PACIFIC
ENVIRONMENTAL
GROUP, INC.

Rec'd 10/5/95 SH

September 29, 1995
Project 330-109.2B

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

Re: Quarterly Report - Second Quarter 1995
Remedial System Performance Evaluation
ARCO Service Station 4931
731 West MacArthur Boulevard at West Street
Oakland, California

Dear Mr. Whelan:

This letter, prepared by Pacific Environmental Group, Inc. (PACIFIC) on behalf of ARCO Products Company, presents the results of the second quarter 1995 groundwater monitoring and performance evaluation of the groundwater extraction (GWE) system 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 May 8, 1995 and analyzed for the presence of total petroleum hydrocarbons calculated as gasoline (TPH-g), benzene, toluene, ethylbenzene, and xylenes (BTEX compounds). Field and laboratory procedures are presented as Attachment A. Certified analytical reports, chain-of-custody documentation, and field data sheets are presented as Attachment B. Treatment system certified analytical reports, chain-of-custody documentation, and field data sheets are presented as Attachment C.

Depth to water data collected during the May 1995 sampling event indicated that groundwater elevation changes in site monitoring wells are mixed but on average have fallen approximately 0.76 feet since February 9, 1995. Groundwater flow has historically been toward the west. Currently, a pumping depression has been created in the central portion of the site. Groundwater elevation data are presented in Table 1. A liquid surface elevation contour map based on the May 1995 data is shown on Figure 1.

The results of groundwater sampling this quarter indicate that TPH-g and benzene concentrations are generally consistent with previous quarterly data. TPH-g was below the detection limit in Wells A-2, A-3, A-5, A-7, A-9 through A-13, AR-2, and AR-3. Benzene was below the detection limit in Wells A-3, A-5, A-7, A-9 through A-13, AR-2, and AR-3. TPH-g concentrations in remaining site wells ranged from 100 to 23,000 parts per billion (ppb). Benzene concentrations in remaining site wells ranged from 1.4 to 3,600 ppb. Groundwater analytical data are presented in Table 2. A TPH-g and benzene concentration map is shown on Figure 2.

REMEDIAL PERFORMANCE EVALUATION

Remedial action consisting of GWE is currently in progress at this site. The GWE system has been in operation since November 10, 1992. Remedial objectives for the site include: (1) migration control of the impacted groundwater plume, and (2) petroleum hydrocarbon mass reduction. To evaluate GWE system performance, PACIFIC monitors groundwater levels, instantaneous and average flow rates, evaluates and analyzes samples of system influent and effluent for TPH-g and BTEX compound concentrations. Below is a brief description of the GWE system and an evaluation of its performance from March 3 to June 9, 1995.

GROUNDWATER EXTRACTION SYSTEM

Description

The treatment system utilizes electric GWE pumps in Wells A-9, AR-1, AR-2, and AR-3, and three 1,500-pound granular activated carbon vessels arranged in series to treat the influent groundwater stream prior to being discharged into the sanitary sewer system. Sample ports are located at the treatment system influent (Sample Point D), between the carbon vessels (Sample Point C at Mid-1, and Sample Point B at Mid-2), and at the effluent (Sample Point A). The treated groundwater is discharged into the East Bay Municipal Utility District sanitary sewer system under Permit No. 502-62131 which is in effect until November 1, 1997.

Migration Control

Progress toward meeting the migration control objective is evaluated by comparison of the groundwater elevation contour map (Figure 1) and TPH-g and benzene concentration map (Figure 2) from previous and current groundwater monitoring events. The groundwater contour map from this quarter indicates a groundwater depression extending radially from groundwater extraction Wells AR-2 and AR-3. As indicated by Figure 2, concentrations of TPH-g and benzene remained below detection limits at downgradient monitoring Wells A-11 and A-12 Therefore, the migration control objective appears to have been met during the reporting period.

Mass Reduction

Progress toward meeting the mass reduction objective is determined by evaluating the GWE system mass removal data and the TPH-g concentration trends in associated groundwater monitoring wells. GWE system flow data are collected monthly. GWE system analytical data are obtained quarterly. The system flow and influent sample analysis data are used to estimate dissolved TPH-g mass removal values. During the reporting period the GWE system removed 0.26 pound (0.04 gallon) of TPH-g and 0.02 pound (<0.01 gallon) of benzene from the impacted groundwater beneath the site. To date, GWE has removed approximately 2.74 pounds (0.45 gallon) of TPH-g and 0.46 pound (0.06 gallon) of benzene from impacted groundwater beneath the site. During this period <0.10 pound (<0.01 gallon) of separate-phase hydrocarbons (SPH) was removed from Well A-8. To date, 23 pounds (3.75 gallons) of SPH have been removed. Mass removal data for the GWE system are presented in Table 3. Treatment system analytical data are presented in Table 4. Graphical presentation of TPH-g and benzene mass removal and concentration data are presented as Figures 3 and 4, respectively. The treatment system certified analytical report, chain-of-custody documentation, and field data sheets are presented as Attachment C. Progress toward site remediation is presented in the table below.

	Mass Removed			
	03/03/95 to 06/09/95		*Cumulative*	
Analyte	(lbs)	(gal)	(lbs)	(gal)
Groundwater Extraction				
TPH-g	0.26	0.04	2.74	0.45
Benzene	0.02	<0.01	0.46	0.06
SPH	<0.10	<0.01	23	3.75

lbs = Pounds
gal = Gallons
TPH-g = Total petroleum hydrocarbons calculated as gasoline
SPH = Separate-phase hydrocarbons
Note: Cumulative mass removed was obtained from available data provided by the previous consultant.

GWE System Operational Data

The GWE system was 100 percent operational during the reporting period.

During the reporting period, the GWE system discharged treated groundwater at an average operational flow rate of approximately 1.1 gallons per minute (gpm), for a period discharge of 95,429 gallons. Calculations based on 8 percent loading isotherm by weight indicate the primary carbon vessel is approximately 3.4 percent loaded.

During this quarter, the GWE system was in compliance with all conditions stipulated in the discharge permit. Operation and maintenance field data sheets are presented as Attachment C.

CONCLUSIONS

The GWE system was shut down on July 5, 1995. PACIFIC proposes to leave the system shut down for the following reasons:

- Since June 28, 1994, the GWE system has only removed a total of 2.74 and 0.46 pounds of TPH-g and benzene, respectively (Table 3). Therefore, the GWE system is not an effective means of TPH-g and benzene mass reduction at the site.
- Concentrations of TPH-g and benzene in downgradient off-site Wells A-11 and A-12 has remained non-detectable since quarterly monitoring was initiated in January 1988 (Table 2). Therefore, it appears the contamination plume has stabilized and the risk of down-gradient migration is minimal.

It is PACIFIC's intention to maintain quarterly monitoring at the site to verify conditions remain stable; in particular, that the hydrocarbon plume remains stagnant. PACIFIC will initiate a dialogue with the Regional Water Quality Control Board (RWQCB) and Alameda County Health Care Services Agency (ACHCSA) regarding site closure based on site Non-Attainment Zone (NAZ) status.

In addition, based on groundwater analytical data, PACIFIC will reduce the groundwater sampling frequency at site wells beginning with the third quarter 1995 groundwater monitoring and sampling event. The reduction in the sampling frequency of selected wells is based on following:

- interior wells with TPH-g and benzene below detection limits for more than eight consecutive quarters;
- an off-site well with TPH-g and benzene below detection limits for eight consecutive quarters;
- an interior well with low or stable TPH-g and benzene concentrations; and,
- adjacent wells providing duplication of groundwater analytical results.

Based on the above criteria, Wells A-7 and A-13 will be sampled annually; Wells A-3, A-5, A-11, and A-12 will be sampled semiannually; Well A-10 will be removed from the sampling schedule; and Wells A-2, A-4, A-6, A-8, A-9, and AR-1 through AR-3 will continue to be sampled quarterly. Depth to water measurements will be collected quarterly from all site wells. A groundwater sampling schedule is presented in Table 5.

SUMMARY OF WORK

Work Performed Second Quarter 1995

- Monitored and optimized GWE system's performance.
- Prepared and submitted first quarter 1995 groundwater monitoring and remedial system evaluation report.
- Sampled site wells for second quarter 1995 groundwater monitoring program. Sampling performed by PACIFIC.
- Prepare second quarter 1995 groundwater monitoring and remedial system performance evaluation report.

Work Anticipated Third Quarter 1995

- Prepare and submit second quarter 1995 groundwater monitoring and remedial system performance evaluation report.
- Sample site wells for third quarter 1995 groundwater monitoring program. Sampling to be performed by PACIFIC.
- Prepare third quarter 1995 groundwater monitoring and remedial system performance evaluation report.
- Pursue NAZ status for the site.

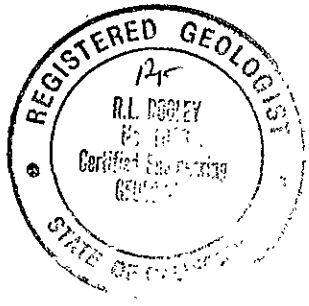
If there are any questions regarding the contents of this letter, please call.

Sincerely,

Pacific Environmental Group, Inc.

Shaw E. Garakani
Project Engineer

R. Lee Dooley
Senior Geologist
CEG 1006



Attachments:
- Table 1 - Liquid Surface Elevation Data
- Table 2 - Groundwater Analytical Data - Total Petroleum Hydrocarbons (TPH as Gasoline and BTEX Compounds)
- Table 3 - Groundwater Extraction System Performance Data
- Table 4 - Groundwater Extraction System Analytical Data
- Table 5 - Groundwater Sampling Schedule
- Figure 1 - Liquid Surface Elevation Contour Map
- Figure 2 - TPH-g/Benzene Concentration Map
- Figure 3 - Groundwater Extraction System Mass Removal Data
- Figure 4 - Groundwater Extraction System Hydrocarbon Concentrations
- Attachment A - Field and Laboratory Procedures
- Attachment B - Certified Analytical Reports, Chain-of-Custody Documentation, and Field Data Sheets
- Attachment C - Treatment System Certified Analytical Reports, Chain-of-Custody Documentation, and Field Data Sheets

cc: Mr. Stan Archacki, East Bay Municipal Utility District
Mr. Kevin Graves, Regional Water Quality Control Board - San Francisco Bay Region
Ms. Susan Hugo, Alameda County Health Care Services Agency

Table 1
Liquid Surface Elevation Data

ARCO Service Station 4931
731 West MacArthur Boulevard at West Street
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	Depth to Water (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
A-2	03/20/89	55.38	3.45	3.45	0.00	51.93
	05/24/89		6.80	6.80	0.00	48.58
	08/18/89		10.82	10.82	0.00	44.56
	10/27/89		8.25	8.25	0.00	47.13
	01/15/90		4.87	4.87	0.00	50.51
	04/04/90		7.03	7.03	0.00	48.35
	07/30/90		10.01	10.01	0.00	45.37
	10/29/90		11.60	11.60	0.00	43.78
	01/16/91		9.43	9.43	0.00	45.95
	04/12/91		3.65	3.65	0.00	51.73
	07/10/91		9.57	9.57	0.00	45.81
	10/21/91		11.54	11.54	0.00	43.84
	02/01/92		11.20	11.20	0.00	44.18
	04/29/92		7.18	7.18	0.00	48.20
	07/29/92	55.48	11.81	11.81	0.00	43.67
	10/29/92		11.91	11.91	0.00	43.57
	01/26/93		5.06	5.06	0.00	50.42
	04/01/93		5.15	5.15	0.00	50.33
	08/06/93		15.33	15.33	0.00	40.15
	10/14/93		15.74	15.74	0.00	39.74
	11/16/93		14.61	14.61	0.00	40.87
	12/16/93		5.80	5.80	0.00	49.68
	02/10/94		4.88	4.88	0.00	50.60
	03/21/94		4.94	4.94	0.00	50.54
	05/06/94		---------- Well Inaccessible ----------			
	08/09/94		12.51	12.51	0.00	42.97
	11/17/94		5.24	5.24	0.00	50.24
	02/09/95		6.55	6.55	0.00	48.93
	05/08/95		6.08	6.08	0.00	49.40
A-3	03/20/89	54.48	7.51	7.51	0.00	46.97
	05/24/89		10.29	10.29	0.00	44.19
	08/18/89		11.60	11.60	0.00	42.88
	10/27/89		10.16	10.16	0.00	44.32
	01/15/90		8.55	8.55	0.00	45.93
	04/04/90		10.66	10.66	0.00	43.82
	07/30/90		11.26	11.26	0.00	43.22
	10/29/90		11.86	11.86	0.00	42.62
	01/16/91		11.46	11.46	0.00	43.02
	04/12/91		9.28	9.28	0.00	45.20
	07/10/91		11.29	11.29	0.00	43.19
	10/21/91		11.51	11.51	0.00	42.97
	02/02/92		---------- Well Inaccessible ----------			
	04/29/92		---------- Well Inaccessible ----------			
	07/29/92	54.66	11.59	11.59	0.00	43 07
	10/28/92		12.00	12.00	0.00	42.66
	01/26/93		9.82	9.82	0.00	44.84
	04/01/93		10.61	10.61	0.00	44.05
	08/06/93		14.90	14.90	0.00	39.76
	10/14/93		15.11	15.11	0.00	39 55
	11/16/93		14.72	14.72	0.00	39.94
	12/16/93		13.37	13.37	0.00	41.29
	02/10/94		9.20	9.20	0.00	45 46
	05/06/94		10.34	10.34	0.00	44.32
	08/09/94		12.09	12.09	0.00	42.57
	11/17/94		5.85	5.85	0.00	48.81
	02/09/95		9.93	9.93	0.00	44.73
	05/08/95		11.32	11.32	0.00	43.34

