



PACIFIC
ENVIRONMENTAL
GROUP, INC.

ENVIRONMENTAL
PROTECTION

95-00727 PM 2:23

October 25, 1995
Project 330-107.2B

Mr. Michael Whelan
ARCO Products Company
2155 South Bascom Avenue, Suite 202
Campbell, California 95008

Re: Quarterly Report - Third Quarter 1995
ARCO Service Station 2162
15135 Hesperian Boulevard at Ruth Court
San Leandro, California

Dear Mr. Whelan:

This letter, prepared by Pacific Environmental Group, Inc. (PACIFIC) on behalf of ARCO Products Company, presents the results of the third quarter 1995 groundwater monitoring at the site referenced above. In addition, a summary of work performed and anticipated at the site is included.

QUARTERLY GROUNDWATER MONITORING RESULTS

Groundwater samples were collected by PACIFIC on August 23, 1995, and analyzed for the presence of total petroleum hydrocarbons calculated as gasoline (TPH-g), benzene, toluene, ethylbenzene, and xylenes (BTEX compounds). In addition, analysis of samples for total methyl t-butyl ether (MTBE) was performed this quarter. The certified analytical report, chain-of-custody documentation, and field data sheets are presented as Attachment A. Field and laboratory procedures are presented as Attachment B.

Depth to water data collected during the August 1995 sampling event indicate that groundwater levels across the site have decreased an average of 0.86 foot since May 31, 1995. Groundwater flow was to the southwest with an approximate gradient of 0.01. This flow direction and gradient are consistent with historical data. Groundwater elevation data are presented in Table 1. A groundwater elevation contour map based on the August 1995 data is shown on Figure 1.

Results of groundwater monitoring this quarter are generally consistent with previous results. TPH-g concentrations ranged from 85 to 180 parts per billion (ppb). Benzene was below detection limits in Wells MW-1, MW-2, and MW-3. The benzene concentration in Well MW-4 was 16 ppb. Total MTBE was below detection limits in Wells MW-1, MW-2, and MW-4. The total MTBE concentration in Well MW-3 was 41 ppb. Separate-phase hydrocarbons have never been observed in any site well. Groundwater analytical data are presented in Tables 2 and 3. A TPH-g and benzene concentration map is shown on Figure 2.

SUMMARY OF WORK

Work Performed Third Quarter 1995

- Prepared and submitted second quarter 1995 groundwater monitoring report.
- Performed third quarter 1995 groundwater monitoring event. Groundwater sampling was performed by PACIFIC.
- Prepared third quarter 1995 groundwater monitoring report.

Work Anticipated Fourth Quarter 1995

- Prepare and submit third quarter 1995 groundwater monitoring report.
- Perform fourth quarter 1995 groundwater monitoring event. Groundwater sampling to be performed by PACIFIC.
- Prepare fourth quarter 1995 groundwater monitoring report.

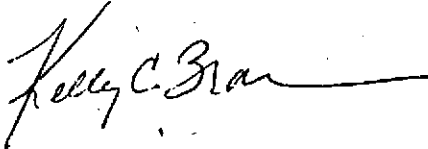
October 25, 1995

Page 3

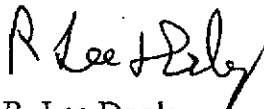
If there are any questions regarding the contents of this letter, please call.

Sincerely,

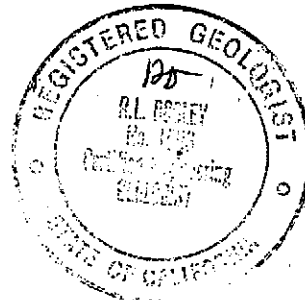
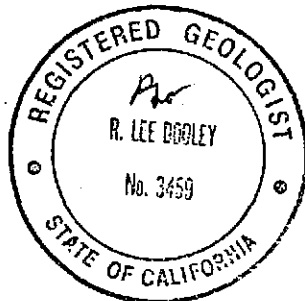
Pacific Environmental Group, Inc.



Kelly C. Brown
Project Manager



R. Lee Dooley
Senior Geologist
CEG 1006



- Attachments:
- Table 1 - Groundwater Elevation Data
 - Table 2 - Groundwater Analytical Data -
Total Petroleum Hydrocarbons
(TPH as Gasoline and BTEX Compounds)
 - Table 3 - Groundwater Analytical Data -
Total Methyl t-Butyl Ether
 - Figure 1 - Groundwater Elevation Contour Map
 - Figure 2 - TPH-g/Benzene Concentration Map
 - Attachment A - Certified Analytical Report, Chain-of-Custody
Documentation, and Field Data Sheets
 - Attachment B - Field and Laboratory Procedures

cc: Mr. John Jang, Regional Water Quality Control Board - San Francisco
Bay Region
Mr. Mike Bakaldin, City of San Leandro Fire Department,
Hazardous Materials Division
Mr. Scott Seery, Alameda County Health Care Services Agency

Table 1
Groundwater Elevation Data

ARCO Service Station 2162
15135 Hesperian Boulevard at Ruth Court
San Leandro, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)
MW-1	09/30/92	31.19	10.68	20.51
	10/16/92		10.83	20.36
	01/14/93		7.25	23.94
	02/24/93		7.23	23.96
	03/30/93		7.58	23.61
	04/14/93		7.96	23.23
	05/19/93		8.26	22.93
	06/17/93		8.42	22.77
	07/28/93		8.68	22.51
	08/11/93		9.07	22.12
	09/28/93		9.60	21.59
	10/15/93		9.51	21.68
	11/16/93		— Well Inaccessible —	
	12/16/93		8.70	22.49
	02/15/94		8.51	22.68
	03/18/94		8.46	22.73
	05/05/94		8.66	22.53
	08/05/94		9.50	21.69
	11/21/94		8.83	22.36
	02/24/95		7.90	23.29
05/31/95		7.86	23.33	
08/23/95		8.74	22.45	
MW-2	09/30/92	30.38	9.74	20.64
	10/16/92		9.91	20.47
	01/14/93		6.56	23.82
	02/24/93		6.67	23.71
	03/30/93		6.76	23.62
	04/14/93		7.10	23.28
	05/19/93		7.40	22.98
	06/17/93		7.51	22.87
	07/28/93		7.73	22.65
	08/11/93		8.11	22.27
	09/28/93		8.57	21.81
	10/15/93		8.56	21.82
	11/16/93		8.87	21.51
	12/16/93		7.92	22.46
	02/15/94		7.62	22.76
	03/18/94		7.57	22.81
	05/05/94		7.75	22.63
	08/05/94		8.53	21.85
	11/21/94		7.92	22.46
	02/24/95		6.98	23.40
05/31/95		6.97	23.41	
08/23/95		7.83	22.55	
MW-3	09/30/92	30.30	9.93	20.37
	10/16/92		10.13	20.17
	01/14/93		6.71	23.59
	02/24/93		6.82	23.48
	03/30/93		7.07	23.23
	04/14/93		7.41	22.89
	05/19/93		7.72	22.58
	06/17/93		7.86	22.44
	07/25/93		8.13	22.17
	08/11/93		8.45	21.85
	09/28/93		8.96	21.34

