/>	
			Soil	Water	Other	Ice	Acid															
MW-1(15)	1-2	2		X		X	HCl	1-14-93	1040		X											
MW-2(15)	3-4	2		X		X	HCl	1-14-93	1110		X											
MW-3(15)	5-6	2		X		X	HCl	1-14-93	1150		X											
MW-4(16)	7-8	2		X		X	HCl	1-14-93	1220		X											

Method of shipment  
**Sampler will deliver**

Special detection Limit/reporting  
**Lowest possible**

Special QA/QC  
**As normal**

Remarks  
**2-40 ml HCl  
0670-055 .01  
55**

Lab number  
**SJ93-0052**

Turnaround time

Priority Rush 1 Business Day

Rush 2 Business Days

Expedited 5 Business Days

Standard 10 Business Days

Condition of sample: **OK**

Temperature received: **cool**

Relinquished by sampler <b>Jesse Rute</b>	Date <b>1-14-93</b>	Time <b>1330</b>	Received by
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by laboratory <b>[Signature]</b>
	Date <b>1-21-93</b>	Time <b>1330</b>	



EMCON ASSOCIATES

# WATER SAMPLE FIELD DATA SHEET

Rev. 2, 5/91

PROJECT NO: CG70-055-01  
PURGED BY: L. RATH  
SAMPLED BY: L. RATH

SAMPLE ID: MW-1 (15)  
CLIENT NAME: ARCO 2162  
LOCATION: 15135 Hesperian Blvd  
San Leandro CA

TYPE: Ground Water  Surface Water \_\_\_\_\_ Treatment Effluent \_\_\_\_\_ Other \_\_\_\_\_  
CASING DIAMETER (inches): 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4  4.5 \_\_\_\_\_ 6 \_\_\_\_\_ Other \_\_\_\_\_

CASING ELEVATION (feet/MSL): N/A VOLUME IN CASING (gal.): 5.71  
DEPTH TO WATER (feet): 7.25 CALCULATED PURGE (gal.): 17.15  
DEPTH OF WELL (feet): 16.0 ACTUAL PURGE VOL (gal.): 18.0  
8.75

DATE PURGED: 1-14-93 Start (2400 Hr) 1020 End (2400 Hr) 1033  
DATE SAMPLED: 1-14-93 Start (2400 Hr) 1040 End (2400 Hr) \_\_\_\_\_

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
<u>1025</u>	<u>6</u>	<u>6.61</u>	<u>950</u>	<u>63.2</u>	<u>Brown</u>	<u>Heavy</u>
<u>1028</u>	<u>12</u>	<u>6.86</u>	<u>996</u>	<u>62.7</u>	<u>Brown</u>	<u>Heavy</u>
<u>1033</u>	<u>18</u>	<u>6.89</u>	<u>1002</u>	<u>63.1</u>	<u>Brown</u>	<u>Heavy</u>
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

D. O. (ppm): AIR ODOR: NONE AIR (COBALT 0-100) AIR (NTU 0-200)

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

### PURGING EQUIPMENT

### SAMPLING EQUIPMENT

- |   |   |  |  |
|---|---|--|--|
| <input type="checkbox"/> 2" Bladder Pump  | <input type="checkbox"/> Bailer (Teflon®)         | <input type="checkbox"/> 2" Bladder Pump | <input checked="" type="checkbox"/> Bailer (Teflon®) |
| <input type="checkbox"/> Centrifugal Pump | <input checked="" type="checkbox"/> Bailer (PVC)  | <input type="checkbox"/> DDL Sampler     | <input type="checkbox"/> Bailer (Stainless Steel)    |
| <input type="checkbox"/> Submersible Pump | <input type="checkbox"/> Bailer (Stainless Steel) | <input type="checkbox"/> Dipper          | <input type="checkbox"/> Submersible Pump            |
| <input type="checkbox"/> Well Wizard™     | <input type="checkbox"/> Dedicated                | <input type="checkbox"/> Well Wizard™    | <input type="checkbox"/> Dedicated                   |
| Other: _____                              |   | Other: _____                             |  |

WELL INTEGRITY: good LOCK #: 3259

REMARKS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Meter Calibration: Date: 1-14-93 Time: 1000 Meter Serial #: 9111 Temperature °F: 55.3  
(EC 1000 11000) (DI \_\_\_\_\_) (pH 7 1700) (pH 10 10000) (pH 4 1)

Location of previous calibration: \_\_\_\_\_

Signature: Lisle Rath Reviewed By: AB Page 1 of 4



# WATER SAMPLE FIELD DATA SHEET

PROJECT NO: OG 70-055.01  
 PURGED BY: L. RATH  
 SAMPLED BY: L. RATH

SAMPLE ID: MW-4 (16)  
 CLIENT NAME: ARCO 2162  
 LOCATION: 15135 Hespanan Blvd San Leandro CA