Table 1 (continued)
Liquid Surface Elevation Data

ARCO Service Station 4931
731 West MacArthur Boulevard at West Street
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	Depth to Water (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
A-4	03/21/86	54.62	NM	NM	3.50	NM
	01/07/88		NM	NM	0.02	NM
	03/20/89		8.13	8.13	0.00	46.49
	05/24/89		11.40	11.40	0.00	43.22
	08/18/89		11.90	11.91	0.01	42.72
	10/27/89		11.36	11.37	0.01	43.26
	01/15/90		9.73	9.74	0.01	44.89
	04/04/90		11.19	11.19	0.00	43.43
	07/30/90		11.70	11.71	0.01	42.92
	10/29/90		12.18	12.21	0.03	42.44
	01/16/91		11.88	11.89	0.01	42.74
	04/12/91		9.54	9.54	0.00	45.08
	07/10/91		11.55	11.55	0.00	43.07
	09/20/91		12.12	12.12	0.00	42.50
	10/21/91		11.73	11.76	0.03	42.89
	02/02/92		11.16	11.18	0.02	43.46
	04/29/92		10.76	10.78	0.02	43.86
	07/29/92	54.73	11.70	11.74	0.04	43.03
	10/28/92		11.90	11.93	0.03	42.83
	01/26/93		10.55	10.59	0.04	44.18
	04/01/93		10.15	10.17	0.02	44.58
	08/06/93		15.09	15.12	0.03	39.64
	10/14/93		15.37	15.37	0.00	39.36
	11/16/93		14.86	14.86	0.00	39.87
	12/16/93		13.41	13.41	0.00	41.32
	02/10/94		9.30	9.30	0.00	45.43
	05/06/94		10.02	10.02	0.00	44.71
	08/09/94		12.28	12.28	0.00	42.45
	11/17/94		9.44	9.44	0.00	45.29
	02/09/95		10.95	10.95	0.00	43.78
	05/08/95		11.29	11.29	0.00	43.44
A-5	03/20/89	54.15	8.09	8.09	0.00	46.06
	05/24/89		11.13	11.13	0.00	43.02
	08/18/89		11.58	11.58	0.00	42.57
	10/27/89		10.68	10.68	0.00	43.47
	01/15/90		9.24	9.24	0.00	44.91
	04/04/90		10.93	10.93	0.00	43.22
	07/30/90		11.48	11.48	0.00	42.67
	10/29/90		11.77	11.77	0.00	42.38
	01/16/91		11.36	11.36	0.00	42.79
	04/12/91		9.64	9.64	0.00	44.51
	07/10/91		11.30	11.30	0.00	42.85
	10/21/91		11.48	11.48	0.00	42.67
	02/02/92		10.73	10.73	0.00	43.42
	04/29/92		10.58	10.58	0.00	43.57
	07/29/92	54.17	11.46	11.46	0.00	42.71
	10/28/92		11.55	11.55	0.00	42.62
	01/26/93		10.32	10.32	0.00	43.85
	04/01/93		10.36	10.36	0.00	43.81
	08/06/93		14.82	14.82	0.00	39.35
	10/14/93		14.99	14.99	0.00	39.18
	11/16/93		14.47	14.47	0.00	39.70
	12/16/93		12.94	12.94	0.00	41.23
	02/10/94		8.94	8.94	0.00	45.23
	05/06/94		10.48	10.48	0.00	43.69
	08/09/94		11.86	11.86	0.00	42.31
	11/17/94		9.49	9.49	0.00	44.68
	02/09/95		10.50	10.50	0.00	43.67
	05/08/95		11.15	11.15	0.00	43.02

Table 1 (continued)
Liquid Surface Elevation Data

ARCO Service Station 4931
731 West MacArthur Boulevard at West Street
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	Depth to Water (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
A-6	03/20/89	55.13	6.43	6.43	0.00	48.70
	05/24/89		9.43	9.43	0.00	45.70
	08/18/89		10.10	10.10	0.00	45.03
	10/27/89		9.16	9.16	0.00	45.97
	01/15/90		8.02	8.02	0.00	47.11
	04/04/90		9.29	9.29	0.00	45.84
	07/30/90		9.93	9.93	0.00	45.20
	10/29/90		10.42	10.42	0.00	44.71
	01/16/91		10.15	10.15	0.00	44.98
	04/12/91		8.05	8.05	0.00	47.08
	07/10/91		10.03	10.03	0.00	45.10
	10/21/91		10.30	10.30	0.00	44.83
	02/02/92		9.81	9.81	0.00	45.32
	04/29/92	---------- Well Inaccessible ----------				
	07/29/92	55.17	10.40	10.40	0.00	44.77
	10/28/92		10.55	10.55	0.00	44.62
	01/26/93		7.50	7.50	0.00	47.67
	04/01/93		7.59	7.59	0.00	47.58
	08/06/93		12.32	12.32	0.00	42.85
	10/14/93		12.82	12.82	0.00	42.35
	11/16/93		12.34	12.34	0.00	42.83
	12/16/93		10.40	10.40	0.00	44.77
	02/10/94		7.53	7.53	0.00	47.64
	05/06/94		8.71	8.71	0.00	46.46
	08/09/94		10.57	10.57	0.00	44.60
	11/17/94		7.91	7.91	0.00	47.26
	02/09/95		8.13	8.13	0.00	47.04
	05/08/95		8.85	8.85	0.00	46.32
A-7	03/20/89	54.67	6.29	6.29	0.00	48.38
	05/24/89		9.26	9.26	0.00	45.41
	08/18/89		9.97	9.97	0.00	44.70
	10/27/89		9.02	9.02	0.00	45.65
	01/15/90		7.90	7.90	0.00	46.77
	04/04/90		9.15	9.15	0.00	45.52
	07/30/90		9.80	9.80	0.00	44.87
	10/29/90		10.30	10.30	0.00	44.37
	01/16/91		11.35	11.35	0.00	43.32
	04/12/91		7.90	7.90	0.00	46.77
	07/10/91		9.82	9.82	0.00	44.85
	10/21/91		10.12	10.12	0.00	44.55
	02/02/92		9.28	9.28	0.00	45.39
	04/29/92		8.85	8.85	0.00	45.82
	07/29/92	54.71	10.09	10.09	0.00	44.62
	10/28/92		10.31	10.31	0.00	44.40
	01/26/93		7.33	7.33	0.00	47.38
	04/01/93		7.35	7.35	0.00	47.36
	08/06/93		12.67	12.67	0.00	42.04
	10/14/93		12.52	12.52	0.00	42.19
	11/16/93		12.13	12.13	0.00	42.58
	12/16/93		10.18	10.18	0.00	44.53
	02/10/94		7.40	7.40	0.00	47.31
	05/06/94		8.41	8.41	0.00	46.30
	08/09/94		10.57	10.57	0.00	44.14
	11/17/94		7.91	7.91	0.00	46.80
	02/09/95		7.85	7.85	0.00	46.86
	05/08/95		8.36	8.36	0.00	46.35

Table 1 (continued)
Liquid Surface Elevation Data

ARCO Service Station 4931
731 West MacArthur Boulevard at West Street
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	Depth to Water (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
A-8	03/21/86	53.61	---------- Well Inaccessible ----------			
	01/07/88		---------- Well Inaccessible ----------			
	03/20/89		7.55	8.21	0.66	46.06
	05/24/89		10.21	11.41	1.20	43.40
	08/18/89		10.11	10.88	0.77	43.50
	10/27/89		10.35	11.66	1.31	43.26
	01/15/90		8.97	9.84	0.87	44.64
	04/04/90		11.10	11.35	0.25	42.51
	07/30/90		8.73	10.48	1.75	44.88
	10/29/90		11.29	11.39	0.10	42.32
	01/16/91		11.10	11.11	0.01	42.51
	04/12/91		9.15	9.16	0.01	44.46
	07/10/91		10.72	10.73	0.01	42.89
	10/21/91		10.87	10.98	0.11	42.74
	02/02/92		9.40	10.80	1.40	44.21
	04/29/92		9.85	11.15	1.30	43.76
	07/29/92	53.77	11.27	11.33	0.06	42.50
	10/28/92		---------- Well Dry ----------			
	01/26/93		---------- Well Dry ----------			
	04/01/93		9.38	9.38	0.00	44.39
	08/06/93		---------- Well Dry ----------			
	10/14/93		13.10	13.10	0.00	40.67
	11/16/93		---------- Well Dry ----------			
	12/16/93		13.40	13.40	0.00	40.37
	02/10/94		8.93	8.94	0.01	44.84
	05/06/94		8.38	8.80	0.42	45.39
	08/09/94		10.13	10.46	0.33	43.64
	11/17/94		9.09	9.41	0.32	44.68
	02/09/95		9.07	9.07	0.00	44.70
	05/08/95		10.60	10.60	<0.01	43.17
A-9	03/20/89	52.96	6.28	6.28	0.00	46.68
	05/24/89		10.12	10.12	0.00	42.84
	08/18/89		9.51	9.51	0.00	43.45
	10/27/89		8 56	8.56	0.00	44.40
	01/15/90		7.20	7.20	0.00	45.76
	04/04/90		8 78	8.78	0.00	44.18
	07/30/90		10.16	10.16	0.00	42.80
	10/29/90		10.71	10.71	0.00	42.25
	01/16/91		10.44	10.44	0.00	42.52
	04/12/91		8.69	8.69	0.00	44.27
	07/10/91		10.23	10.23	0.00	42.73
	09/20/91		10.47	10.47	0.00	42.49
	10/21/91		10 39	10.39	0.00	42.57
	02/02/92		9.05	9.05	0.00	43.91
	04/29/92		9 56	9.56	0.00	43.40
	07/29/92	53 04	10.43	10.43	0.00	42.61
	10/28/92		---------- Well Inaccessible ----------			
	01/26/93		---------- Well Inaccessible ----------			
	04/01/93		---------- Well Inaccessible ----------			
	08/06/93		---------- Well Inaccessible ----------			
	10/14/93		---------- Well Inaccessible ----------			
	11/16/93		---------- Well Inaccessible ----------			
	12/16/93		12 10	12.10	0.00	40.94
	02/10/94		8 00	8.00	0.00	45.04
	03/21/94		9.62	9.62	0.00	43.42
	05/06/94		9.41	9.41	0.00	43.63
	08/09/94		10 81	10.81	0.00	42.23
	11/17/94		9.89	9.89	0.00	43.15
	02/09/95		9 97	9.97	0.00	43.07
	05/08/95		10 28	10.28	0.00	42.76

Table 1 (continued)
Liquid Surface Elevation Data

ARCO Service Station 4931
731 West MacArthur Boulevard at West Street
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	Depth to Water (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
A-10	03/20/89	54.16	8.52	8.52	0.00	45.64
	05/24/89		11.31	11.31	0.00	42.85
	08/18/89		11.82	11.82	0.00	42.34
	10/27/89		10.94	10.94	0.00	43.22
	01/15/90		9.58	9.58	0.00	44.58
	04/04/90		---------- Well Inaccessible ----------			
	07/30/90		11.57	11.57	0.00	42.59
	10/29/90		12.11	12.11	0.00	42.05
	01/16/91		11.60	11.60	0.00	42.56
	04/12/91		10.04	10.04	0.00	44.12
	07/10/91		11.55	11.55	0.00	42.61
	10/21/91		11.79	11.79	0.00	42.37
	02/02/92		---------- Well Inaccessible ----------			
	04/29/92		10.85	10.85	0.00	43.31
	07/29/92	54.26	11.84	11.84	0.00	42.42
	10/28/92		11.89	11.89	0.00	42.37
	01/26/93		10.81	10.81	0.00	43.45
	04/01/93		10.85	10.85	0.00	43.41
	08/06/93		15.06	15.06	0.00	39.20
	10/14/93		15.22	15.22	0.00	39.04
	11/16/93		14.70	14.70	0.00	39.56
	12/16/93		13.22	13.22	0.00	41.04
	02/10/94		9.61	9.61	0.00	44.65
	05/06/94		10.81	10.81	0.00	43.45
	08/09/94		12.24	12.24	0.00	42.02
	11/17/94		9.89	9.89	0.00	44.37
	02/09/95		11.00	11.00	0.00	43.26
	05/08/95		11.60	11.60	0.00	42.66
A-11	03/20/89	53.75	8.11	8.11	0.00	45.64
	05/24/89		10.92	10.92	0.00	42.83
	08/18/89		11.52	11.52	0.00	42.23
	10/27/89		10.63	10.63	0.00	43.12
	01/15/90		9.22	9.22	0.00	44.53
	04/04/90		10.85	10.85	0.00	42.90
	07/30/90		11.29	11.29	0.00	42.46
	10/29/90		11.66	11.66	0.00	42.09
	01/16/91		11.31	11.31	0.00	42.44
	04/12/91		9.55	9.55	0.00	44.20
	07/10/91		11.18	11.18	0.00	42.57
	10/21/91		11.24	11.24	0.00	42.51
	02/02/92		10.70	10.70	0.00	43.05
	04/29/92		10.57	10.57	0.00	43.18
	07/29/92	53.74	11.33	11.33	0.00	42.41
	10/28/92		11.54	11.54	0.00	42.20
	01/26/93		9.90	9.90	0.00	43.84
	04/01/93		10.11	10.11	0.00	43.63
	08/06/93		14.43	14.43	0.00	39.31
	10/14/93		14.72	14.72	0.00	39.02
	11/16/93		NM	NM	NM	NM
	12/16/93		NM	NM	NM	NM
	02/10/94		9.30	9.30	0.00	44.44
	05/06/94		9.94	9.94	0.00	43.80
	08/09/94		11.67	11.67	0.00	42.07
	11/17/94		9.32	9.32	0.00	44.42
	02/09/95		10.20	10.20	0.00	43.54
	05/08/95		10.88	10.88	0.00	42.86