Table 1 (continued)
Groundwater Elevation Data

ARCO Service Station 2162
15135 Hesperian Boulevard at Ruth Court
San Leandro, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)
MW-3 (cont.)	10/15/93		8.85	21.45
	11/16/93		9.09	21.21
	12/16/93		8.10	22.20
	02/15/94		7.88	22.42
	03/18/94		7.88	22.42
	05/05/94		8.08	22.22
	08/05/94		8.82	21.48
	11/21/94		8.17	22.13
	02/24/95		7.40	22.90
	05/31/95		7.35	22.95
	08/23/95		8.15	22.15
MW-4	09/30/92	30.39	11.15	19.24
	10/16/92		11.33	19.06
	01/14/93		7.49	22.90
	02/24/93		7.57	22.82
	03/30/93		8.06	22.33
	04/14/93		8.48	21.91
	05/19/93		7.80	22.59
	06/17/93		8.94	21.45
	07/25/93		9.28	21.11
	05/11/93		9.61	20.78
	09/25/93		10.14	20.25
	10/15/93		10.00	20.39
	11/16/93		10.22	20.17
	12/16/93		9.11	21.28
	02/15/94		8.97	21.42
	03/15/94		8.99	21.40
	05/05/94		9.21	21.18
08/05/94		10.02	20.37	
11/21/94		9.30	21.09	
02/24/95		8.46	21.93	
05/31/95		8.41	21.98	
	08/23/95		9.32	21.07
MSL = Mean sea level				
TOC = Top of casing				

Table 2
Groundwater Analytical Data
 Total Petroleum Hydrocarbons
 (TPH as Gasoline and BTEX Compounds)

ARCO Service Station 2162
 15135 Hesperian Boulevard at Ruth Court
 San Leandro, California

Well Number	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-1	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 a	15	4.6
	04/14/93	310	<1 a	<1 a	<1 a	
	08/11/93	660	0.8	<0.7	9.0	<1 b
	10/15/93	620	0.7	<0.5	5.9	2.2
	02/15/94	650	1.9	<0.5	4.5	4.9 b
	05/05/94	510	<0.5	<0.5	<1	1.6
	08/05/94	310	<0.5	<0.5	1.5	1.2
	11/21/94	330	<0.5	<0.5	1.5	1.1
	02/24/95	120	<0.50	<0.50	<0.50	<0.50
	05/31/95	<50	<0.50	<0.50	<0.50	<0.50
	08/23/95	160	<0.50	<0.50	<0.50	<0.50
	MW-2	09/30/92	1,000	9.6	<0.50	45
10/16/92		630	8	<1 a	37	64
01/14/93		7,800	33	5	340	920
04/14/93		1,600	7	<5 a	220	520
08/11/93		1,600	4.3	<1 a	80	120
10/15/93		1,100	1.7	<1 a	62	70
02/15/94		490	1.8	1.5	49	37
05/05/94		360	<0.5	<0.5	27	18
08/05/94		680	<0.5	<0.5	42	37
11/21/94		500	<0.5	<0.5	40	25
02/24/95		650	<0.50	<0.50	52	48
05/31/95		450	<0.50	<0.50	33	33
08/23/95		180	<0.50	<0.50	12	9.5
MW-3		09/30/92	<50	<0.50	<0.50	<0.50
	10/16/92	<50	<0.50	<0.50	<0.50	<0.50
	01/14/93	52	<0.50	<0.50	<0.50	<0.50
	04/14/93	360	86	2.1	5.1	4.0
	08/11/93	69	1.1	<0.5	<0.5	<0.5
	10/15/93	<50	<0.5	<0.5	<0.5	<0.5
	02/15/94	<50	<0.5	<0.5	<0.5	<0.5
	05/05/94	<50	<0.5	<0.5	<0.5	<0.5
	08/05/94	<50	<0.5	<0.5	<0.5	<0.5
	11/21/94	<50	<0.5	<0.5	<0.5	<0.5
	02/24/95	<50	0.93	<0.50	<0.50	<0.50
	05/31/95	120	24	<0.50	<0.50	<0.50
	08/23/95	85	<0.5	<0.5	<0.5	<0.5
	MW-4	09/30/92	330	81	<0.50	<0.50
10/16/92		250	44	<0.50	<0.50	0.7
01/14/93		260	29	0.6	<0.50	1.1
04/14/93		NS	NS	NS	NS	NS
08/11/93		150	21	<0.5	<0.5	<0.5
10/15/93		190	12	<0.5	<0.5	<0.5
02/15/94		<50	2.0	<0.5	<0.5	<0.5
05/05/94		160	17	<0.5	<0.5	0.6
08/05/94		120	10	<0.5	<0.5	<0.5
11/21/94		120	17	<0.5	<0.5	0.6

Table 2 (continued)
Groundwater Analytical Data
 Total Petroleum Hydrocarbons
 (TPH as Gasoline and BTEX Compounds)

ARCO Service Station 2162
 15135 Hesperian Boulevard at Ruth Court
 San Leandro, California

Well Number	Date Sampled	TPH as			Ethylbenzene (ppb)	Xylenes (ppb)
		Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)		
MW-4	02/24/95	110	14	<0.50	<0.50	<0.50
(cont.)	05/31/95	97	11	<0.50	<0.50	<0.50
	08/23/95	110	18	<0.50	<0.50	<0.50
ppb	= Parts per million					
NS	= Not sampled, separate-phase hydrocarbon entered well during purging.					
a.	Raised MRL due to high analyte concentration requiring sample dilution					
b.	Raised MRL due to matrix interference					