TYPE: Ground Water  Surface Water  Treatment Effluent  Other   
 CASING DIAMETER (inches): 2  3  4  4.5  6  Other

CASING ELEVATION (feet/MSL): NR VOLUME IN CASING (gal.): 6.27  
 DEPTH TO WATER (feet): 7.49 CALCULATED PURGE (gal.): 18.83  
 DEPTH OF WELL (feet): 17.1 ACTUAL PURGE VOL (gal.): 19.0  
9.61

DATE PURGED: 1-14-93 Start (2400 Hr) 1155 End (2400 Hr) 1212  
 DATE SAMPLED: 1-14-93 Start (2400 Hr) 1220 End (2400 Hr)     

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
<u>1202</u>	<u>6.5</u>	<u>7.30</u>	<u>1131</u>	<u>63.2</u>	<u>Brown</u>	<u>Heavy</u>
<u>1207</u>	<u>13.0</u>	<u>7.14</u>	<u>1148</u>	<u>63.5</u>	<u>Brown</u>	<u>Heavy</u>
<u>1212</u>	<u>19.0</u>	<u>7.10</u>	<u>1139</u>	<u>63.8</u>	<u>Brown</u>	<u>Heavy</u>

D. O. (ppm): NR ODOR: slight COLOR: NR TURBIDITY: NR  
 (COBALT 0-100) (NTU 0-200)

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

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
<input type="checkbox"/> 2" Bladder Pump	<input type="checkbox"/> Bailer (Teflon®)	<input type="checkbox"/> 2" Bladder Pump	<input checked="" type="checkbox"/> Bailer (Teflon®)
<input type="checkbox"/> Centrifugal Pump	<input checked="" type="checkbox"/> Bailer (PVC)	<input type="checkbox"/> ODL Sampler	<input type="checkbox"/> Bailer (Stainless Steel)
<input type="checkbox"/> Submersible Pump	<input type="checkbox"/> Bailer (Stainless Steel)	<input type="checkbox"/> Dipper	<input type="checkbox"/> Submersible Pump
<input type="checkbox"/> Well Wizard™	<input type="checkbox"/> Dedicated	<input type="checkbox"/> Well Wizard™	<input type="checkbox"/> Dedicated
Other: <u>    </u>		Other: <u>    </u>	

WELL INTEGRITY: good LOCK #: 3259

REMARKS:       
      
    

Meter Calibration: Date: 1-14-93 Time: 1000 Meter Serial #: 9111 Temperature °F:       
 ( EC 1000      /      ) ( DI      ) ( pH 7      /      ) ( pH 10      /      ) ( pH 4      /      )  
 Location of previous calibration: MW-1

Signature: L. RATH Reviewed By: JTB Page 2 of 4



EMCON ASSOCIATES

# WATER SAMPLE FIELD DATA SHEET

Rev. 2, 5/91

PROJECT NO: 0870-055.01

SAMPLE ID: MW-3 (14)

PURGED BY: L. RATIT

CLIENT NAME: ARCO 2162

SAMPLED BY: L. RATIT

LOCATION: 15135 Hesperian Blvd  
San Leandro CA

TYPE: Ground Water  Surface Water \_\_\_\_\_ Treatment Effluent \_\_\_\_\_ Other \_\_\_\_\_

CASING DIAMETER (inches): 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4  4.5 \_\_\_\_\_ 6 \_\_\_\_\_ Other \_\_\_\_\_

CASING ELEVATION (feet/MSL):	<u>NR</u>	VOLUME IN CASING (gal.):	<u>5.42</u>
DEPTH TO WATER (feet):	<u>6.70</u>	CALCULATED PURGE (gal.):	<u>16.26</u>
DEPTH OF WELL (feet):	<u>15.0</u> <u>8.30</u>	ACTUAL PURGE VOL. (gal.):	<u>17.0</u>

DATE PURGED:	<u>1-14-93</u>	Start (2400 Hr)	<u>1125</u>	End (2400 Hr)	<u>1141</u>
DATE SAMPLED:	<u>1-14-93</u>	Start (2400 Hr)	<u>1150</u>	End (2400 Hr)	_____

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
<u>1130</u>	<u>5.5</u>	<u>7.28</u>	<u>936</u>	<u>63.6</u>	<u>Brown</u>	<u>Heavy</u>
<u>1136</u>	<u>11.0</u>	<u>7.09</u>	<u>1009</u>	<u>64.1</u>	<u>Brown</u>	<u>Heavy</u>
<u>1141</u>	<u>17.0</u>	<u>6.99</u>	<u>1018</u>	<u>64.5</u>	<u>Brown</u>	<u>Heavy</u>
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