Table 1 (continued)
Liquid Surface Elevation Data

ARCO Service Station 4931
731 West MacArthur Boulevard at West Street
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	Depth to Water (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
A-12	03/20/89	52.05	8.00	8.00	0.00	44.05
	05/24/89		10.35	10.35	0.00	41.70
	08/18/89		10.75	10.75	0.00	41.30
	10/27/89		10.06	10.06	0.00	41.99
	01/15/90		8.88	8.88	0.00	43.17
	04/04/90		10.30	10.30	0.00	41.75
	07/30/90		10.66	10.66	0.00	41.39
	10/29/90		10.90	10.90	0.00	41.15
	01/16/91		10.60	10.60	0.00	41.45
	04/12/91		9.45	9.45	0.00	42.60
	07/10/91		10.56	10.56	0.00	41.49
	10/21/91		10.62	10.62	0.00	41.43
	02/02/92		10.10	10.10	0.00	41.95
	04/29/92		10.19	10.19	0.00	41.86
	07/29/92		10.81	10.81	0.00	41.24
	10/28/92		10.81	10.81	0.00	41.24
	01/26/93		9.48	9.48	0.00	42.57
	04/01/93		10.67	10.67	0.00	41.38
	08/06/93		12.95	12.95	0.00	39.10
	10/14/93		13.28	13.28	0.00	38.77
	11/16/93		NM	NM	NM	NM
	12/16/93		NM	NM	NM	NM
	02/10/94		8.66	8.66	0.00	43.39
	05/06/94		9.89	9.89	0.00	42.16
	08/09/94		11.07	11.07	0.00	40.98
	11/17/94		9 17	9.17	0.00	42.88
	02/09/95		9.90	9.90	0.00	42.15
	05/08/95		10.27	10.27	0.00	41.78
A-13	07/01/92	55.11	9.93	9.93	0.00	45.18
	07/29/92		11.12	11.12	0.00	43.99
	10/28/92		10.84	10.84	0.00	44.27
	01/26/93		8.99	8.99	0.00	46.12
	04/01/93		9.18	9.18	0.00	45.93
	08/06/93		13.70	13.70	0.00	41.41
	10/14/93		14.02	14.02	0.00	41.09
	11/16/93		NM	NM	NM	NM
	12/16/93		NM	NM	NM	NM
	02/10/94		9.64	9.64	0.00	45.47
	05/06/94		10 29	10.29	0.00	44.82
	08/09/94		11.45	11 45	0.00	43.66
	11/17/94		9.67	9.67	0.00	45.44
	02/09/95		9.38	9.38	0.00	45.73
	05/08/95		10 32	10.32	0 00	44.79
AR-1	07/01/92	54.72	10.27	10.27	0.00	44.45
	07/29/92		11.32	11 32	0.00	43.40
	10/28/92	---------- Well Inaccessible ----------				
	01/26/93	---------- Well Inaccessible ----------				
	04/01/93	---------- Well Inaccessible ----------				
	08/06/93		17.42	17.42	0.00	37.30
	10/14/93	---------- Well Inaccessible ----------				
	11/16/93		13.76	13.76	0.00	40.96
	12/16/93		19.44	19.44	0.00	35.28
	02/10/94		9.00	9.00	0.00	45.72
	03/21/94		9.99	10.00	0.01	44.73
	05/06/94		19.61	19.61	0.00	35.11
	08/09/94		17.51	17.59	0.08	37.21
	11/17/94		17.39	17.39	sheen	37.33
	02/09/95		18 83	18.83	0.00	35.89
	05/08/95		10.96	18 83	0.00	43.76

Table 1 (continued)
Liquid Surface Elevation Data

ARCO Service Station 4931
731 West MacArthur Boulevard at West Street
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	Depth to Water (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
AR-2	07/01/92	54 77	11.33	11.33	0.00	43.44
	07/29/92		11.90	11.90	0.00	42.87
	10/28/92		---------- Well Inaccessible ----------			
	01/26/93		---------- Well Inaccessible ----------			
	04/01/93		---------- Well Inaccessible ----------			
	08/06/93		17.16	17.16	0.00	37.61
	10/14/93		18.11	18.11	0.00	36.66
	11/16/93		17.92	17.92	0.00	36.85
	12/16/93		18 02	18.02	0.00	36.75
	02/10/94		9.32	9.32	0.00	45.45
	03/21/94		10.36	10.36	0.00	44.41
	05/06/94		15.14	15.14	0.00	39.63
	08/09/94		18.25	18.25	0.00	36.52
	11/17/94		18.10	18.10	0.00	36.67
	02/09/95		17.10	17.10	0.00	37.67
	05/08/95		18.25	18.25	0.00	36.52
AR-3	07/01/92	54.19	10.11	10.11	0.00	44.08
	07/29/92		11.55	11.55	0.00	42.64
	10/28/92		---------- Well Inaccessible ----------			
	01/26/93		---------- Well Inaccessible ----------			
	04/01/93		---------- Well Inaccessible ----------			
	08/06/93		16.12	16.12	0.00	38.07
	10/14/93		---------- Well Inaccessible ----------			
	11/16/93		16.38	16.38	0.00	37.81
	12/16/93		---------- Well Inaccessible ----------			
	02/10/94		9.20	9.20	0.00	44.99
	03/21/94		10.80	10.80	0.00	43.39
	05/06/94		10.54	10.54	0.00	43.65
	08/09/94		11 92	11.92	0.00	42.27
	11/17/94		9 62	9.62	0.00	44.57
	02/09/95		15.90	15.90	0.00	38.29
	05/08/95		17 75	17.75	0.00	36.44

MSL = Mean sea level
TOB = Top of box
NM = Not monitored

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

ARCO Service Station 4931
731 West MacArthur Boulevard at West Street
Oakland, California

Well Number	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)
A-2	03/21/86	31,000	NA	NA	NA	NA
	01/07/88	12,000	920	1,500	--	4,000
	03/20/89	22,000	1,200	1,800	1,200	7,700
	05/24/89	9,000	460	260	250	2,400
	08/18/89	14,000	900	200	<200	1,300
	10/27/89	16,000	1,200	340	90	3,100
	01/15/90	9,900	1,100	460	150	2,900
	04/04/90	16,000	1,100	400	380	3,900
	07/30/90	16,000	1,400	340	290	3,600
	07/30/90	16,000	1,400	340	290	3,600
	10/29/90	14,000	1,100	210	66	2,700
	01/16/91	15,000	1,200	800	190	4,600
	04/12/91	16,000	640	290	280	2,600
	10/21/91	26,000	1,100	560	81	3,900
	02/02/92	11,000	150	13	91	94
	04/29/92	5,400	120	16	129	19
	07/30/92	590	10	<2.0	<2.0	9.0
	10/29/92	77	0.56	<0.50	<0.50	0.51
	01/26/93	390	0.87	<0.50	<0.50	4.3
	04/01/93	16,000	<10	<10	<10	<10
	08/06/93	---------- Well Dry ----------				
	10/14/93	350	<0.5	<0.5	<0.5	<0.5
	02/10/94	---------- Well Dry ----------				
	03/21/94	66	<0.5	<0.5	<0.5	<0.5
	05/06/94	---------- Well Inaccessible ----------				
	08/09/94	<50	1.1	<0.5	<0.5	<0.5
	11/17/94	<50	<0.5	<0.5	<0.5	<0.5
	02/09/95	50	1.7	2.0	<0.5	1.6
	05/08/95	<50	1.4	1.4	<0.50	0.50
A-3	03/21/86	1,000	NA	NA	NA	NA
	01/07/88	250	2 3	8	NA	21
	03/20/89	230	1 6	<1	3	3
	05/24/89	170	0.9	2	1	<3
	08/18/89	180	0.7	1	<1	<3
	10/27/89	120	<0.5	<0.5	<0.5	<1
	01/15/90	<50	<0 5	<0.5	<0 5	<1
	04/04/90	88	1.2	2.0	0.8	4
	07/30/90	120	8 3	2.9	2.3	12
	10/29/90	780	10	27	18	85
	01/16/91	69	2.0	3.5	<0.5	9.6
	04/12/91	<30	<0 30	<0.30	<0.30	<0.30
	07/10/91	59	<0.30	<0.30	0.50	0.51
	10/21/91	56	0 44	0 77	0.41	1.3
	02/01/92	---------- Well Inaccessible ----------				
	04/29/92	---------- Well Inaccessible ----------				
	07/30/92	<50	<0 50	<0.50	<0.50	<0.50
	10/28/92	<50	<0.50	<0.50	<0.50	<0.50
	01/26/93	<50	<0.50	<0 50	<0.50	<0.50
	04/01/93	<50	<0.50	<0.50	<0.50	<0.50
	08/06/93	<50	<0.5	<0.5	<0.5	<0.5
	10/14/93	<50	<0.5	<0.5	<0.5	<0.5
	02/10/94	<50	<0.5	<0.5	<0.5	<0.5
	05/06/94	<50	<0 5	<0 5	<0.5	<0.5
	08/09/94	<50	<0.5	<0.5	<0.5	<0.5
	11/17/94	<50	<0.5	<0.5	<0.5	<0.5
	02/09/95	90	0.9	<0.5	0.7	1.3
	05/08/95	<50	<0.50	<0.50	<0.50	<0.50

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

ARCO Service Station 4931
731 West MacArthur Boulevard at West Street
Oakland, California

Well Number	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)
A-4	03/21/86	---------- 3.50 feet of Separate-Phase Hydrocarbons ----------				
	01/07/88	---------- 0.02 foot of Separate-Phase Hydrocarbons ----------				
	03/20/89	360,000	1,500	3,700	6,500	35,000
	05/24/89	1,500,000	1,000	2,000	6,000	23,000
	08/18/89	---------- 0.01 foot of Separate-Phase Hydrocarbons ----------				
	10/27/89	---------- 0.01 foot of Separate-Phase Hydrocarbons ----------				
	01/15/90	---------- 0.01 foot of Separate-Phase Hydrocarbons ----------				
	04/04/90	40,000	680	320	1,400	4,900
	07/30/90	---------- 0.01 foot of Separate-Phase Hydrocarbons ----------				
	10/29/90	---------- 0.03 foot of Separate-Phase Hydrocarbons ----------				
	01/16/91	---------- 0.01 foot of Separate-Phase Hydrocarbons ----------				
	04/12/91	1,800	<60	90	650	1,700
	07/10/91	61,000	2,700	8,500	1,700	8,200
	09/20/91	NA	1,200	5,300	1,500	11,000
	02/01/92	---------- 0.02 foot of Separate-Phase Hydrocarbons ----------				
	04/29/92	---------- 0.02 foot of Separate-Phase Hydrocarbons ----------				
	07/29/92	---------- 0.04 foot of Separate-Phase Hydrocarbons ----------				
	10/28/92	---------- 0.03 foot of Separate-Phase Hydrocarbons ----------				
	01/26/93	---------- 0.04 foot of Separate-Phase Hydrocarbons ----------				
	04/01/93	---------- 0.02 foot of Separate-Phase Hydrocarbons ----------				
	08/06/93	---------- 0.03 foot of Separate-Phase Hydrocarbons ----------				
	10/14/93	160,000	1,200	<250	4,100	950
	02/10/94	56,000	220	68	790	700
	05/06/94	18,000	210	<30	200	101
	08/09/94	20,000	800	<20	200	270
	11/17/94	3,900	420	11	38	92
	02/09/95	14,000	2,900	7.5	420	440
	05/08/95	5,100	700	<10	79	160
A-5	03/21/86	88	NA	NA	NA	NA
	01/07/88	<50	0.5	1	NA	4
	03/20/89	60	0.5	1	2	10
	05/24/89	<50	0.5	<1	<1	<3
	08/18/89	<50	<0 5	<1	<1	<3
	10/27/89	<50	<0.50	<0.50	<0.50	<1
	01/15/90	<50	<0.5	<0.5	<0.5	<1
	04/04/90	<50	<0.5	<0.5	<0.5	<1
	07/30/90	<50	<0.5	<0.5	<0.5	<0.5
	10/29/90	280	<0.5	<0.5	<0.5	<0.5
	01/16/91	<50	<0.5	<0.5	<0.5	<0.5
	04/12/91	<30	<0 30	<0.30	<0 30	0.84
	07/10/91	<30	<0.30	<0.30	<0 30	<0.30
	10/21/91	<30	<0.30	<0.30	<0.30	<0.30
	02/01/92	<30	1.7	<0.30	<0.30	<0.30
	04/29/92	<30	<0.30	<0.30	<0.30	<0.30
	07/30/92	<50	<0 50	<0.50	<0.50	<0.50
	10/28/92	<50	<0.50	<0.50	<0.50	<0 50
	01/26/93	<50	<0.50	<0.50	<0.50	<0.50
	04/01/93	<50	<0.50	<0.50	<0.50	<0.50
	08/06/93	<50	<0 5	<0.5	<0.5	<0.5
	10/14/93	<50	<0.5	<0.5	<0.5	<0.5
	02/10/94	<50	<0 5	<0.5	<0.5	<0.5
	05/06/94	<50	<0.5	<0.5	<0.5	<0.5
	08/09/94	<50	<0.5	<0.5	<0.5	<0.5
	11/17/94	<50	<0.5	<0.5	<0.5	<0.5
	02/09/95	<50	<0.5	<0 5	<0.5	<0.5
	05/08/95	<50	<0 50	<0 50	<0.50	<0.50

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

ARCO Service Station 4931
731 West MacArthur Boulevard at West Street
Oakland, California