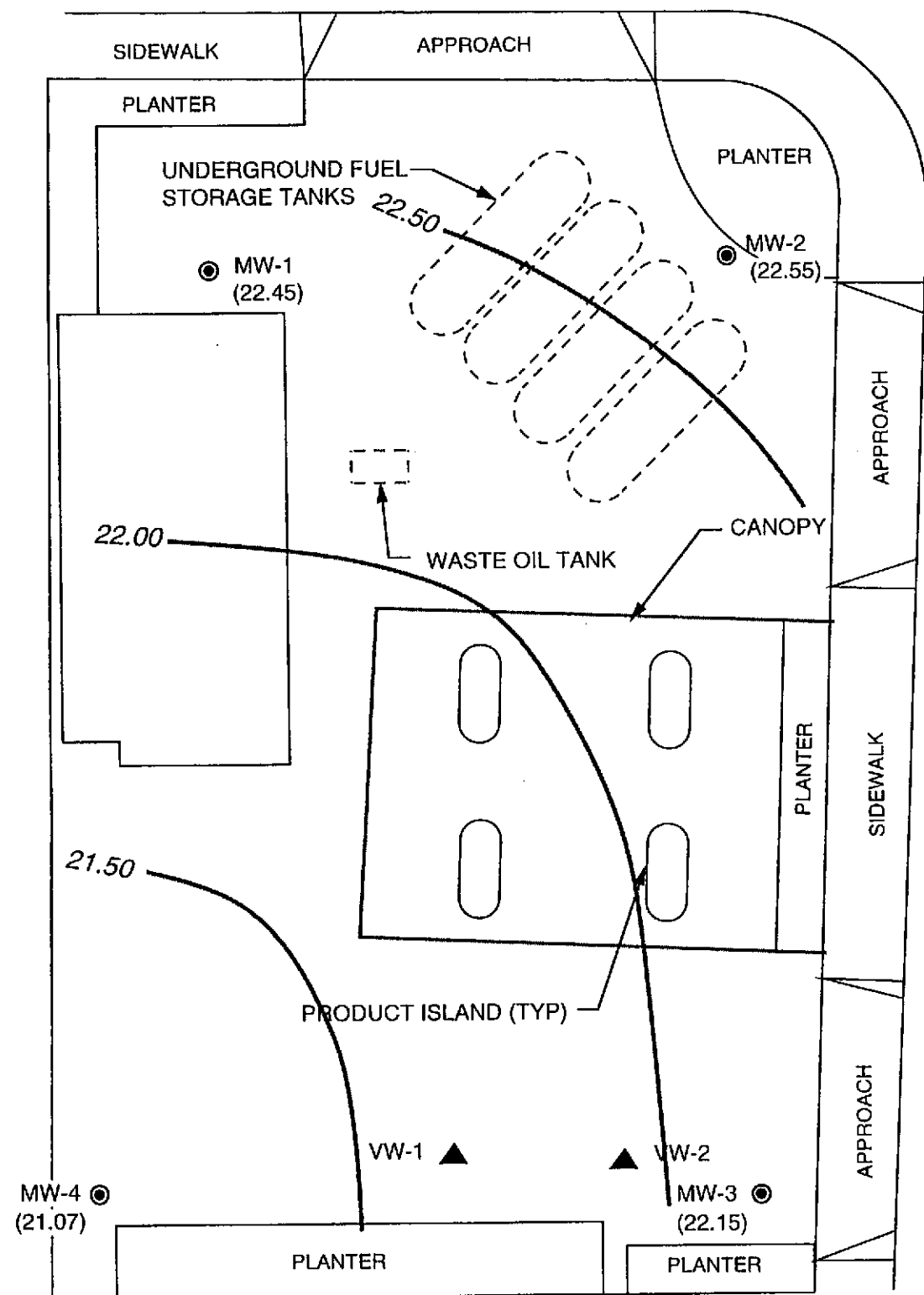
Table 3
Groundwater Analytical Data
Total Methyl t-Butyl Ether

ARCO Service Station 2162
15135 Hesperian Boulevard at Ruth Court
San Leandro, California

Well Number	Date Sampled	Methyl t-Butyl Ether (ppb)
MW-1	8/23/95	<2.5
MW-2	8/23/95	<2.5
MW-3	8/23/95	41
MW-4	8/23/95	<2.5

ppb = Parts per billion

RUTH COURT



- LEGEND**
- MW-4 ● GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
 - VW-1 ▲ SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION
 - (22.55) GROUNDWATER ELEVATION IN FEET - MSL, 8-23-95
 - 22.50 — GROUNDWATER ELEVATION CONTOUR IN FEET - MSL, 8-23-95



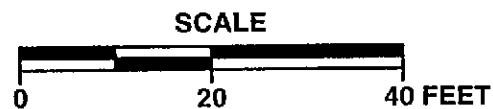
APPROXIMATE DIRECTION OF GROUNDWATER FLOW
 APPROXIMATE GRADIENT = 0.01

HESPERIAN BOULEVARD

SOURCE: MAP BY RESNA



PACIFIC ENVIRONMENTAL GROUP, INC.