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

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

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
<input type="checkbox"/> 2" Bladder Pump	<input type="checkbox"/> Bailer (Teflon®)	<input type="checkbox"/> 2" Bladder Pump	<input checked="" type="checkbox"/> Bailer (Teflon®)
<input type="checkbox"/> Centrifugal Pump	<input checked="" type="checkbox"/> Bailer (PVC)	<input type="checkbox"/> DDL Sampler	<input type="checkbox"/> Bailer (Stainless Steel)
<input type="checkbox"/> Submersible Pump	<input type="checkbox"/> Bailer (Stainless Steel)	<input type="checkbox"/> Dipper	<input type="checkbox"/> Submersible Pump
<input type="checkbox"/> Well Wizard™	<input type="checkbox"/> Dedicated	<input type="checkbox"/> Well Wizard™	<input type="checkbox"/> Dedicated
Other: _____		Other: _____	

WELL INTEGRITY: good      LOCK #: 3259

REMARKS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Meter Calibration: Date: 1-14-93 Time: 1000 Meter Serial #: 9111 Temperature °F: \_\_\_\_\_  
 ( EC 1000 \_\_\_\_\_ / \_\_\_\_\_ ) ( DI \_\_\_\_\_ ) ( pH 7 \_\_\_\_\_ / \_\_\_\_\_ ) ( pH 10 \_\_\_\_\_ / \_\_\_\_\_ ) ( pH 4 \_\_\_\_\_ / \_\_\_\_\_ )  
 Location of previous calibration: MW-1

Signature: Lisa Ratit      Reviewed By: JB      Page 3 of 4



# WATER SAMPLE FIELD DATA SHEET

Rev. 2, 5/91

PROJECT NO: 0670-055-01  
PURGED BY: L. RATI  
SAMPLED BY: L. RATI

SAMPLE ID: MIN 2 (15)  
CLIENT NAME: ARCO 2162  
LOCATION: 15135 Hesperon Blvd  
San Leandro CA

TYPE: Ground Water  Surface Water \_\_\_\_\_ Treatment Effluent \_\_\_\_\_ Other \_\_\_\_\_  
CASING DIAMETER (inches): 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4  4.5 \_\_\_\_\_ 6 \_\_\_\_\_ Other \_\_\_\_\_

CASING ELEVATION (feet/MSL): NR VOLUME IN CASING (gal.): 6.17  
DEPTH TO WATER (feet): 6.55 CALCULATED PURGE (gal.): 18.52  
DEPTH OF WELL (feet): 16.0 ACTUAL PURGE VOL. (gal.): 19.0  
9.45

DATE PURGED: 1-14-93 Start (2400 Hr) 1050 End (2400 Hr) 1105  
DATE SAMPLED: 1-14-93 Start (2400 Hr) 1110 End (2400 Hr) \_\_\_\_\_

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	EC. (umhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
<u>1055</u>	<u>6</u>	<u>7.36</u>	<u>1008</u>	<u>61.9</u>	<u>Brown</u>	<u>Heavy</u>
<u>1100</u>	<u>12</u>	<u>7.59</u>	<u>1053</u>	<u>63.2</u>	<u>Brown</u>	<u>Heavy</u>
<u>1105</u>	<u>19</u>	<u>7.54</u>	<u>1048</u>	<u>63.8</u>	<u>Brown</u>	<u>Heavy</u>
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

D. O. (ppm): NR ODOR: NONE \_\_\_\_\_  
(COBALT 0 - 100) (NTU 0 - 200)

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

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
<input type="checkbox"/> 2" Bladder Pump	<input type="checkbox"/> Bailor (Teflon)	<input type="checkbox"/> 2" Bladder Pump	<input checked="" type="checkbox"/> Bailor (Teflon)
<input type="checkbox"/> Centrifugal Pump	<input checked="" type="checkbox"/> Bailor (PVC)	<input type="checkbox"/> ODL Sampler	<input type="checkbox"/> Bailor (Stainless Steel)
<input type="checkbox"/> Submersible Pump	<input type="checkbox"/> Bailor (Stainless Steel)	<input type="checkbox"/> Dipper	<input type="checkbox"/> Submersible Pump
<input type="checkbox"/> Well Wizard™	<input type="checkbox"/> Dedicated	<input type="checkbox"/> Well Wizard™	<input type="checkbox"/> Dedicated
Other: _____		Other: _____	

WELL INTEGRITY: good LOCK #: 3259

REMARKS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Meter Calibration: Date: 1-14-93 Time: 1000 Meter Serial #: 911 Temperature °F: \_\_\_\_\_  
( EC 1000 \_\_\_\_\_ / \_\_\_\_\_ ) ( DI \_\_\_\_\_ ) ( pH 7 \_\_\_\_\_ / \_\_\_\_\_ ) ( pH 10 \_\_\_\_\_ / \_\_\_\_\_ ) ( pH 4 \_\_\_\_\_ / \_\_\_\_\_ )  
Location of previous calibration: NR-1