Well Number	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)
A-6	03/21/86	<10	NA	NA	NA	NA
	01/07/88	390	54	89	NA	110
	03/20/89	220	33	21	9	39
	05/24/89	110	13	6	3	13
	08/18/89	<50	2.1	1	<1	<3
	10/27/89	55	3.8	1.6	1.7	6
	01/15/90	100	12	2.5	5.5	18
	04/04/90	100	17	7.1	5.5	18
	07/30/90	<50	2.6	<0.5	<0.5	1.2
	10/29/90	<50	0.7	<0.5	<0.5	<0.5
	01/16/91	<50	<0.5	<0.5	<0.5	<0.5
	04/12/91	430	24	5.1	9.4	32
	07/10/91	<30	1.4	0.39	0.47	1.5
	10/21/91	<30	<0.30	<0.30	<0.30	<0.30
	02/01/92	<30	2.0	0.40	0.58	1.7
	04/29/92	---------- Well Inaccessible ----------				
	07/30/92	<50	0.64	<0.50	<0.50	<0.50
	10/28/92	<50	<0.50	<0.50	<0.50	<0.50
	01/26/93	1,600	4.8	1.2	14	46
	04/01/93	310	4.8	0.74	3.3	8.7
	08/06/93	<50	<0.5	<0.5	<0.5	<0.5
	10/14/93	<50	<0.5	<0.5	<0.5	<0.5
	02/10/94	140	2.8	<0.5	2.4	5.6
	05/06/94	61	1.7	<0.5	0.6	1.4
	08/09/94	<50	<0 5	<0.5	<0.5	<0.5
	11/17/94	53	<0.5	<0.5	<0.5	<0.5
	02/09/95	90	17	0.8	1.2	6.0
	05/08/95	100	7.9	<0.50	4.1	8.6
A-7	01/07/88	<50	<0.5	1	NA	4
	03/20/89	<50	0.9	<1	<1	<3
	05/24/89	<50	<0.5	<1	<1	<3
	08/18/89	<50	<0 5	<1	<1	<3
	10/27/89	<50	<0.5	<0.5	<0.5	<1
	01/15/90	<50	<0.5	<0.5	<0.5	<1
	04/04/90	<50	<0.5	<0.5	<0.5	<1
	07/30/90	<50	<0 5	<0 5	<0.5	<0.5
	10/29/90	<50	2.7	7 6	1.1	3.0
	01/16/91	<50	<0.5	<0.5	<0.5	<0.5
	04/12/91	<30	<0.30	<0.30	<0.30	0.48
	07/10/91	<30	<0.30	0 49	<0 30	1.2
	10/21/91	<30	<0 30	<0.30	<0.30	<0.30
	02/01/92	<30	<0.30	<0 30	<0.30	<0.30
	04/29/92	<30	<0 30	<0 30	<0.30	<0 30
	07/29/92	<50	<0 50	<0 50	<0.50	<0.50
	10/28/92	<50	<0 50	<0.50	<0.50	<0.50
	01/26/93	<50	<0 50	<0 50	<0.50	<0.50
	04/01/93	<50	<0 50	<0 50	<0 50	<0 50
	08/06/93	<50	<0.5	<0.5	<0.5	<0.5
	10/14/93	<50	<0 5	<0 5	<0.5	<0.5
	02/10/94	<50	<0.5	<0.5	<0.5	<0.5
	05/06/94	<50	<0 5	<0.5	<0.5	<0.5
	08/09/94	<50	<0 5	<0.5	<0.5	<0 5
	11/17/94	<50	<0 5	<0 5	<0.5	<0.5
	02/09/95	<50	3 7	<0.5	<0 5	<0.5
	05/08/95	<50	<0 50	<0 50	<0.50	<0.50

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

ARCO Service Station 4931
731 West MacArthur Boulevard at West Street
Oakland, California

Well Number	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)
A-8	03/21/86	---------- Well Inaccessible ----------				
	01/07/88	---------- Well Inaccessible ----------				
	03/20/89	--------- 0.66 foot of Separate-Phase Hydrocarbons ---------				
	05/24/89	--------- 1.20 feet of Separate-Phase Hydrocarbons ---------				
	08/18/89	--------- 0.77 foot of Separate-Phase Hydrocarbons ---------				
	10/27/89	--------- 1.31 feet of Separate-Phase Hydrocarbons ---------				
	01/15/90	--------- 0.87 foot of Separate-Phase Hydrocarbons ---------				
	04/04/90	--------- 0.25 foot of Separate-Phase Hydrocarbons ---------				
	07/30/90	--------- 1.75 feet of Separate-Phase Hydrocarbons ---------				
	10/29/90	--------- 0.10 foot of Separate-Phase Hydrocarbons ---------				
	01/16/91	--------- 0.01 foot of Separate-Phase Hydrocarbons ---------				
	04/12/91	--------- 0.01 foot of Separate-Phase Hydrocarbons ---------				
	07/10/91	--------- 0.01 foot of Separate-Phase Hydrocarbons ---------				
	10/21/91	--------- 0.11 foot of Separate-Phase Hydrocarbons ---------				
	02/01/92	--------- 1.40 feet of Separate-Phase Hydrocarbons ---------				
	04/29/92	--------- 1.30 feet of Separate-Phase Hydrocarbons ---------				
	07/29/92	--------- 0.06 foot of Separate-Phase Hydrocarbons ---------				
	10/28/92	---------- Well Dry ----------				
	01/26/93	---------- Well Dry ----------				
	04/01/93	---------- Well Inaccessible ----------				
	08/06/93	---------- Well Dry ----------				
	10/14/93	---------- Well Inaccessible ----------				
	12/10/93	29,000,000	16,000	12,000	19,000	99,000
	02/10/94	NS	NS	NS	NS	NS
	05/06/94	NS	NS	NS	NS	NS
	08/09/94	--------- 0.33 foot of Separate-Phase Hydrocarbons ---------				
	11/17/94	--------- 0.32 foot of Separate-Phase Hydrocarbons ---------				
	02/09/95	68,000	2,400	500	960	5,000
	05/08/95	23,000	3,600	560	520	2,100
A-9	01/07/88	300	45	14	NA	43
	03/21/89	50	2.8	1	1	3
	05/24/89	120	26	12	4	79
	08/18/89	14,000	400	800	400	2,000
	10/27/89	1,700	150	36	30	110
	01/15/90	860	140	58	38	140
	04/04/90	620	36	13	9.4	32
	07/30/90	180	77	16	2.1	4.2
	10/29/90	110	30	3.7	4.1	8.3
	01/16/91	<50	15	<0.5	<0.5	0.6
	04/12/91	130	52	0.83	5.3	6.0
	07/10/91	<30	7.8	<0.30	<0.30	<0.30
	09/20/91	NA	21	<2.0	<2.0	<0.20
	10/21/91	240	63	0.65	5.1	1.6
	02/01/92	320	77	0.95	11	6.5
	04/29/92	170	52	<0.30	5.6	1.4
	07/30/92	<50	14	<0.50	1.7	6.0
	10/28/92	---------- Well Inaccessible ----------				
	01/26/93	---------- Well Inaccessible ----------				
	04/01/93	---------- Well Inaccessible ----------				
	08/06/93	---------- Well Inaccessible ----------				
	10/14/93	---------- Well Inaccessible ----------				
	12/10/93	<50	<0.5	<0.5	<0.5	<0.5
	02/10/94	---------- Well Inaccessible ----------				
	03/21/94	<50	<0.5	<0.5	<0.5	<0.5
	05/06/94	<50	<0.5	<0.5	<0.5	<0.5

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

ARCO Service Station 4931
731 West MacArthur Boulevard at West Street
Oakland, California

Well Number	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)
A-9	08/09/94	<50	<0.5	<0.5	<0.5	<0.5
(cont.)	11/17/94	<50	2.5	<0.5	0.9	3.3
	02/09/95	<50	<0.5	<0.5	<0.5	<0.5
	05/08/95	<50	<0.50	<0.50	<0.50	<0.50
A-10	01/07/88	<50	0.6	11	NA	4
	03/20/89	<50	<0.5	<1	<1	<3
	05/24/89	<50	<0.5	<1	<1	<3
	08/18/89	<50	<0.5	<1	<1	<3
	10/27/89	<50	<0.5	<0.5	<0.5	<1
	01/15/90	<50	<0.5	<0.5	<0.5	<1
	04/04/90	---------- Well Inaccessible ----------				
	07/30/90	<50	<0.5	<0.5	<0.5	<0.5
	10/29/90	<50	2.3	6.9	1.2	3.0
	01/16/91	<50	<0.5	<0.5	<0.5	<0.5
	04/12/91	<30	0.67	0.55	<0.30	0.90
	07/10/91	<30	<0.30	<0.30	<0.30	<0.30
	10/21/91	<30	<0.30	<0.30	<0.30	<0.30
	02/02/92	---------- Well Inaccessible ----------				
	04/29/92	<30	<0.30	<0.30	<0.30	<0.30
	07/29/92	<50	25	<0.50	<0.50	1.8
	10/28/92	<50	<0.50	<0.50	<05.0	<0.50
	01/26/93	<50	<0.50	<0.50	<0.50	<0.50
	04/01/93	<50	<0.50	<0.50	<0.50	<0.50
	08/06/93	<50	<0.5	<0.5	<0.5	<0.5
	10/14/93	<50	<0.5	<0.5	<0.5	<0.5
	02/10/94	<50	<0.5	<0.5	<0.5	<0.5
	05/06/94	<50	<0 5	<0.5	<0.5	<0.5
	08/09/94	<50	<0.5	<0.5	<0.5	<0.5
	11/17/94	<50	<0.5	<0.5	<0.5	<0.5
	02/09/95	60	<0.5	<0.5	<0.5	<0.5
	05/08/95	<50	<0.50	<0.50	<0.50	<0.50
A-11	01/07/88	<50	1.1	2	NA	5
	03/20/89	<50	<0 5	<1	<1	<3
	05/24/89	<50	<0.5	<1	<1	<3
	08/18/89	<50	<0.5	<1	<1	<3
	10/27/89	<50	<0.5	<0.5	<0.5	<1
	01/15/90	<50	<0.5	<0 5	<0.5	<1
	04/04/90	<50	<0.5	<0.5	<0.5	<1
	07/30/90	<50	<0 5	0.6	<0.5	0.5
	10/29/90	<50	0 6	2 4	0.6	1.5
	01/16/91	<50	<0.5	<0 5	<0.5	<0.5
	04/12/91	<30	<0.30	0.37	<0.30	<0.30
	07/10/91	<30	0 61	0.46	<0.30	1.0
	10/21/91	<30	<0.30	<0.30	<0.30	<0.30
	02/01/92	<30	<0.30	<0.30	<0.30	<0 30
	04/29/92	<30	<0 30	<0.30	<0.30	<0.30
	07/30/92	<50	<0.50	<0.50	<0 50	<0.50
	10/28/92	<50	<0 50	<0.50	<0.50	<0.50
	01/26/93	<50	<0.50	<0.50	<0.50	<0.50
	01/04/93	<50	<0.50	<0.50	<0.50	<0.50
	08/06/93	<50	<0.5	<0.5	<0.5	<0.5
	10/14/93	<50	<0.5	<0.5	<0 5	<0.5
	02/10/94	<50	<0 5	<0.5	<0.5	<0.5
	05/06/94	<50	<0.5	<0.5	<0.5	<0.5

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

ARCO Service Station 4931
731 West MacArthur Boulevard at West Street
Oakland, California

Well Number	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)
A-11 (cont.)	08/09/94	<50	<0.5	<0.5	<0.5	<0.5
	11/17/94	<50	<0.5	<0.5	<0.5	<0.5
	02/09/95	<50	<0.5	<0.5	<0.5	<0.5
	05/08/95	<50	<0.50	<0.50	<0.50	<0.50
A-12	01/07/88	<50	<0.5	2	NA	<4
	03/20/89	<50	<0.5	<1	<1	<3
	05/24/89	<50	<0.5	<1	<1	<3
	08/18/89	<50	<0.5	<1	<1	<3
	10/27/89	<50	<0.5	<0.5	<0.5	<1
	01/15/90	<50	<0.5	<0.5	<0.5	<1
	04/04/90	<50	<0.5	<0.5	<0.5	<1
	07/30/90	<50	<0.5	<0.5	<0.5	<0.5
	10/29/90	<50	<0.5	<0.5	<0.5	<0.5
	01/16/91	<50	<0.5	<0.5	<0.5	<0.5
	04/12/91	<30	<0.30	<0.30	<0.30	<0.30
	07/10/91	<30	<0.30	<0.30	<0.30	<0.30
	10/21/91	<30	<0.30	<0.30	<0.30	<0.30
	02/01/92	<30	<0.30	<0.30	<0.30	<0.30
	04/29/92	<30	<0.30	<0.30	<0.30	<0.30
	07/30/92	<50	<0.50	<0.50	<0.50	<0.50
	10/28/92	<50	<0.50	<0.50	<0.50	<0.50
	01/26/93	<50	<0.50	<0.50	<0.50	<0.50
	04/01/93	<50	<0.50	<0.50	<0.50	<0.50
	08/06/93	<50	<0.5	<0.5	<0.5	<0.5
	10/14/93	<50	<0.5	<0.5	<0.5	<0.5
	02/10/94	<50	<0.5	<0.5	<0.5	<0.5
	05/06/94	<50	<0.5	<0.5	<0.5	<0.5
	08/09/94	<50	<0.5	<0.5	<0.5	<0.5
	11/17/94	<50	<0.5	<0.5	<0.5	<0.5
	02/09/95	<50	<0.5	<0.5	<0.5	<0.5
	05/08/95	<50	<0.50	<0.50	<0.50	<0.50
A-13	07/01/92	<50	<0.50	<0.50	<0.50	<0.50
	07/30/92	<50	<0.50	<0.50	<0.50	<0.50
	10/28/92	<50	<0.50	<0.50	<0.50	<0.50
	01/26/93	<50	<0.50	<0.50	<0.50	<0.50
	04/01/93	<50	<0.50	<0.50	<0.50	<0.50
	08/06/93	<50	<0.5	<0.5	<0.5	<0.5
	10/14/93	<50	<0.5	<0.5	<0.5	<0.5
	02/10/94	<50	<0.5	<0.5	<0.5	<0.5
	05/06/94	<50	<0.5	<0.5	<0.5	<0.5
	08/09/94	<50	<0.5	<0.5	<0.5	<0.5
	11/17/94	<50	<0.5	<0.5	<0.5	<0.5
	02/09/95	<50	<0.5	<0.5	<0.5	<0.5
	05/08/95	<50	<0.50	<0.50	<0.50	<0.50
AR-1	07/01/92	2,300	260	150	38	470
	07/29/92	1,600	340	180	52	320
	10/28/92	---------- Well Inaccessible ----------				
	01/26/93	---------- Well Inaccessible ----------				
	04/01/93	---------- Well Inaccessible ----------				
	08/06/93	---------- Well Inaccessible ----------				
	10/14/93	---------- Well Inaccessible ----------				
	12/10/93	3,400	<25	<25	<25	250
	02/10/94	---------- Well Inaccessible ----------				
	03/21/94	NS	NS	NS	NS	NS
	05/06/94	NS	NS	NS	NS	NS

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

ARCO Service Station 4931
731 West MacArthur Boulevard at West Street
Oakland, California