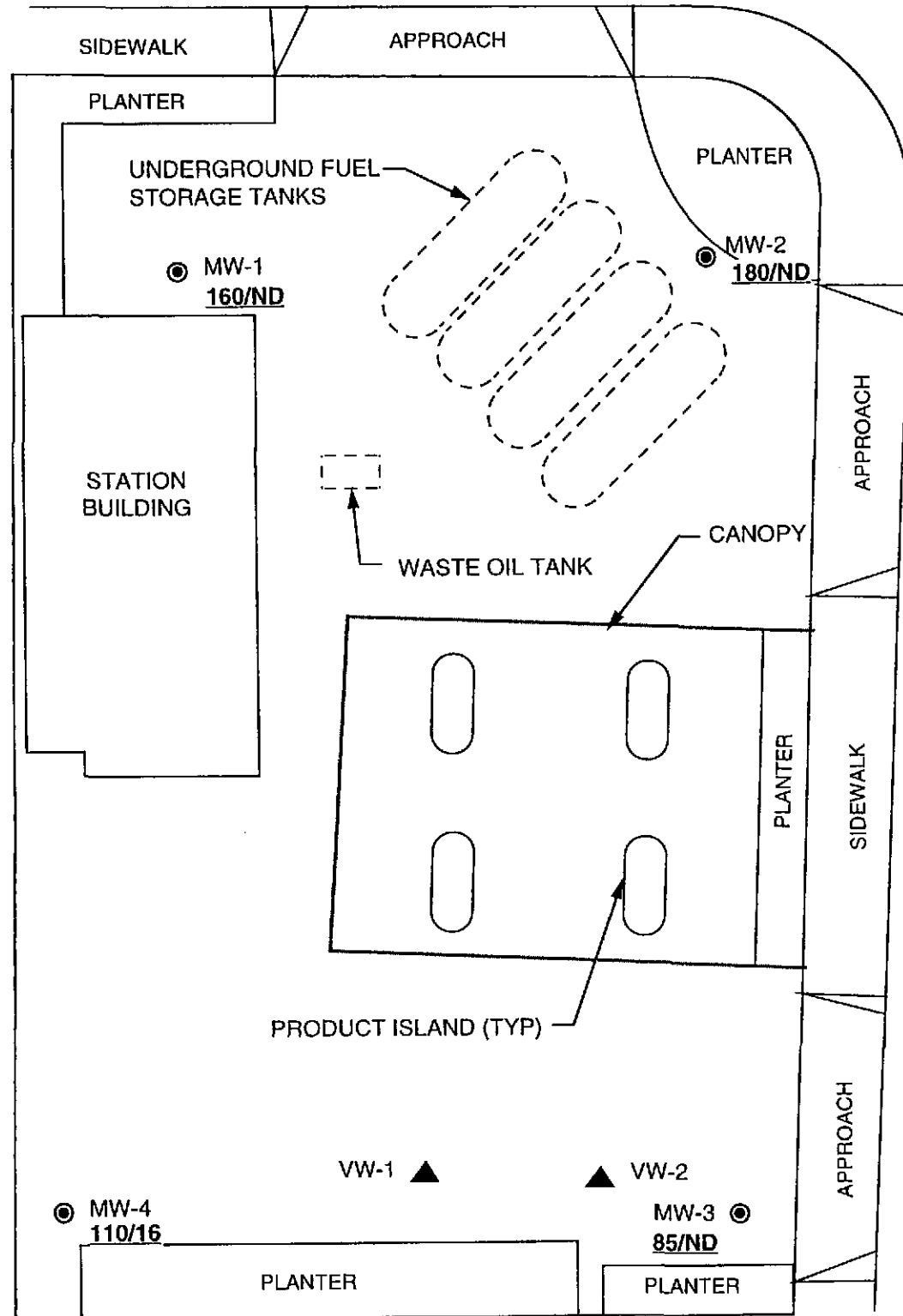


ARCO SERVICE STATION 2162
 15135 Hesperian Boulevard at Ruth Court
 San Leandro, California

GROUNDWATER ELEVATION CONTOUR MAP

FIGURE:
1
 PROJECT:
 330-107.2B

RUTH COURT



LEGEND

- MW-4 ● GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- VW-1 ▲ SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION
- 180/ND TPH-g/BENZENE CONCENTRATION IN GROUNDWATER, IN PARTS PER BILLION, 8-23-95
- ND NOT DETECTED



APPROXIMATE DIRECTION OF GROUNDWATER FLOW

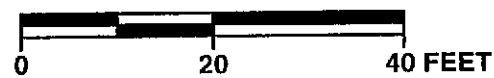
HESPERIAN BOULEVARD

SOURCE: MAP BY RESNA



PACIFIC ENVIRONMENTAL GROUP, INC.

SCALE



ARCO SERVICE STATION 2162
15135 Hesperian Boulevard at Ruth Court
San Leandro, California

TPH-g/BENZENE CONCENTRATION MAP

FIGURE:
2
PROJECT:
330-107.2B

ATTACHMENT A

**CERTIFIED ANALYTICAL REPORT,
CHAIN-OF-CUSTODY DOCUMENTATION,
AND FIELD DATA SHEETS**



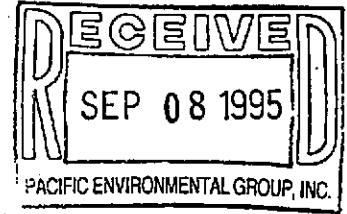
Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834

(415) 364-9600
(510) 988-9600
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FAX (415) 364-9233
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FAX (916) 921-0100



Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Maree Doden

Project: 330-107.2G/2162, San Leandro

Enclosed are the results from samples received at Sequoia Analytical on August 24, 1995.
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
3508J78 -01	LIQUID, MW-1	08/23/95	TPGBMW Purgeable TPH/BTEX
3508J78 -02	LIQUID, MW-2	08/23/95	TPGBMW Purgeable TPH/BTEX
3508J78 -03	LIQUID, MW-3	08/23/95	TPGBMW Purgeable TPH/BTEX
3508J78 -04	LIQUID, MW-4	08/23/95	TPGBMW Purgeable TPH/BTEX
3508J78 -05	LIQUID, TB-1	08/23/95	TPGBMW Purgeable TPH/BTEX

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

Project Manager

Quality Assurance Department



Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 330-107.2G/2162, San Leandro Sample Descript: MW-1 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9508J78-01	Sampled: 08/23/95 Received: 08/24/95 Analyzed: 08/29/95 Reported: 09/06/95
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QC Batch Number: GC082995BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	160
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern: Weathered Gas		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	82

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

SEQUOIA ANALYTICAL - ELAP #1210

Brucie Fletcher
Project Manager





Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 330-107.2G/2162, San Leandro Sample Descript: MW-2 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9508J78-02	Sampled: 08/23/95 Received: 08/24/95 Analyzed: 08/29/95 Reported: 09/06/95
--	---	---

QC Batch Number: GC082995BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	180
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	12
Xylenes (Total)	0.50	9.5
Chromatogram Pattern:		Gas

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	106

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

SEQUOIA ANALYTICAL - ELAP #1210

Brucie Fletcher
Project Manager





Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 330-107.2G/2162, San Leandro Sample Descript: MW-3 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9508J78-03	Sampled: 08/23/95 Received: 08/24/95 Analyzed: 08/29/95 Reported: 09/06/95
Attention: Maree Doden		

QC Batch Number: GC082995BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	85
Methyl t-Butyl Ether	2.5	41
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern: Weathered Gas		C7-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	90

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

SEQUOIA ANALYTICAL - ELAP #1210

Bruce Fletcher
Project Manager



Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 330-107.2G/2162, San Leandro Sample Descript: MW-4 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9508J78-04	Sampled: 08/23/95 Received: 08/24/95 Analyzed: 08/29/95 Reported: 09/06/95
Attention: Maree Doden		

QC Batch Number: GC082995BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	110
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	16
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern: Weathered Gas		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	99

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

SEQUOIA ANALYTICAL - ELAP #1210

Brucie Fletcher
Project Manager





Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Maree Doden

Client Proj. ID: 330-107.2G/2162, San Leandro
Sample Descript: TB-1
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9508J78-05

Sampled: 08/23/95
Received: 08/24/95
Analyzed: 08/29/95
Reported: 09/06/95

QC Batch Number: GC082995BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	84

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

SEQUOIA ANALYTICAL - ELAP #1210

Bruce Fletcher
Project Manager





Sequoia Analytical

680 Chesapeake Drive
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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Maree Doden

Client Project ID: 330-107.2G/2162, San Leandro
Matrix: LIQUID

Work Order #: 9508J78 01-05

Reported: Sep 6, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC082995BTEX21A	GC082995BTEX21A	GC082995BTEX21A	GC082995BTEX21A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	J. Minkel	J. Minkel	J. Minkel	J. Minkel
MS/MSD #:	9508D9703	9508D9703	9508D9703	9508D9703
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	8/29/95	8/29/95	8/29/95	8/29/95
Analyzed Date:	8/29/95	8/29/95	8/29/95	8/29/95
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	12	11	12	36
MS % Recovery:	120	110	120	120
Dup. Result:	11	10	11	31
MSD % Recov.:	110	100	110	103
RPD:	8.7	9.5	8.7	15
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:

Prepared Date:
Analyzed Date:
Instrument I.D.#:
Conc. Spiked:

LCS Result:
LCS % Recov.:

MS/MSD	71-133	72-128	72-130	71-120
LCS				
Control Limits				

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

Please Note:

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

B Fletcher
Brucie Fletcher
Project Manager

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9508J79.PPP <1>

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: PEG
 REC. BY (PRINT): JB

WORKORDER: 9508J78
 DATE OF LOG-IN: 8/28/95

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC.)
1. Custody Seal(s)	Present / <u>Absent</u> Intact / Broken*	01	A	MW-1	3 VOAS	LI	8-23-95	
2. Custody Seal Nos.:	Put in Remarks Section	02		MW-2	↓	↓	↓	
3. Chain-of-Custody Records:	<u>Present</u> / Absent*	03		MW-3	↓	↓	↓	
4. Traffic Reports or Packing List:	Present / <u>Absent</u>	04		MW-4	↓	↓	↓	
5. Airbill:	Airbill / Sticker Present / <u>Absent</u>	05		TB-1	2 VOAS	↓	↓	
6. Airbill No.:								
7. Sample Tags:	<u>Present</u> / Absent*							
8. Sample Condition:	<u>Intact</u> / Broken* / Leaking*							
9. Does information on custody reports, traffic reports and sample tags agree?	<u>Yes</u> / No*							
10. Proper preservatives used:	<u>Yes</u> / No*							
11. Date Rec. at Lab:	<u>8-24-95</u>							
12. Temp. Rec. at Lab:	<u>12°</u>							
13. Time Rec. at Lab:	<u>1520</u>							

Handwritten note: 8-24-95 JB

* If Circled, contact Project manager and attach record of resolution

ARCO Facility no. 2162	City (Facility) SAN LEANORO	Project manager (Consultant) KELLY BROWN	Laboratory name SEQUOIA
ARCO engineer MIKE WHELAN	Telephone no. (ARCO)	Telephone no. (Consultant) (415) 441-7500	Contract number 07-073
Consultant ARCO Environmental Group	Address (Consultant) 2025 GARDENWAY PLACE #4LD, SAN JOSE 95110		

Sample I.D.	Lab no.	Container no.	Matrix			Preservation		Sampling date	Sampling time	BTEX 802/EPA 8020	BTEX/TPH EPA 1162/201/8015	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/SM503E	EPA 601/6010	EPA 624/6240	EPA 625/6270	TCMP Metals <input type="checkbox"/> VOA <input type="checkbox"/> VOA <input type="checkbox"/>	Semi Metals <input type="checkbox"/> VOA <input type="checkbox"/> VOA <input type="checkbox"/>	CAM Metals EPA 601/7000 TTLC <input type="checkbox"/> STLC <input type="checkbox"/>	Lead Org./DMS <input type="checkbox"/> Lead EPA 7420/7421 <input type="checkbox"/>	
			Soil	Water	Other	Ice	Acid															
MW-1		3		X		X	HCL	8-23-95	7:30		X											01
MW-2		3		↓		↓	↓	↓	↓	↓	↓											02
MW-3		3		↓		↓	↓	↓	↓	↓	↓											03
MW-4		3		↓		↓	↓	↓	↓	↓	↓											04
TB-1		2		↓		↓	↓	↓	↓	↓	↓											05

Method of shipment
COURIER

Special detection Limit/reporting

Special QA/QC

Remarks

JUN 24 3 20

Lab number **9508578**

Turnaround time

Condition of sample:		Temperature received:	
Relinquished by <i>[Signature]</i>	Date 8-23-95 Time 1435	Received by <i>[Signature]</i>	Date 8/23/95 Time 1435
Relinquished by <i>[Signature]</i>	Date 8/24/95 Time 2:00	Received by <i>[Signature]</i>	
Relinquished by <i>[Signature]</i>	Date 8/24/95 Time	Received by laboratory <i>[Signature]</i>	Date 8-24-95 Time 1520

Priority Rush 1 Business Day <input type="checkbox"/>
Rush 2 Business Days <input type="checkbox"/>
Expedited 5 Business Days <input type="checkbox"/>
Standard 10 Business Days <input checked="" type="checkbox"/>

	Initials	Date
E/S	RY	8/24/95
Copy/Dist.	RY	↓

FIELD SERVICES / O & M REQUEST

SITE INFORMATION FORM

Project #:330-107.2G

1st time visit

Station #:2162

1st 2nd 3rd 4th

Date of Request:8/3/95

Site Address:15135 Hesperian blvd.
San Leandro, California

Monthly

Ideal Field Date:8/31/95

County:Alameda

Semi-Monthly

Budget Hrs.

FILE COPY

Project Manager:Kelly Brown

Weekly

Actual Hrs. 2.0

Requestor:Chuck Graves

One time Event

Mob de Mob 2.0

Other. _____

Client:Arco

Client P.O.C.:Mike Whelan

Prefield contacts:

Field Tasks: For General Description

Third quarter groundwater sampling event: DTW/DTL on all wells from TOB/TOC
Sample per attached protocol
WA#17076 00

Comments, remarks, from Field Staff (include problems encountered

~ NO PROBLEMS ~

- TB-1 NEEDS TO BE ADDED TO REQUEST

=> 64.5 GALLONS OF PUROX H₂O

Completed by: [Signature]

Date: 8-23-95

Checked by: [Signature]

WELL SAMPLING REQUEST

SAMPLING PROTOCOL								
Project No. 330-107.2G	Station # 2162	Project Name 5135 Hesperian San Lorenz	SEQUENCE Q2	Project Manager Kelly Brown	Approval 	Date/s 8/31/95	Laboratory: Sequoia	Client Engineer: Mike Whelan

Well Number	Ideal Sampling Order	Sample I.D.	Sampling Frequency	Analyses	TOB TOC	Well Depth	Casing Diameter	Well goes Dry?	Comments
MW-1			QLY	GAS/BTEX/MTBE	TOB/TOC		4"		
MW-2			QLY	GAS/BTEX/MTBE	TOB/TOC		4"		
MW-3			QLY	GAS/BTEX/MTBE	TOB/TOC		4"		
MW-4			QLY	GAS/BTEX/MTBE	TOB/TOC		4"		
TB-1			QLY	GAS/BTEX/MTBE					

FIELD REPORT

DEPTH TO WATER/SEPARATE-PHASE HYDROCARBON SURVEY

PROJECT No.: 330-107c LOCATION: 15135 HESPERIAN DATE: 8-23-95
 CLIENT/STATION NO.: 02162 FIELD TECHNICIAN: J. V. Mammone DAY OF WEEK: Wed. Sunny

PROBE TYPE/ID No.