Signature: L. Rati Reviewed By: JB Page 4 of 4

62511.04



# EMCON Associates

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

Date February 25, 1993  
Project OG70-055.01

To:  
Mr. Joel Coffman  
RESNA/ Applied Geosystems  
3315 Almaden Expressway, Suite 34  
San Jose, California 95118

We are enclosing:

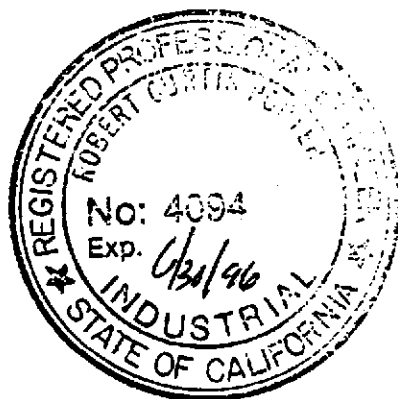
Copies	Description
<u>1</u>	<u>Depth To Water/Floating Product Survey Results</u>
	<u>February 1993 monthly water level survey, ARCO</u>
	<u>2162, 15135 Hesperian Blvd., San Leandro, CA</u>

For your:  X  Information Sent by:  X  Mail

Comments:

Monthly water level data for the above mentioned site are attached. Please call if you have any questions: (408) 453-2266.

Reviewed by:



Jim Butera JB

Robert Porter  
Robert Porter, Senior Project Engineer.



**FIELD REPORT**  
**DEPTH TO WATER / FLOATING PRODUCT SURVEY**

PROJECT # : OG70-055.01

STATION ADDRESS : 15135 Hesperian Blvd, San Leandre

DATE : 2/24/93

ARCO STATION # : 2162

FIELD TECHNICIAN : S. Horton / L. Graham

DAY : Wednesday

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	MW-1	good	yes	na	3259	yes	7.23	7.23	ND	ND	16.0	—
2	MW-2	good	yes	na	3259	yes	6.67	6.67	ND	ND	16.0	—
3	MW-3	good	yes	na	3259	yes	6.82	6.82	ND	ND	15.0	water in box
4	MW-4	good	yes	na	3259	yes	7.57	7.56	ND	ND	17.1	string ader

**SURVEY POINTS ARE TOP OF WELL CASINGS**





# EMCON Associates

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

APR 1 1993

Date April 1, 1993  
Project 0G70-055.01

To:  
Mr. Joel Coffman  
RESNA/ Applied Geosystems  
3315 Almaden Expressway, Suite 34  
San Jose, California 95118

We are enclosing:

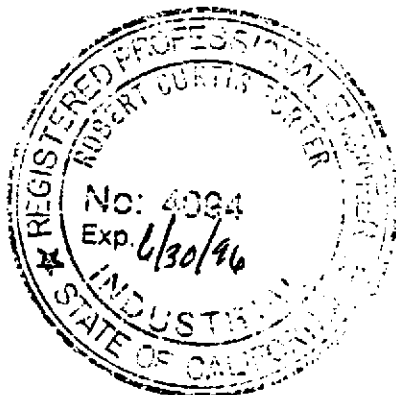
Copies	Description
<u>1</u>	<u>Depth To Water/Floating Product Survey Results</u>
<u>          </u>	<u>March 1993 monthly water level survey, ARCO</u>
<u>          </u>	<u>2162, 15135 Hesperian Blvd., San Leandro, CA</u>

For your:   X   Information Sent by:   X   Mail

Comments:

Monthly water level data for the above mentioned site are attached. Please call if you have any questions: (408) 453-2266.

Reviewed by:



Jim Butera *JB*

Robert Porter  
Robert Porter, Senior Project Engineer.



**FIELD REPORT  
DEPTH TO WATER / FLOATING PRODUCT SURVEY**

PROJECT # : OG70-055.01

STATION ADDRESS : 15135 Hesperian Blvd, San Leandro

DATE : 3/30/93

ARCO STATION # : 2162

FIELD TECHNICIAN : 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	MW-3	OK	YES	OK	3259	OK	7.07	7.07	ND	ND	15.0	
2	MW-4	OK	YES	OK	3259	OK	8.06	8.06	ND	ND	17.1	
3	MW-2	OK	YES	OK	3259	OK	6.76	6.76	ND	ND	16.1	
4	MW-1	OK	YES	OK	3259	OK	7.58	7.58	ND	ND	16.0	

**SURVEY POINTS ARE TOP OF WELL CASINGS**