Well Number	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)
AR-1	08/09/94	0.08 foot of Separate-Phase Hydrocarbons				
(cont.)	11/17/94	Sheen of Separate-Phase Hydrocarbons				
	02/09/95	670	1.5	1.0	0.7	33
	05/08/95	3,700	19	<2.5	5.7	47
AR-2	07/01/92	<50	<0.50	<0.50	<0.50	<0.50
	07/29/92	350	130	8.5	<10	<10
	10/28/92	Well Inaccessible				
	01/26/93	Well Inaccessible				
	04/01/93	Well Inaccessible				
	08/06/93	Well Inaccessible				
	10/14/93	Well Inaccessible				
	12/10/93	<50	<0.5	<0.5	<0.5	<0.5
	02/10/94	Well Inaccessible				
	03/21/94	<50	<0.5	<0.5	<0.5	<0.5
	05/06/94	<50	<0.5	<0.5	<0.5	<0.5
	08/09/94	<50	<0.5	<0.5	<0.5	<0.5
	11/17/94	<50	<0.5	<0.5	<0.5	<0.5
	02/09/95	60	<0.5	<0.5	<0.5	<0.5
	05/08/95	<50	<0.50	<0.50	<0.50	<0.50
AR-3	07/01/92	<50	1.8	0.86	<0.50	2.2
	07/29/92	<50	1.6	<0.50	<0.50	<0.50
	10/28/92	Well Inaccessible				
AR-3	01/26/93	Well Inaccessible				
(cont.)	04/01/93	Well Inaccessible				
	08/06/93	Well Inaccessible				
	10/14/93	Well Inaccessible				
	12/10/93	<50	<0.5	<0.50	<0.50	<0.50
	02/10/94	Well Inaccessible				
	03/21/94	<50	<0.5	<0.5	<0.5	<0.5
	05/06/94	<50	<0.5	<0.5	<0.5	<0.5
	08/09/94	<50	<0.5	<0.5	<0.5	<0.5
	11/17/94	<50	<1.3 *	<0.5	<0.5	<0.5
	02/09/95	50	<0.5	<0.5	<0.5	<0.5
	05/08/95	<50	<0.50	<0.50	<0.50	<0.50

ppb = Parts per billion
NA = Not analyzed
NS = Not sampled
* = Laboratory raised MRL due to matrix interference
** = Positive result confirmed by secondary column or GC.MS analysis.

Table 3
Groundwater Extraction System Performance Data

ARCO Service Station 4931
731 West MacArthur Boulevard at West Street
Oakland, California

Sample I.D.	Date Sampled	Totalizer Reading (gallons)	Net Volume (gallons)	Average Flow Rate (gpm)	TPH as Gasoline: Influent Concentration (µg/L)	TPH as Gasoline: Net Remove (lbs)	TPH as Gasoline: Remove to Date (lbs)	Benzene: Influent Concentration (µg/L)	Benzene: Net Remove (lbs)	Benzene: Remove to Date (lbs)	Primary Carbon Loading (percent)
INFL	06/28/94 a	4,120,050	N/A	0.9	740	0.000	1.61	38	0.000	0.33	2.0
INFL	07/15/94	4,143,150	23,100	0.9	ND	0.071	1.68	ND	0.004	0.38	2.1
INFL	08/18/94	4,175,310	32,160	0.7	NS	0.099	1.78	NS	0.005	0.39	2.2
INFL	09/30/94	4,243,295 b	67,985	1.1	NS	0.210	1.99	NS	0.011	0.40	2.5
INFL	10/31/94 c	4,311,280	67,985	1.5	ND	0.000	1.99	ND	0.000	0.40	2.5
INFL	11/04/94	4,330,500	19,220	3.3	56	0.004	2.00	ND	0.000	0.40	2.5
INFL	12/16/94	4,352,780	22,280	0.4	NS d	0.005	2.00	NS d	0.000	0.40	2.5
INFL	01/05/95	4,382,610	29,830	1.0	1,000	0.131	2.13	87	0.011	0.41	2.7
INFL	02/07/95	4,430,130 e	47,520	1.0 e	NS d	0.209	2.34	NS d	0.017	0.43	2.9
INFL	03/03/95	4,464,690 e	34,560	1.0 e	NS d	0.152	2.49	NS d	0.013	0.44	3.1
INFL	04/13/95	23 f	59,040	1.0 e	ND	0.246	2.74	ND	0.021	0.46	3.4
INFL	05/01/95	12,138	12,115	0.5	ND	0.000	2.74	ND	0.000	0.46	3.4
INFL	06/09/95	36,412	24,274	0.4	ND	0.000	2.74	ND	0.000	0.46	3.4
REPORTING PERIOD: 3/03/95 - 6/9/95											
TOTAL POUNDS REMOVED:							2.74			0.46	
TOTAL GALLONS REMOVED:							0.45			0.06	
PERIOD POUNDS REMOVED:						0.25			0.02		
PERIOD GALLONS REMOVED:						0.04			0.00		
TOTAL GALLONS EXTRACTED:					4,558,909 (e)						
PERIOD GALLONS EXTRACTED:					95,429 (e)						
PERIOD AVERAGE FLOW RATE (gpm):					1.1 (e)						
PRIMARY BED CAPACITY REMAINING (%):					96.6						

TPH = Total petroleum hydrocarbons
gpm = Gallons per minute
µg/L = Micrograms per liter
lbs = Pounds
N/A = Not available
ND = Not detected
NS = Not sampled
Carbon loading assumes an 8% isotherm.
See certified analytical reports for detection limits.

a. Data prior to October 1, 1994 provided by prior consultant.
b. No operational or analytical data available; totalizer reading, flow rate, and sample estimated from prior event July 15, 1994.
c. Pacific Environmental Group, Inc became consultant for the site as of October 1, 1994.
d. Sampled quarterly; concentrations assumed from prior sampling event.
e. Totalizer broken; volume estimated using 1.0 gpm based on prior sampling event. Replacement totalizer/flow gauge ordered.
f. Totalizer replaced and re-calibrated on April 13, 1995.
Pounds of hydrocarbons removed to date provided by prior consultant.

Table 4
Groundwater Extraction System Analytical Data
Total Petroleum Hydrocarbons
(TPH as Gasoline and BTEX Compounds)

ARCO Service Station 4931
731 West MacArthur Boulevard at West Street
Oakland, California

Sample I.D.	Date Sampled	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)
INFL	10/31/94	ND	ND	ND	ND	ND
	11/09/94	56	ND	ND	ND	2.7
	01/05/95	1,000	87	9	ND	160.0
	04/13/95	ND	ND	ND	ND	ND
	05/01/95	ND	ND	ND	ND	ND
	06/09/95	ND	ND	ND	ND	ND
MID-1	11/09/94	ND	ND	ND	ND	ND
	01/05/95	ND	ND	ND	ND	ND
	04/13/95	ND	ND	ND	ND	ND
	05/01/95	ND	ND	ND	ND	ND
MID-2	11/09/94	ND	ND	ND	ND	ND
	01/05/95	ND	ND	ND	ND	ND
	04/13/95	ND	ND	ND	ND	ND
	05/01/95	ND	ND	ND	ND	ND
	06/09/95	ND	ND	ND	ND	ND
EFFL	10/31/94	ND	ND	ND	ND	ND
	11/09/94	ND	ND	ND	ND	ND
	01/05/95	ND	ND	ND	ND	ND
	04/13/95	ND	ND	ND	ND	ND
	05/01/95	ND	ND	ND	ND	ND
	06/09/95	ND	ND	ND	ND	ND

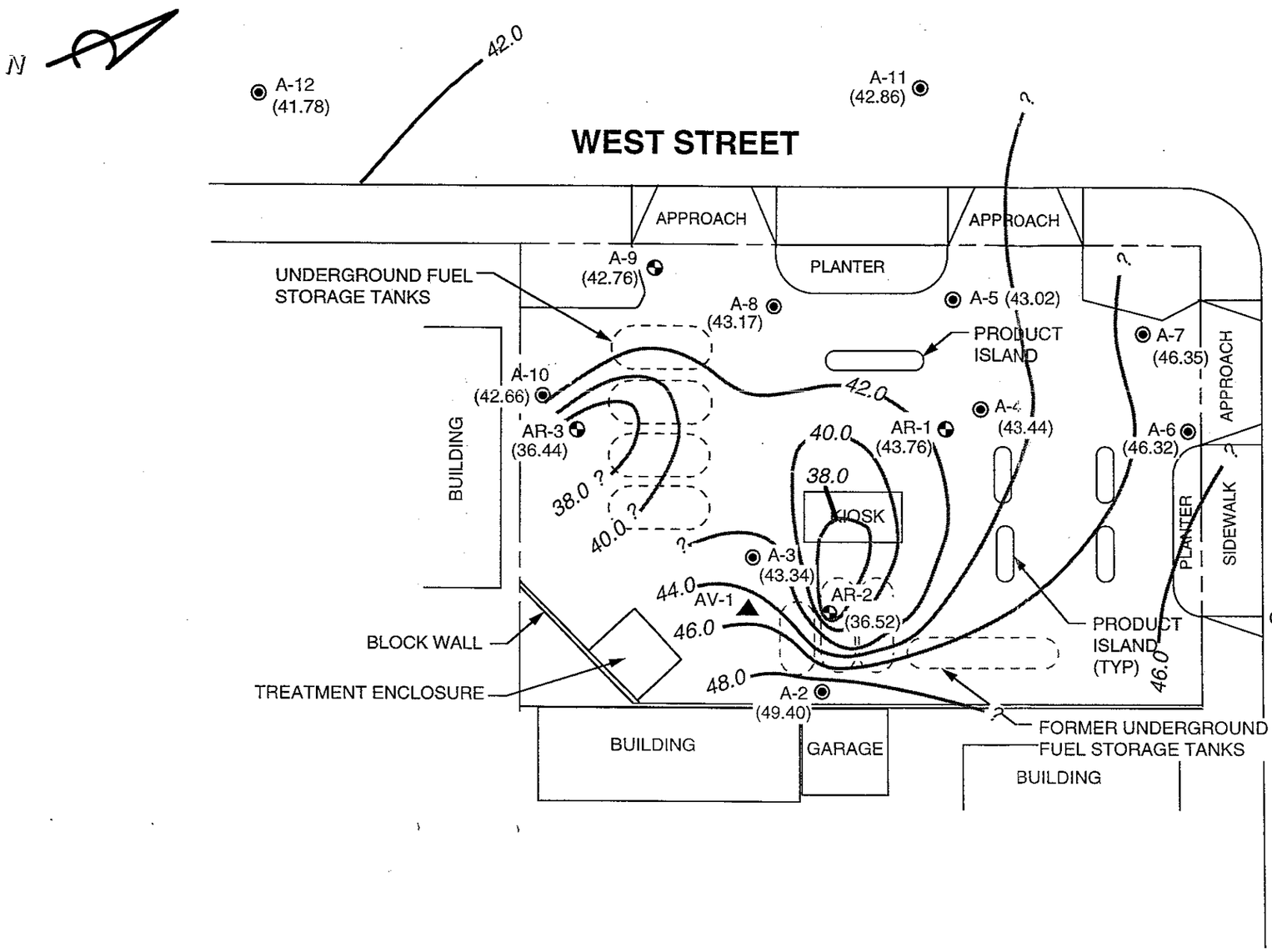
µg/L = Micrograms per liter
ND = Not detected above detection limits
Pacific Environmental Group, Inc. became consultant to site 10/01/94.
See certified analytical reports for individual detection limits.

Table 5
Groundwater Sampling Schedule

ARCO Service Station 4931
731 West MacArthur Boulevard at West Street
Oakland, California

Well Number	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Sampling Frequency
A-1	---------- Destroyed ----------				
A-2	a	a	a	a	Quarterly
A-3		a		a	Semiannually
A-4	a	a	a	a	Quarterly
A-5		a		a	Semiannually
A-6	a	a	a	a	Quarterly
A-7		a			Annually
A-8	a	a	a	a	Quarterly
A-9	a	a	a	a	Quarterly
A-10	---------- Removed from Sampling Program ----------				
A-11		a		a	Semiannually
A-12		a		a	Semiannually
A-13		a			Annually
AR-1	a	a	a	a	Quarterly
AR-2	a	a	a	a	Quarterly
AR-3	a	a	a	a	Quarterly

a. Groundwater samples analyzed for the presence of TPH-g and BTEX compounds according to EPA Methods 8015 (modified) and 8020.