- Oil/Water IF/ _____
 H₂O level indicator #3
 Other: _____

Dtw Order	Well ID	Time	Surface Seal	Lid Secure	Gasket	Lock	Expanding Cap	TOC Total Depth (feet)	First Depth to Water (feet)		Second Depth to Water (feet)		SPH Depth (feet) TOB/TOC	SPH Thickness (feet)	SEPARATE-PHASE HYDROCARBONS (SPH)					LIQUID REMOVED (gallons)				
									TOB/TOC		TOB/TOC				Fresh	Weathered	Gas	Oil	VISCOSITY			SPH		
																			Lite		Medium		Heavy	H ₂ O
2	MW-1	1222	✓	✓	✓	✓	✓	1604	8.74	8.74	8.87	8.87	—	—						—				
1	MW-2	1200	✓	✓	✓	✓	1604	7.83	7.83	8.15	8.15	—	—							—				
4	MW-3	1210	✓	✓	✓	✓	1501	8.15	8.15	8.40	8.40	—	—							—				
3	MW-4	1215	✓	✓	✓	✓	17.75	9.32	9.32	9.57	9.57	—	—							—				
																				—				
																				—				
																				—				
																				—				
																				—				

Comments: _____

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-10726 LOCATION: 15135 HESPERIAN RD WELL ID #: MW-1
SAN LEANDRO
 CLIENT/STATION No.: ARCO/02162 FIELD TECHNICIAN: J. Monahan

WELL INFORMATION

Depth to Liquid: TOB TOC
 Depth to water: TOB 8.74 TOC
 Total depth: TOB 1604 TOC
 Date: 8-23-95 Time (2400): 1222

CASING
DIAMETER GAL/
LINEAR FT.

- 2 0.17
- 3 0.38
- 4 0.66
- 4.5 0.83
- 5 1.02
- 6 1.5
- 8 2.6

- SAMPLE TYPE
- Groundwater
 - Duplicate
 - Extraction well
 - Trip blank
 - Field blank
 - Equipment blank
 - Other:

Probe Type and I.D. #
 Oil/Water interface
 Electronic indicator #3
 Other:

TD 1604 - DTW 8.74 = 7.30 Gal/Linear 0.66 = 482 x Foot 3 = Purge 1445

DATE PURGED: 8-23-95 START: 1251 END (2400 hr): 1302 PURGED BY: MM
 DATE SAMPLED: 8-23-95 START: 1303 END (2400 hr): 1307 SAMPLED BY: MM

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
<u>1254</u>	<u>5.0</u>	<u>6.80</u>	<u>946</u>	<u>68.9</u>	<u>CLR</u>	<u>LT</u>	<u>Faint</u>
<u>1257</u>	<u>10.0</u>	<u>6.69</u>	<u>958</u>	<u>69.6</u>	<u>CLR</u>	<u>LT</u>	<u>Faint</u>
<u>1300</u>	<u>15.0</u>	<u>6.71</u>	<u>965</u>	<u>69.8</u>	<u>CLR</u>	<u>LT</u>	<u>Faint</u>

Pumped dry Yes / (No)

Cobalt 0-100
 Clear
 Cloudy
 Yellow
 Brown

NTU 0-200
 Heavy
 Moderate
 Light
 Trace

Strong
 Moderate
 Faint
 None

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: TOB/TOC

PURGING EQUIPMENT/I.D. #

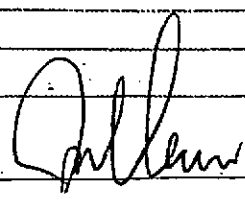
- Bailor:
- Centrifugal Pump: #3
- Other:
- Airlift Pump:
- Dedicated:

SAMPLING EQUIPMENT/I.D. #

- Bailor: 13-7
- Dedicated:
- Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
<u>MW-1</u>	<u>8-23-95</u>	<u>1305</u>	<u>3</u>	<u>40ml</u>	<u>VOA</u>	<u>HCL</u>	<u>TPH_g/BTEX</u>

REMARKS:

SIGNATURE: 



FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-107.26 LOCATION: 15135 HESPERIAN DR WELL ID #: MW-2
 CLIENT/STATION No.: ARCO/02162 FIELD TECHNICIAN: J. M. N. N. M.

WELL INFORMATION

Depth to Liquid: TOB TOC
 Depth to water: TOB 7.83 TOC
 Total depth: TOB 16.04 TOC
 Date: 8-23-95 Time (2400): 1220

CASING DIAMETER GAL LINEAR FT.
 2 _____ 0.17
 3 _____ 0.38
 4 _____ 0.66
 4.5 _____ 0.83
 5 _____ 1.02
 6 _____ 1.5
 8 _____ 2.6

SAMPLE TYPE
 Groundwater
 Duplicate
 Extraction well
 Trip blank
 Field blank
 Equipment blank
 Other: _____

Probe Type and I.D. #
 Oil/Water interface
 Electronic indicator #3
 Other: _____

TD 16.04 - DTW 7.83 = 8.21 Gal/Linear x Foot 0.66 = 5.42 Number of Casings 3 Calculated = Purge 16.26

DATE PURGED: 8-23-95 START: 1231 END (2400 hr): 1242 PURGED BY: AM
 DATE SAMPLED: 8-23-95 START: 1240 END (2400 hr): 1247 SAMPLED BY: AM

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
<u>1234</u>	<u>5.5</u>	<u>7.16</u>	<u>902</u>	<u>75.6</u>	<u>CLR</u>	<u>LT</u>	<u>Faint</u>
<u>1237</u>	<u>11.0</u>	<u>6.87</u>	<u>858</u>	<u>73.0</u>	<u>CLR</u>	<u>LT</u>	<u>MDO</u>
<u>1240</u>	<u>16.5</u>	<u>6.86</u>	<u>860</u>	<u>71.3</u>	<u>CLR</u>	<u>LT</u>	<u>MDO</u>

Pumped dry Yes No
 FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:
 DTW: _____ TOB/TOC _____

PURGING EQUIPMENT/I.D. # SAMPLING EQUIPMENT/I.D. #
 Bailer: _____ Airlift Pump: _____ Bailer: #13.6
 Centrifugal Pump: #2 Dedicated: _____ Dedicated: _____
 Other: _____ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
<u>MW-2</u>	<u>8-23-95</u>	<u>1245</u>	<u>3</u>	<u>40mL</u>	<u>VOA</u>	<u>HCL</u>	<u>TPH, 1,3,5 TEX</u>

REMARKS: _____

SIGNATURE: [Signature]



FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-107.26 LOCATION: 15135 HESPERIAN RD WELL ID #: MMW-3
 CLIENT/STATION No.: ARCO/02162 FIELD TECHNICIAN: J. Monahan
SAN LEANDRO

WELL INFORMATION

Depth to Liquid: TOB TOC
 Depth to water: TOB 0.15 TOC
 Total depth: TOB 15.01 TOC
 Date: 8-23-95 Time (2400): 1210

Probe Type and I.D. #
 Oil/Water interface
 Electronic indicator # 3
 Other:

CASING DIAMETER **GAL/ LINEAR FT.**

<input type="checkbox"/>	2	_____	0.17
<input type="checkbox"/>	3	_____	0.38
<input checked="" type="checkbox"/>	4	_____	0.66
<input type="checkbox"/>	4.5	_____	0.83
<input type="checkbox"/>	5	_____	1.02
<input type="checkbox"/>	6	_____	1.5
<input type="checkbox"/>	8	_____	2.6

SAMPLE TYPE

Groundwater
 Duplicate
 Extraction well
 Trip blank
 Field blank
 Equipment blank
 Other:

TD 15.01 - DTW 8.15 = 6.86 Gal/Linear x Foot 0.66 = 453 Number of Casings 3 Calculated = Purge 13.58

DATE PURGED: 8-23-95 START: 1337 END (2400 hr): 1348 PURGED BY: OM
 DATE SAMPLED: 8-23-95 START: 1348 END (2400 hr): 1353 SAMPLED BY: OM

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
<u>1340</u>	<u>5.0</u>	<u>7.43</u>	<u>1005</u>	<u>73.3</u>	<u>CMY</u>	<u>LT</u>	<u>MND</u>
<u>1343</u>	<u>10.0</u>	<u>7.22</u>	<u>1030</u>	<u>73.4</u>	<u>CMY</u>	<u>LT</u>	<u>Faint</u>
<u>1347</u>	<u>15.0</u>	<u>7.12</u>	<u>1126</u>	<u>74.8</u>	<u>CMY</u>	<u>LT</u>	<u>Faint</u>

Pumped dry Yes No

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

PURGING EQUIPMENT/I.D. #

Bailer: _____ Airlift Pump: _____
 Centrifugal Pump: # 3 Dedicated: _____
 Other: _____

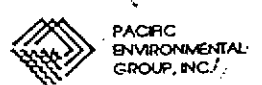
SAMPLING EQUIPMENT/I.D. #

Bailer: 13-13
 Dedicated: _____
 Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
<u>MMW-3</u>	<u>8-23-95</u>	<u>1350</u>	<u>3</u>	<u>40ml</u>	<u>VOA</u>	<u>HCL</u>	<u>TPH_g/BTEX/MSB</u>

REMARKS: _____

SIGNATURE: [Signature]



FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-107126 LOCATION: 15135 HESPERIAN RD WELL ID #: MW-4
SAN LEANDRO
 CLIENT/STATION No.: ARCO/02162 FIELD TECHNICIAN: J. MANNING

WELL INFORMATION

Depth to Liquid: - TOB - TOC
 Depth to water: - TOB 9.32 TOC
 Total depth: - TOB 17.75 TOC
 Date: 8-23-95 Time (2400): 1215

Probe Type and I.D. #
 Oil/Water interface
 Electronic indicator #3
 Other: _____

CASING
DIAMETER GAL/
LINEAR FT.

2 _____ 0.17
 3 _____ 0.38
 4 _____ 0.66
 4.5 _____ 0.83
 5 _____ 1.02
 6 _____ 1.5
 8 _____ 2.6

SAMPLE TYPE

Groundwater
 Duplicate
 Extraction well
 Trip blank
 Field blank
 Equipment blank
 Other: _____

TD 17.75 - DTW 9.32 = 8.43 Gal/Linear x Foot 0.66 = 5.56 Number of 3 Casings = Calculated Purge 16.69

DATE PURGED: 8-27-95 START: 1308 END (2400 hr): 1322 PURGED BY: DM
 DATE SAMPLED: 8-23-95 START: 1323 END (2400 hr): 1327 SAMPLED BY: DM

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
<u>1312</u>	<u>6.0</u>	<u>7.46</u>	<u>1007</u>	<u>73.2</u>	<u>CUY</u>	<u>LT</u>	<u>Faint</u>
<u>1316</u>	<u>12.0</u>	<u>7.37</u>	<u>1006</u>	<u>72.4</u>	<u>CUY</u>	<u>LT</u>	<u>Faint</u>
<u>1320</u>	<u>18.0</u>	<u>7.34</u>	<u>1000</u>	<u>72.2</u>	<u>CUY</u>	<u>LT</u>	<u>None</u>

Pumped dry Yes No

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

PURGING EQUIPMENT/I.D. #

Bailer: _____
 Centrifugal Pump: #3
 Other: _____
 Airlift Pump: _____
 Dedicated: _____

SAMPLING EQUIPMENT/I.D. #

Bailer: 13-6
 Dedicated: _____
 Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
<u>MW-4</u>	<u>8-23-95</u>	<u>1325</u>	<u>3</u>	<u>40ml</u>	<u>VOA</u>	<u>HCL</u>	<u>TPH, 1,3,TEX, 1,2,4,6</u>

REMARKS: _____

SIGNATURE: _____

[Handwritten Signature]



PACIFIC ENVIRONMENTAL GROUP, INC.

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-107 LOCATION: 15135 HESPERIAN RD WELL ID #: TB-1
SAN LEANDRO
 CLIENT/STATION No.: ARCO / 02162 FIELD TECHNICIAN: J.M. [Signature]

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC _____
 Depth to water: _____ TOB _____ TOC _____
 Total depth: _____ TOB _____ TOC _____
 Date: _____ Time (2400): _____

Probe Type and I.D. #
 Oil/Water interface _____
 Electronic indicator _____
 Other: _____

CASING DIAMETER GAL/ LINEAR FT.
 2 _____ 0.17
 3 _____ 0.38
 4 _____ 0.66
 4.5 _____ 0.83
 5 _____ 1.02
 6 _____ 1.5
 8 _____ 2.6

SAMPLE TYPE
 Groundwater
 Duplicate
 Extraction well
 Trip blank
 Field blank
 Equipment blank
 Other: _____

TD _____ - DTW _____ = _____ Gal/Linear x Foot _____ = _____ Number of x Casings _____ = Purge _____

DATE PURGED: _____ START: _____ END (2400 hr): _____ PURGED BY: _____
 DATE SAMPLED: _____ START: _____ END (2400 hr): _____ SAMPLED BY: _____

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 2.5°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
TRIP BLANK							

Pumped dry Yes / No _____
 FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:
 DTW: _____ TOB/TOC _____

PURGING EQUIPMENT/I.D. #
 Bailer: _____
 Centrifugal Pump: _____
 Other: _____
 Airlift Pump: _____
 Dedicated: _____

SAMPLING EQUIPMENT/I.D. #
 Bailer: _____
 Dedicated: _____
 Other: _____

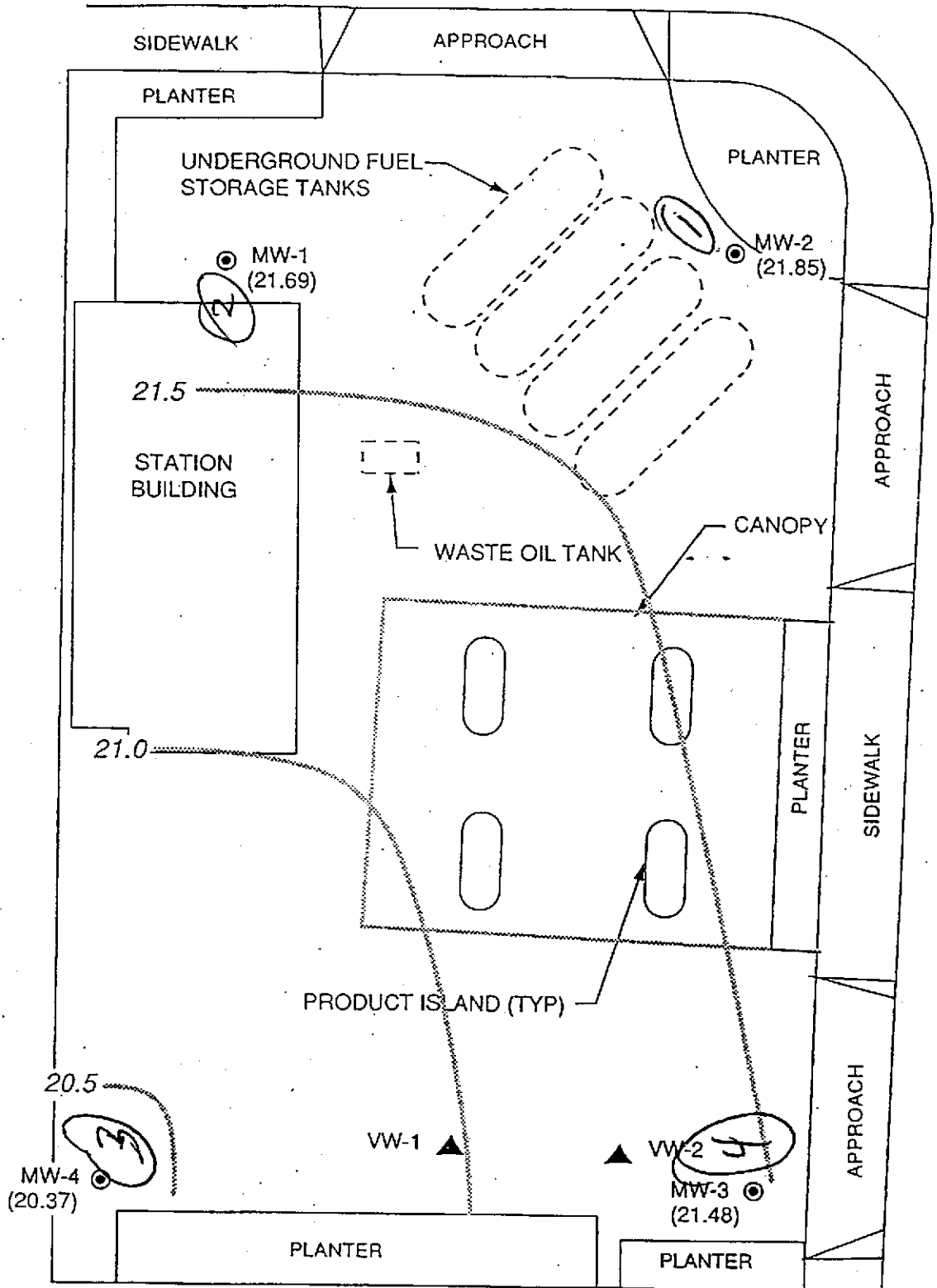
SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
<u>TB-1</u>	<u>8-23-91</u>	<u>NA</u>	<u>2</u>	<u>40mL</u>	<u>VOA</u>	<u>HCL</u>	<u>TRM / BTEX / [Signature]</u>

REMARKS: _____

SIGNATURE: [Signature]



RUTH COURT

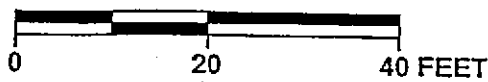


URCE: MAP BY RESNA



PACIFIC ENVIRONMENTAL GROUP, INC.

SCALE



ARCO Facility no. 2162	City (Facility) SAN LEANDRO	Project manager (Consultant) KELLY BROWN	Laboratory name SEQUOIA
ARCO engineer MIKE WHELAN	Telephone no. (ARCO)	Telephone no. (Consultant) (415) 941-7500	Contract number
Consultant PACIFIC ENVIRONMENTAL GROUP	Address (Consultant) 2025 BAYVIEW PLACE #410, SAN JOSE 95110		
		Fax no. (Consultant) (415) 941-7539	

Sample I.D.	Lab no.	Container no.	Matrix			Preservation		Sampling date	Sampling time	BTEX EPA 802/EPA 8020	BTEX/TPH EPA 802/602/801/815	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/SMS30E	EPA 801/8010	EPA 824/8240	EPA 825/8270	TCLP Metals <input type="checkbox"/> VOA <input type="checkbox"/> VOA <input type="checkbox"/>	Semi Metals <input type="checkbox"/> VOA <input type="checkbox"/> VOA <input type="checkbox"/>	CMM Metals EPA 601/67000 TLC <input type="checkbox"/> STLC <input type="checkbox"/>	Lead Org./DHS <input type="checkbox"/> Lead EPA 7420/7421 <input type="checkbox"/>	
			Soil	Water	Other	Ice	Acid															
MW-1		3		X		X	HCL	8-23-85	1305		X											
MW-2		3		↓		↓			1245													
MW-3		3		↓		↓			1350													
MW-4		3		↓		↓			1325													
TB-1		2		↓		↓			NA													

Method of shipment
COURIER

Special detection Limit/reporting

Special QA/QC

Remarks

Lab number

Turnaround time

Priority Rush 1 Business Day

Rush 2 Business Days

Expedited 5 Business Days

Standard 10 Business Days

Condition of sample:	Temperature received:
Relinquished by [Signature]	Received by
Date 8-23-85 Time 1435	Date
Relinquished by	Received by
Date	Time
Relinquished by	Received by laboratory
Date	Time

ATTACHMENT B
FIELD AND LABORATORY PROCEDURES

ATTACHMENT B

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Sampling Procedures

The sampling procedure for each well consists of first measuring the water level and checking for the presence of separate-phase hydrocarbons (SPH) using either an electronic indicator and a clear Teflon® bailer or an oil-water interface probe. Wells not containing SPH are then purged of approximately three casing volumes of water (or to dryness) using a centrifugal pump, gas displacement pump, or bailer. Equipment used for the current sampling event is noted on the attached field data sheets. During purging, temperature, pH, and electrical conductivity are monitored in order to document that these parameters are stable prior to collecting samples. After purging, water levels are allowed to partially recover. Groundwater samples are collected using a Teflon bailer, placed into appropriate EPA-approved containers, labeled, logged onto chain-of-custody documents, and transported on ice to a California State-certified laboratory.

Laboratory Procedures

The groundwater samples were analyzed for the presence of total petroleum hydrocarbons calculated as gasoline, benzene, toluene, ethylbenzene, and xylenes. The analyses were performed according to EPA Methods 8015 (modified), 8020, and 5030 utilizing a purge-and-trap extraction technique. Final detection was by gas chromatography using flame- and photo-ionization detectors. The methods of analysis for the groundwater samples are documented in the certified analytical report. The certified analytical report, chain-of-custody documentation, and field data sheets are presented as Attachment A.