LEGEND

- A-7 ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- AR-3 ◉ GROUNDWATER EXTRACTION WELL LOCATION AND DESIGNATION
- AV-1 ▲ SOIL VAPOR WELL LOCATION AND DESIGNATION
- (43.44) GROUNDWATER ELEVATION IN FEET - MSL, 5-8-95
- 42.0 GROUNDWATER ELEVATION CONTOUR IN FEET - MSL, 5-8-95
- * NOT USED IN CONTOURING

APPROXIMATE DIRECTION OF GROUNDWATER FLOW

SOURCE: MAP FROM GEO STRATEGIES INC. DATED 6-94

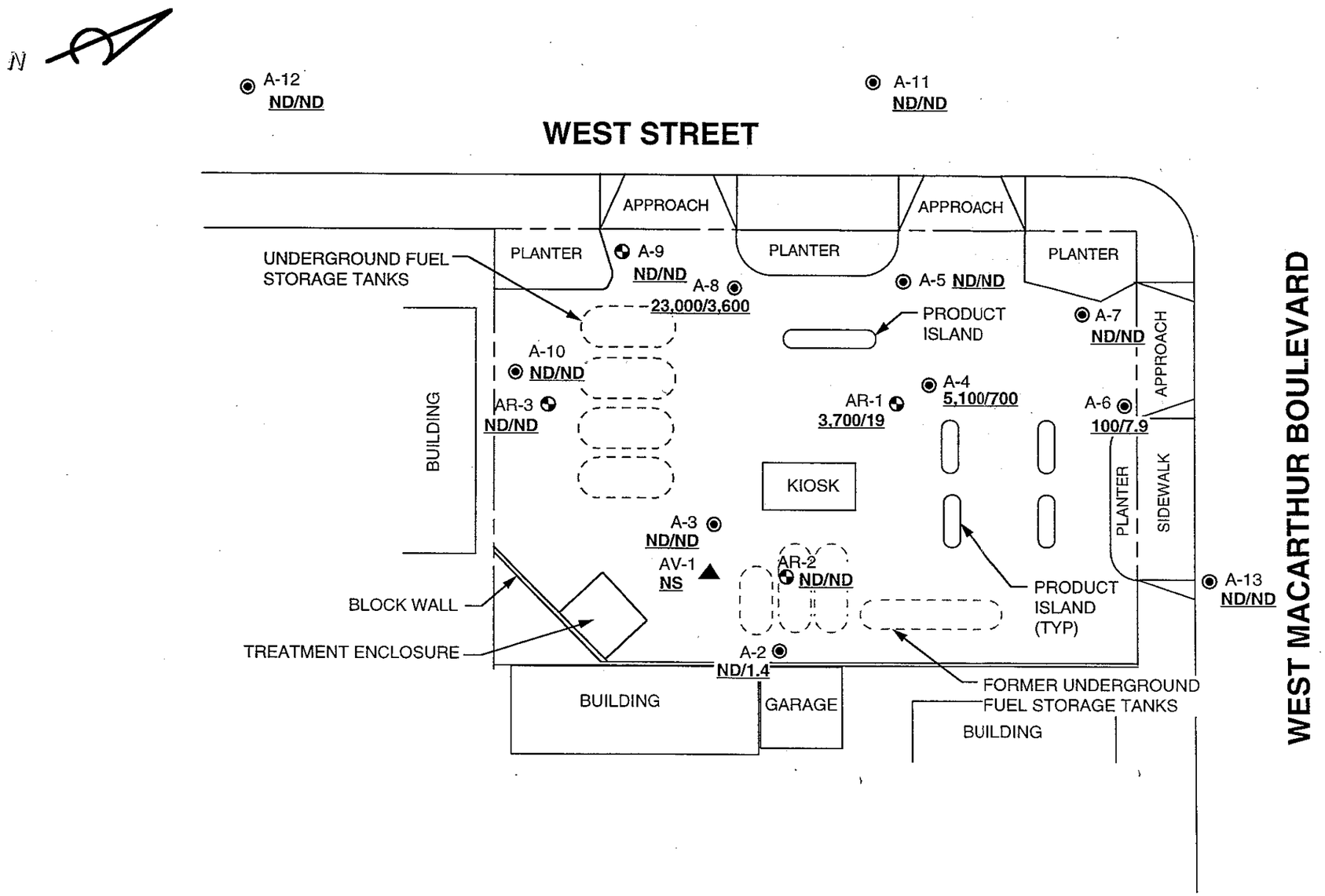
PACIFIC ENVIRONMENTAL GROUP, INC.

SCALE
0 30 60 FEET

ARCO SERVICE STATION 4931
731 West MacArthur Boulevard at West Street
Oakland, California

LIQUID SURFACE ELEVATION CONTOUR MAP

FIGURE: 1
PROJECT: 330-109.2B



LEGEND

A-7 ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

AR-3 ⊕ GROUNDWATER EXTRACTION WELL LOCATION AND DESIGNATION

AV-1 ▲ SOIL VAPOR WELL LOCATION AND DESIGNATION

3,700/19 TPH-g/BENZENE CONCENTRATION IN GROUNDWATER, IN PARTS PER BILLION, 5-8-95

ND NOT DETECTED

NS NOT SAMPLED

APPROXIMATE DIRECTION
OF GROUNDWATER FLOW

SOURCE: MAP FROM GEO STRATEGIES INC. DATED 6-94

PACIFIC ENVIRONMENTAL GROUP, INC.

SCALE
0 30 60 FEET

ARCO SERVICE STATION 4931
731 West MacArthur Boulevard at West Street
Oakland, California

TPH-g/BENZENE CONCENTRATION MAP

FIGURE:
2
PROJECT:
330-109.2B

Figure 3
Groundwater Extraction System Mass Removal Data

ARCO Service Station 4931
731 West MacArthur Boulevard
Oakland, California

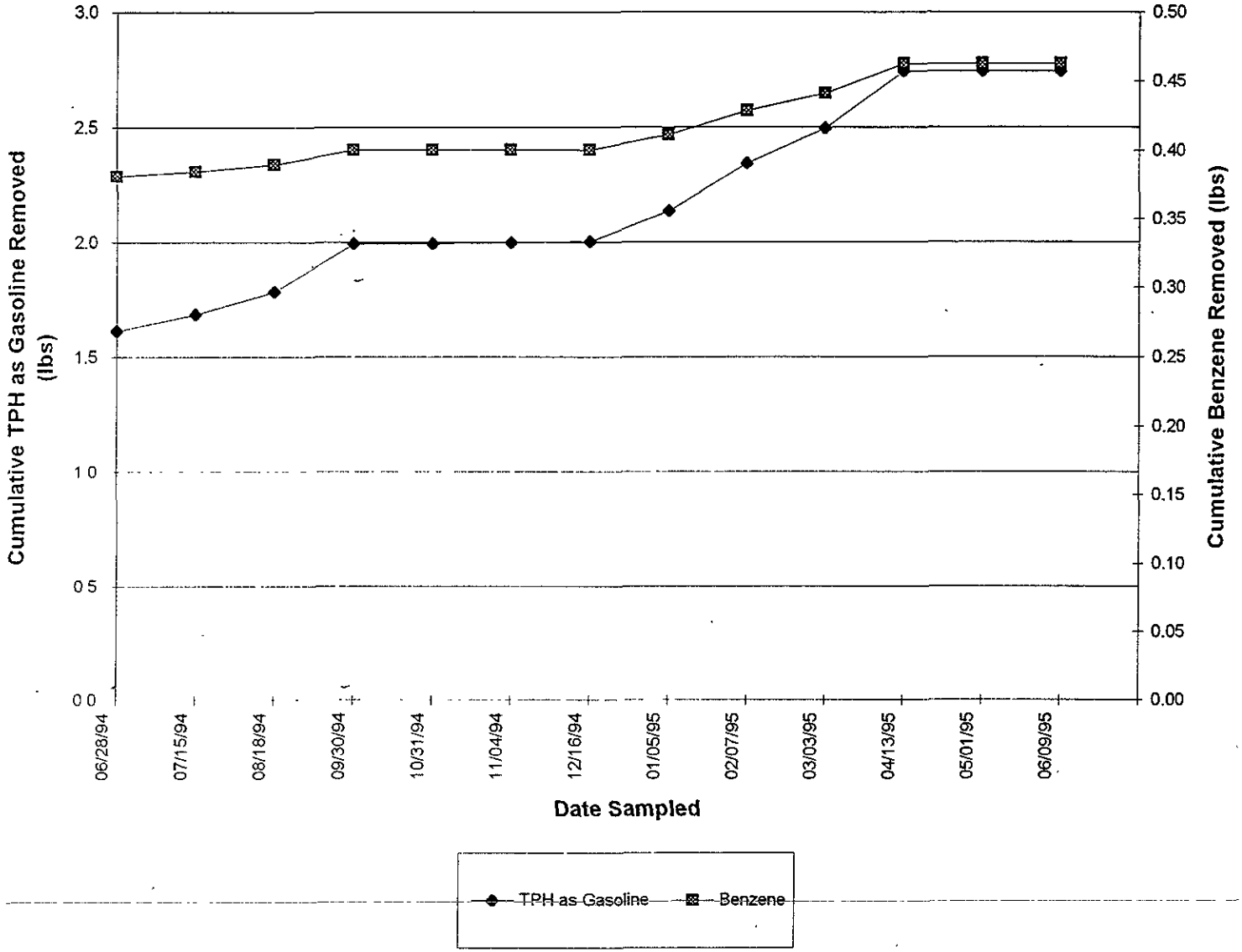
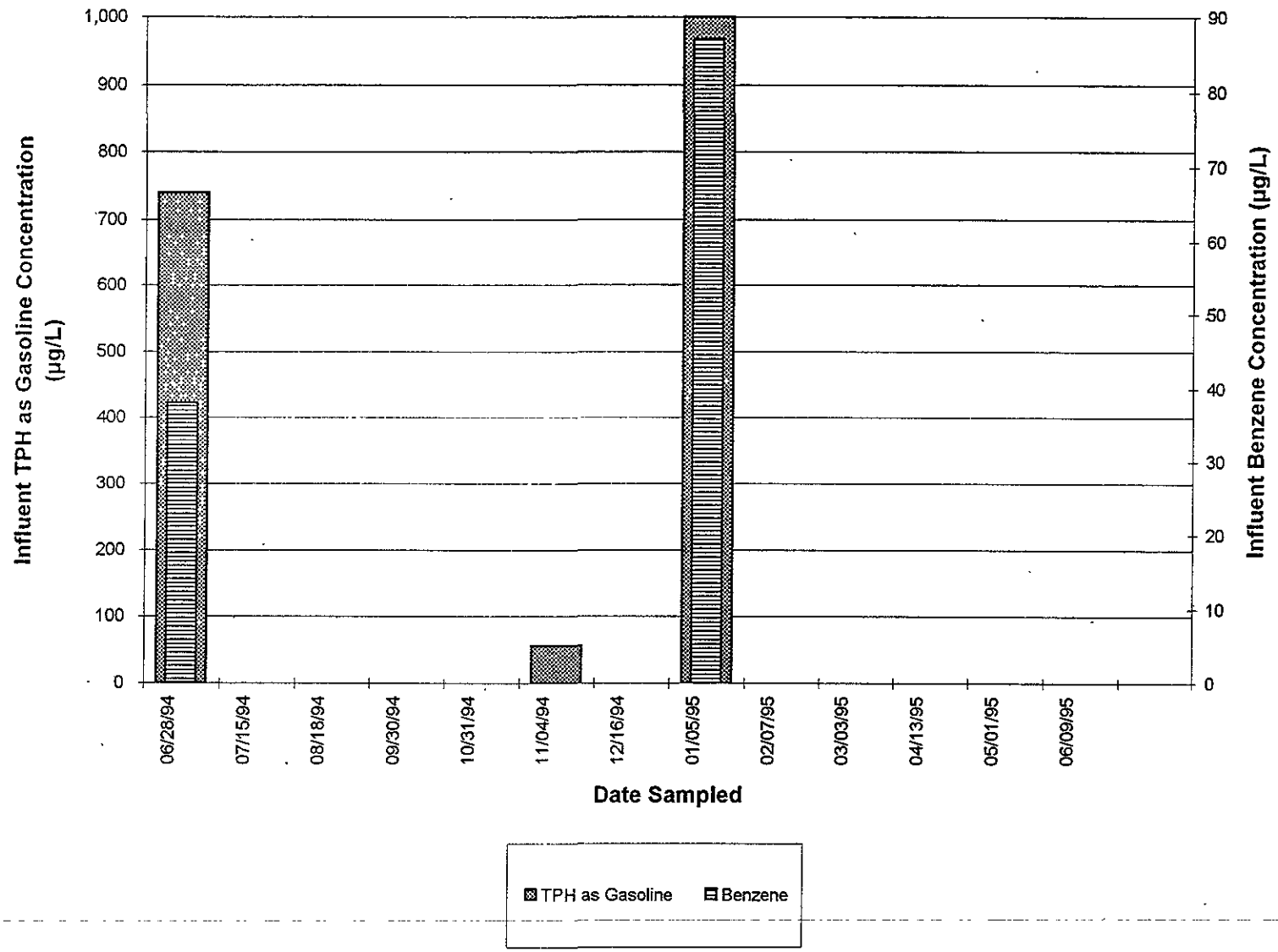


Figure 4
Groundwater Extraction System Hydrocarbon Concentrations

ARCO Service Station 4931
731 West MacArthur Boulevard
Oakland, California



ATTACHMENT A

FIELD AND LABORATORY PROCEDURES

ATTACHMENT A
FIELD AND LABORATORY PROCEDURES

Sampling Procedures

The sampling procedure for each well consists first of 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 four 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 B.

ATTACHMENT B

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

FILE COPY

	Initials	Date
F/S	RJ	5/17/95
Copy/Dist.	RJ	↓

FIELD SERVICES / O & M REQUEST

SITE INFORMATION FORM

Project #:330-109.2G

Station #:4931

Site Address:731 McArthur Bl
Oakland, California

County:Alameda

Project Manager:Kelly Brown

Requestor:Chuck Graves

Client:Arco

Prefield contacts:

☐ 1st time visit

☐ 1st ☒ 2nd ☐ 3rd ☐ 4th

☐ Monthly

☐ Semi-Monthly

☐ Weekly

☐ One time Event

☐ Other._____

Client P.O.C.:Mike Whelan

Date of Request:5/8/95

Ideal Field Date:5/8/95

	JIM	PEDRO
Budget Hrs.		
Actual Hrs.	7.5	5.0
Mob de Mob	3.5	1.0
	11.0	6.0

Field Tasks: For General Description

Second Quarter groundwater sampling event: DTW/DTL from TOB; sample all wells for GAS/BTEX.

INFO to be Added when request comes back: TD, Casing Dia.. etc

Comments, remarks, from Field Staff (include problems encountered

INFORMATION ON WELLS ADDED IN.

SITE DANGEROUS AFTER 3pm. & (TIME TO LEAVE)

BRING TRAILER (WRITE IN ON REQUEST)

- NO DRUMS LEFT ON SITE -

- GALLONS OF WATER TO BONEYARD: 170 GAL

Completed by: J. McKinnon Date: 5-8-95

Checked by: Chuck Graves

WELL SAMPLING REQUEST

SAMPLING PROTOCOL								
Project No.	Station #	Project Name	SEQUENCE	Project Manager	Approval	Date/s	Laboratory:	Client Engineer:
330-109.2G	4931	731 McArthur BL Oakland	Q2	Kelly Brown		5/8/95	Sequoia	Mike Whelan

Well Number	Ideal Sampling Order	Sample I.D.	Sampling Frequency	Analyses	TOB TOC	Well Depth	Casing Diameter	Well goes Dry?	Comments
A-2			QLY	GAS/BTEX	TOB	20	4"	yes	
A-3			QLY	GAS/BTEX	TOB	17	↓	↓	
A-4			QLY	GAS/BTEX	TOB	20	↓	↓	
A-5			QLY	GAS/BTEX	TOB	24.5	3"	NO	
A-6			QLY	GAS/BTEX	TOB	25.5	↓		
A-7			QLY	GAS/BTEX	TOB	23	↓		
A-8			QLY	GAS/BTEX	TOB	18	~~4"~~ 3"		
A-9			QLY	GAS/BTEX	TOB	18.	6"		
A-10			QLY	GAS/BTEX	TOB	30	3"		
A-11			QLY	GAS/BTEX	TOB	28	3"		
A-12			QLY	GAS/BTEX	TOB	30	3"		
A-13			QLY	GAS/BTEX	TOB	29	3"		
AR-1			QLY	GAS/BTEX	TOB	32	6"		
AR-2			QLY	GAS/BTEX	TOB	28	↓		
AR-3			QLY	GAS/BTEX	TOB	27	↓	↓	
TB-1			QLY	GAS/BTEX	~~TOB~~	—	—	—	

FIELD REPORT

PTH TO WATER/SEPARATE-PHASE HYDROCARBON SURVEY

PROJECT No.: 330109.26 LOCATION: 731 McArthur DATE: 5-8-95

CLIENT/STATION NO.: Arco 0493 FIELD TECHNICIAN: J. Murray DAY OF WEEK: Monday-Cloudy

PROBE TYPE/ID No.
- ☐ Oil/Water IF/ ____
- ☒ H_2O level indicator #3
- ☐ Other: ____

Dtw Order	Well ID	Time	Surface Seal	Lid Secure	Gasket	Lock	Expanding Cap	Total Depth (feet) TOB/TOC	First Depth to Water (feet) TOB/TOC	Second Depth to Water (feet) TOB/TOC	SEPARATE-PHASE HYDROCARBONS (SPH): SPH Depth (feet) TOB/TOC	SPH Thickness (feet)	COLOR: Fresh	Weathered	Gas	Oil	VISCOSITY: Lite	Medium	Heavy	LIQUID REMOVED (gallons): SPH / H_2O
1.1	A-2	1023	✓	✓		✓		19.80	6.08	6.08	—	—								— / —
ND	A-3	1020	✓	✓		✓	✓	17.08	11.32	11.32	—	—								— / —
800	A-4	1052	✓	✓		✓		20.27	11.29	11.29	—	—								— / —
ND	A-5	1030	✓	✓		✓		24.10	11.15	11.15	—	—								— / —
ND	A-6	1034	✓	✓		✓		25.50	8.85	8.85	—	—								— / —
ND	A-7	1036	✓	✓		✓		22.80	8.36	8.36	—	—								— / —
0.33	A-8	1055	✓	✓				18.10	10.60	10.60	PBNM	< 0.01		✓	✓	✓				— / —
ND	A-9	1044	✓	✓				39.70	10.28	10.28	—	—								— / —
ND	A-10	1010	✓	✓		✓		30.10	11.60	11.60	—	—								— / —

Comments: A-10 FULL OF RAINWATER (MAY HAVE ENTERED WELL)

FIELD REPORT

PTH TO WATER/SEPARATE-PHASE HYDROCARBON SURVEY

PROJECT No.: 3301092G LOCATION: OAKLAND 731 McArthur DATE: 5-8-95

CLIENT/STATION NO. 04931 FIELD TECHNICIAN: J. Monkwicz DAY OF WEEK: Mon- CLOUDY

PROBE TYPE/ID No.
- [ ] Oil/Water IF/
- [x] H_2O level indicator #3
- [ ] Other:

Dtw Order	Well ID	Time	Surface Seal	Lid Secure	Gasket	Lock	Expanding Cap	(TOB) Total Depth (feet)	First Depth to Water (feet) TOB/TOC	Second Depth to Water (feet) TOB/TOC	SPH Depth (feet) TOB/TOC	SPH Thickness (feet)	Fresh	Weathered	Gas	Oil	Lite	Medium	Heavy	LIQUID REMOVED (gallons) SPH / H_2O
											SEPARATE-PHASE HYDROCARBONS (SPH)		COLOR				VISCOSITY			
ND	A-11	957	✓	✓		✓		29.15	1208-1.2	10.88	—	—								— / —
ND	A-12	1003	✓	✓		✓		29.74	10.27	10.27	—	—								— / —
NP	A-13	1031	✓	✓		✓	✓	29.33	10.32	10.32	—	—								— / —
N	AR-1	1048	✓	✓		8		30.15	1216-1.2	10.96	—	—								— / —
ND	AR-2	1020	✓	✓				27.30	18.25	18.25	—	—								— / —
NP	AR-3	1040	✓	✓				27.00	17.15 to 18.65	17.75	—	—								— / —

Comments:

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330109.26 LOCATION: 731 McArthur OAKLAND WELL ID #: A-2

CLIENT/STATION No.: 04931 FIELD TECHNICIAN: PEDRO REYES

WELL INFORMATION

Depth to Liquid: ____ TOB ____ TOC
Depth to water: 6.08 TOB ____ TOC
Total depth: 19.80 TOB ____ TOC
Date: ____ Time (2400): ____

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 19.80 - DTW 6.08 = 13.72 x Gal/Linear Foot 0.66 = 9.05 x Number of Casings 3 = Calculated Purge 27.16

DATE PURGED: 05-08-95 START: 13:35 END (2400 hr): ____ PURGED BY: PE
DATE SAMPLED: 05-08-95 START: 15:15 END (2400 hr): ____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
13:40	9	6.98	2860	77.8	BROWN	>200	NONE
13:43	11	6.95	2660	75.3	BROWN	>200	NONE
			DRY AT 11 GAL				

Pumped dry: (Yes) No

Color: Cobalt 0-100, Clear, Cloudy, Yellow, Brown
Turbidity: NTU 0-200, Heavy, Moderate, Light, Trace
Odor: Strong, Moderate, Faint, None

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW:	TOB/TOC				COLOR	TURBIDITY	ODOR
19.80	TOB/TOC	701	2770	68.3	BROWN	>200	NONE

PURGING EQUIPMENT/I.D. #
- ☐ Bailer: ____
- ☒ Centrifugal Pump: 13
- ☐ Other: ____
- ☐ Airlift Pump: ____
- ☐ Dedicated: ____

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: 10-1
- ☐ Dedicated: ____
- ☐ Other: ____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
A-2	050895	15:15	3	40ml	VOA	HCL	TPH/BTEX

REMARKS: ____

PACIFIC ENVIRONMENTAL

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330109.76 LOCATION: 731 McArthur OAKLAND WELL ID #: A-3

CLIENT/STATION No.: 04931 FIELD TECHNICIAN: PEDRO RUIZ

WELL INFORMATION

Depth to Liquid: ——— TOB ——— TOC
Depth to water: 11.32 (TOB) ——— TOC
Total depth: 17.08 (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 17.08 DTW 11.32 = 5.76 x Gal/Linear Foot 0.66 = 3.80 x Number of Casings 3 = Calculated Purge 11.40

DATE PURGED: 05.08.95 START: 13:10 END (2400 hr): ——— PURGED BY: PE

DATE SAMPLED: 05.08.95 START: 15:00 END (2400 hr): ——— SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 2 5°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
13:13	3.75	6.98	7950	71.2	BROWN	>200	NONE
13:15	5	7.00	7870	70.6	BROWN	>200	NONE
			DRY AT 5 GAL.				

Pumped dry (Yes) / No

Color: Cobalt 0-100, Clear, Cloudy, Yellow, Brown
Turbidity: NTU 0-200, Heavy, Moderate, Light, Trace
Odor: Strong, Moderate, Faint, None

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW	TOB/TOC						
17.85	TOB/TOC	7.01	5710	69.1	CLEAR	17.85	NONE

PURGING EQUIPMENT/I.D. #
- ☐ Bailer: ———
- ☒ Centrifugal Pump: 13
- ☐ Other: ———
- ☐ Airlift Pump: ———
- ☐ Dedicated: ———

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: 15-1
- ☐ Dedicated: ———
- ☐ Other: ———

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
A-3	050895	15:00	3	40ml	VOA	HCL	TPH/BTEX

REMARKS: ———

PACIFIC ENVIRONMENTAL

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 1092G LOCATION: 731 McArthur OAKLAND WELL ID #: A-4

CLIENT/STATION No.: 0 4931 FIELD TECHNICIAN: J. Monwiel

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 #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 20.27 - DTW 11.29 = 8.98 x Gal/Linear Foot 0.66 = 5.92 x Number of Casings 3 = Calculated Purge 17.78

DATE PURGED: 5-8-95 START: 1343 END (2400 hr): 1353 PURGED BY: JM
DATE SAMPLED: 5-8-95 START: 1449 END (2400 hr): 1452 SAMPLED BY: JM

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
1347	6.0	1402 ↔	6.53	69.1	BRN	MOD	HVY
1350	8.0	6.45	1377	70.1	GRY	MOD	HVY
- DRY AT 8.0 GALLONS -							

Pumped dry (Yes) / No

COLOR: Cobalt 0-100, Clear, Cloudy, Yellow, Brown
TURBIDITY: NTU 0-200, Heavy, Moderate, Light, Trace
ODOR: Strong, Moderate, Faint, None

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: 13.00 (TOB)/TOC 7.15 1,537 74.9 CLR LT HVY

PURGING EQUIPMENT/I.D. #
- ☐ Bailer:
- ☒ Centrifugal Pump: #3
- ☐ Other:
- ☐ Airlift Pump:
- ☐ Dedicated:

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: 13-5
- ☐ Dedicated:
- ☐ Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
A-4	5-8-95	1450	3	40ml	VOA	HCL	TPH/BTEX

REMARKS:

SIGNATURE: [signature]

PACIFIC ENVIRONMENTAL

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 1097G LOCATION: 731 McArthur OAKLAND WELL ID #: A-5

CLIENT/STATION No.: 04931 FIELD TECHNICIAN: J. Monwar

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 #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 24.10 - DTW 11.15 = 12.95 x Gal/Linear Foot 0.38 = 4.92 x Number of Casings 3 = Calculated Purge 14.76

DATE PURGED: 5-8-95 START: 1317 END (2400 hr): 1331 PURGED BY: JM

DATE SAMPLED: 5-8-95 START: 1332 END (2400 hr): 1337 SAMPLED BY: JM

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
1321	5.0	7.29	1144	63.3	BRN	HVY	NONE
1325	10.0	6.63	1053	66.6	BRN	MOD	NONE
1329	15.0	7.10	929	67.4	BRN	LT	NONE
					Cobalt 0-100 Clear Cloudy Yellow Brown	NTU 0-200 Heavy Moderate Light Trace	Strong Moderate Faint None

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: 13-2
☐ Dedicated:
☐ Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
A-5	5-8-95	1335	3	40ml	VOA	HCL	TPHg/BTEX

REMARKS:

PACIFIC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 1097G LOCATION: 731 McArthur OAKLAND WELL ID #: A-6

CLIENT/STATION No.: 04931 FIELD TECHNICIAN: J. Mowhker

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 #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 25.50 - DTW 8.85 = 16.65 x Gal/Linear Foot 0.38 = 6.33 x Number of Casings 3 = Calculated Purge 18.98

DATE PURGED: 5-8-95 START: 1251 END (2400 hr): 1306 PURGED BY: JM
DATE SAMPLED: 5-8-95 START: 1307 END (2400 hr): 1312 SAMPLED BY: JM

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
1255	6.5	7.18	617	68.5	BRN	HVY	NONE
1259	13.0	7.04	692	67.4	BRN	HVY	NONE
1304	19.5	7.05	723	69.0	BRN	MOD	NONE

Pumped dry Yes / (No)

COLOR	TURBIDITY	ODOR
Cobalt 0-100	NTU 0-200	Strong
Clear	Heavy	Moderate
Cloudy	Moderate	Faint
Yellow	Light	None
Brown	Trace	

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: 13-7
☐ Dedicated:
☐ Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
A-6	5-8-95	1310	3	40ml	VOA	HCL	TPHg/BTEX

REMARKS:

PACIFIC ENVIRONMENTAL

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330109.2G LOCATION: 731 MacArthur OAKLAND WELL ID #: A-7

CLIENT/STATION No.: 04931 FIELD TECHNICIAN: J. Mowwer

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 #3
- ☐ Other: ____

CASING DIAMETER / GAL/LINEAR FT.

	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 22.80 - DTW 8.36 = 14.44 x Gal/Linear Foot 0.38 = 5.49 x Number of Casings 3 = Calculated Purge 16.46

DATE PURGED: 5-8-95 START: 1225 END (2400 hr): 1237 PURGED BY: MM

DATE SAMPLED: 5-8-95 START: 1238 END (2400 hr): 1241 SAMPLED BY: MM

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
1228	5.5	7.51	456	67.7	BRN	HVY	NONE
1232	11.0	7.06	699	68.8	BRN	LT	NONE
1235	16.5	6.71	714	69.4	BRN	LT	NONE

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. #
- ☐ Bailer: ____
- ☒ Centrifugal Pump: #3
- ☐ Airlift Pump: ____
- ☐ Dedicated: ____
- ☐ Other: ____

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: B-6
- ☐ Dedicated: ____
- ☐ Other: ____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
A-7	5-8-95	1240	3	40ml	VOA	HCl	TPH/BTEX

REMARKS: ____

PACIFIC ENVIRONMENTAL

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330109.26 LOCATION: 731 McArthur OAKLAND WELL ID #: A-8

CLIENT/STATION No.: 04931 FIELD TECHNICIAN: Pedro Ruiz.

WELL INFORMATION

Depth to Liquid: — TOB — TOC
Depth to water: 10.60 TOB — TOC
Total depth: 18.10 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 18.10 - DTW 10.60 = 7.5 x Gal/Linear Foot .38 = 2.85 x Number of Casings 3 = Calculated Purge 8.55

DATE PURGED: — START: — END (2400 hr): — PURGED BY: —

DATE SAMPLED: 05.08.25 START: 12:25 END (2400 hr): — SAMPLED BY: PE.

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
12:25	—	7.01	8850	72.6	cloudy	7.25	strong
		GRAB SAMPLE.					

Color: Cobalt 0-100, Clear, Cloudy, Yellow, Brown
Turbidity: NTU 0-200, Heavy, Moderate, Light, Trace
Odor: Strong, Moderate, Faint, None

Pumped dry Yes / No

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

PURGING EQUIPMENT/I.D. #
- ☐ Bailer: _____
- ☐ Airlift Pump: _____
- ☒ Centrifugal Pump: DEDICATED
- ☐ Dedicated: _____
- ☐ Other: _____

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: DEDICATED
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
A-8	05.08.25	12:25	3	40ml	VOA	HCL	GRO / BTEX

REMARKS: _____

PACIFIC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330109.26 LOCATION: 731 McArthur OAKLAND WELL ID #: A-9

CLIENT/STATION No.: 04931 FIELD TECHNICIAN: PEDRO RUIZ.

WELL INFORMATION

Depth to Liquid: — TOB — TOC
Depth to water: 10.78 TOB — TOC
Total depth: 39.70 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 39.70 DTW 10.78 = 29.92 x Gal/Linear Foot 1.5 = 44.13 x Number of Casings 3 = Calculated Purge 132.39

DATE PURGED: — START: — END (2400 hr): — PURGED BY: —

DATE SAMPLED: 05-08-95 START: 12:10 END (2400 hr): — SAMPLED BY: PE.

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
12:10		7.00	5870	67.1	cloudy	10.18	NONE
		EXTRACTION WELL					

Color: Cobalt 0-100, Clear, Cloudy, Yellow, Brown
Turbidity: NTU 0-200, Heavy, Moderate, Light, Trace
Odor: Strong, Moderate, Faint, None

Pumped dry Yes / No

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: TOB/TOC

PURGING EQUIPMENT/I.D. #
- ☐ Bailer:
- ☐ Airlift Pump:
- ☒ Centrifugal Pump:
- ☐ Dedicated:
- ☒ Other: GRAB

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: GRAB SAMP.
- ☐ Dedicated:
- ☐ Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
A-9	05.08.95	12:10	3	40ml	VOA	HCL	GMS / BTEX

REMARKS:

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330109726 LOCATION: 731 MacArthur OAKLAND WELL ID #: A-10

CLIENT/STATION No.: 04931 FIELD TECHNICIAN: PEDRO RUIZ

WELL INFORMATION

Depth to Liquid: ____ TOB ____ TOC
Depth to water: 11.60 TOB ____ TOC
Total depth: 30.10 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 30.10 DTW 11.60 = 18.5 x Gal/Linear Foot 0.38 = 7.03 x Number of Casings 3 = Calculated Purge 21.09

DATE PURGED: 05-08-95 START: 12:35 END (2400 hr): ____ PURGED BY: RE

DATE SAMPLED: 05-08-95 START: 12:50 END (2400 hr): ____ SAMPLED BY: RE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
12:40	7.	7.00	5470	73.8	Cloudy	89.5	None
12:43	14	7.02	5000	70.5	Clear	18.80	None
12:45	21	6.99	4950	68.5	Clear	19.10	None

Color: Cobalt 0-100, Clear, Cloudy, Yellow, Brown
Turbidity: NTU 0-200, Heavy, Moderate, Light, Trace
Odor: Strong, Moderate, Faint, None

Pumped dry Yes / (No)

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: ____ TOB/TOC ____

PURGING EQUIPMENT/I.D. #
- ☐ Bailer: ____
- ☒ Centrifugal Pump: 13
- ☐ Airlift Pump: ____
- ☐ Dedicated: ____
- ☐ Other: ____

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: 15-10
- ☐ Dedicated: ____
- ☐ Other: ____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
A-10	05-08-95	12:50	3	40ml	VOA	HCL	TPH/BTEX

REMARKS: ____

PACIFIC ENVIRONMENTAL

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 1097G LOCATION: 731 McArthur OAKLAND WELL ID #: A-11

CLIENT/STATION No.: 04931 FIELD TECHNICIAN: J. Munnell

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 29.15 - DTW 10.98 = 18.27 x Gal/Linear Foot 0.38 = 6.94 x Number of Casings 3 = Calculated Purge 20.83

DATE PURGED: 5-8-95 START: 1132 END (2400 hr): 1145 PURGED BY: DM

DATE SAMPLED: ↓ START: 1147 END (2400 hr): 1153 SAMPLED BY: DM

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
1136	7.0	7.30	759	67.4	BRN	HVY	NONE
1140	14.0	7.12	754	67.6	BRN	MOD	NONE
1144	21.0	6.77	750	67.5	BRN	LT	NONE

Cobalt 0-100: Clear, Cloudy, Yellow, Brown
NTU 0-200: Heavy, Moderate, Light, Trace
Strong, Moderate, Faint, None

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: B-13
- ☐ Dedicated:
- ☐ Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
A-11	5-8-95	1150	3	40ml	VOA	HCL	TPH/BTEX

REMARKS:

SIGNATURE:

PACIFIC ENVIRONMENTAL

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 10976 LOCATION: 731 MacArthur OAKLAND WELL ID #: A-12

CLIENT/STATION No.: 04931 FIELD TECHNICIAN: J. Monroe

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 #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 29.74 - DTW 10.27 = 19.47 x Gal/Linear Foot 0.38 = 7.40 x Number of Casings 3 = Calculated Purge 22.20

DATE PURGED: 5-8-95 START: 1109 END (2400 hr): 1122 PURGED BY: DM

DATE SAMPLED: 5-8-95 START: 1123 END (2400 hr): 1127 SAMPLED BY: DM

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
1113	7.5	709	714	64.4	BRN	MOD	NONE
1116	15.0	702	720	64.3	BRN	MOD	NONE
1120	22.5	6.98	743	64.2	BRN	LT	NONE

Color: Cobalt 0-100, Clear, Cloudy, Yellow, Brown
Turbidity: NTU 0-200, Heavy, Moderate, Light, Trace
Odor: Strong, Moderate, Faint, None

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: B-1
☐ Dedicated:
☐ Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
A-12	5-8-95	1125	3	40ml	VOA	HCL	TPH-g/BTEX

REMARKS:

PACIFIC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 1097G LOCATION: 731 McArthur OAKLAND WELL ID #: A-13

CLIENT/STATION No.: 04931 FIELD TECHNICIAN: J. Morwige

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 #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 29.33 - DTW 10.32 = 19.01 x Gal/Linear Foot 0.38 = 7.22 x Number of Casings 3 = Calculated Purge 21.67

DATE PURGED: 5-8-95 START: 12:00 END (2400 hr): 1213 PURGED BY: JM
DATE SAMPLED: 5-8-95 START: 1214 END (2400 hr): 1217 SAMPLED BY: JM

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
1205	7.5	7.42	742	64.2	CLR	LT	NONE
1209	15.0	6.82	790	64.8	CLR	LT	NONE
1212	22.5	~~7.~~6.63	752	64.9	CLR	LT	NONE

Pumped dry Yes (No)

COLOR	TURBIDITY	ODOR
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. #
☐ Bailer:
☒ Centrifugal Pump: #3
☐ Other:
☐ Airlift Pump:
☐ Dedicated:

SAMPLING EQUIPMENT/I.D. #
☒ Bailer: 13-4
☐ Dedicated:
☐ Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
A-13	5-8-95	1215	3	40ml	VOA	HCL	TPHg/BTEX

REMARKS:

(signature)

PACIFIC ENVIRONMENTAL

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330109.26 LOCATION: 731 McArthur OAKLAND WELL ID #: AR-1

CLIENT/STATION No.: 04931 FIELD TECHNICIAN: J. Mowrer

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 #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 ——— - DTW ——— = ——— x Gal/Linear Foot 1.5 = ——— x Number of Casings 3 = Calculated Purge ———

DATE PURGED: ——— START: ——— END (2400 hr): ——— PURGED BY: ———

DATE SAMPLED: 5-8-95 START: 1348 END (2400 hr): 1352 SAMPLED BY: MM

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 2.5°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
		- NO PURGE EXTRACTION WELL					

Pumped dry Yes / (No)

Color: Cobalt 0-100, Clear, Cloudy, Yellow, Brown
Turbidity: NTU 0-200, Heavy, Moderate, Light, Trace
Odor: Strong, Moderate, Faint, None

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW:	TOB/TOC				COLOR	TURBIDITY	ODOR
10.96	TOB/TOC	7.29	1113	77.9	CLR	LT	HY

PURGING EQUIPMENT/I.D. #
- ☐ Bailer: ———
- ☒ Centrifugal Pump: ———
- ☐ Airlift Pump: ———
- ☒ Dedicated: EXTRACTION
- ☐ Other: ———

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: ———
- ☒ Dedicated: EXTRACTION
- ☐ Other: ———

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
AR-1	5-8-95	1350	3	40ml	VOA	HCL	GMA / BTEX

REMARKS: ———

PACIFIC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 10976 LOCATION: 731 McArthur OAKLAND WELL ID #: A-22

CLIENT/STATION No.: 04931 FIELD TECHNICIAN: Pedro Ruiz

WELL INFORMATION

Depth to Liquid: — TOB — TOC
Depth to water: 18.75 (TOB) — TOC
Total depth: 27.30 (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 27.30 DTW 18.75 = 906 x Gal/Linear Foot 1.5 = 13.57 x Number of Casings 3 = Calculated Purge 40.72

DATE PURGED: — START: — END (2400 hr): — PURGED BY: —

DATE SAMPLED: 05-08-95 START: 13:20 END (2400 hr): — SAMPLED BY: PR

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
13:20	—	6.98	5430	78.5	CLEAR		NONE
			GRAB SAMPLE				

Cobalt 0-100: Clear, Cloudy, Yellow, Brown
NTU 0-200: Heavy, Moderate, Light, Trace
Strong, Moderate, Faint, None

Pumped dry Yes / No

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC

PURGING EQUIPMENT/I.D. #
- ☐ Bailer:
- ☐ Airlift Pump:
- ☒ Centrifugal Pump:
- ☐ Dedicated:
- ☐ Other:

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: GRAB SAMPLE
- ☐ Dedicated:
- ☐ Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
A22	050895	13:20	3	40ml	VOA	HCL	GMAS/BTEX

REMARKS:

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 10976 LOCATION: 731 MacArthur OAKLAND WELL ID #: AR 3

CLIENT/STATION No.: 04931 FIELD TECHNICIAN: PEDRO R. SR.

WELL INFORMATION

Depth to Liquid: — TOB — TOC
Depth to water: 17.75 (TOB) — TOC
Total depth: 77.00 (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 77.00 DTW 17.75 = 9.25 x Gal/Linear Foot 1.5 = 13.87 x Number of Casings 3 = Calculated Purge 41.62

DATE PURGED: — START: — END (2400 hr): — PURGED BY: —

DATE SAMPLED: 05-08-95 START: 13:00 END (2400 hr): — SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
13:00	—	7.00	5350	73.5	CLEAR	14.8	NONE
			GRAB	SAMPLE			

Cobalt 0-100: Clear, Cloudy, Yellow, Brown
NTU 0-200: Heavy, Moderate, Light, Trace
Strong, Moderate, Faint, None

Pumped dry Yes / No

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: ____ TOB/TOC ____

PURGING EQUIPMENT/I.D. #
- ☐ Bailer:
- ☐ Airlift Pump:
- ☒ Centrifugal Pump:
- ☐ Dedicated:
- ☐ Other:

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: GRAB SAMP.
- ☐ Dedicated:
- ☐ Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
AR-3	050895	13:00	3	40ml	VOA	HCL	GMA / BTEX

REMARKS:

PACIFIC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 10926 LOCATION: 731 McAlthor OAKLAND WELL ID #: TB-1

CLIENT/STATION No.: 04931 FIELD TECHNICIAN: J. Monnish

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 ____ = ____ x Gal/Linear Foot ____ = ____ x Number of Casings ____ = Calculated 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 @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR

Cobalt 0-100, Clear, Cloudy, Yellow, Brown | NTU 0-200, Heavy, Moderate, Light, Trace | Strong, Moderate, Faint, None

Pumped dry Yes / No

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: ____ TOB/TOC ____

PURGING EQUIPMENT/I.D. #
- ☐ Bailer: ____
- ☐ Airlift Pump: ____
- ☐ Centrifugal Pump: ____
- ☐ Dedicated: ____
- ☐ Other: ____

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: ____
- ☐ Dedicated: ____
- ☐ Other: ____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
TB-1	5-8-95	NA	2	40ml	VOA	HCL	GMS / BTEX

REMARKS: ____

PACIFIC

ARCO Products Company ◆ Division of AtlanticRichfieldCompany — 3301926 — **Task Order No.** 170760 0 — **Chain of Custody**

ARCO Facility no. 4931	City (Facility) OAKLAND	Project manager (Consultant) KELLY BROWN	Laboratory name SEQUOIA
ARCO engineer MIKE WHELAN	Telephone no. (ARCO)	Telephone no. (Consultant) 408 441 7500	Fax no. (Consultant) 408 441-7539
Consultant name PACIFIC ENVIRONMENTAL GROUP	Address (Consultant) 2025 GATEWAY PLACE #440, SAN JOSE, CA 95110		Contract number

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 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 ☐		
A-2		3		X		X	HCl	5-8-95	1515		X											
A-3									1500													
A-4									1450													
A-5									1335													
A-6									1310													
A-7									1240													
A-8									1225													
A-9									1210													
A-10									1250													
A-11									1150													
A-12									1125													
A-13									1215													
AR-1									1350													
AR-2									1320													
AR-3									1300													
TB-1	X	2							NA		✓											

Special detection Limit/reporting:

Special QA/QC:

Remarks: 1 of 1

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 sampler	Date 5-9-95 Time 730	Received by	
Relinquished by	Date Time	Received by	
Relinquished by	Date Time	Received by laboratory	Date Time

Sequoia Analytical

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

Project: 330-109.2G/4931, Oakland

Enclosed are the results from samples received at Sequoia Analytical on May 9, 1995. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
950566901	LIQUID, A-2	5/8/95	TPHGB Purgeable TPH/BTEX
950566902	LIQUID, A-3	5/8/95	TPHGB Purgeable TPH/BTEX
950566903	LIQUID, A-4	5/8/95	TPHGB Purgeable TPH/BTEX
950566904	LIQUID, A-5	5/8/95	TPHGB Purgeable TPH/BTEX
950566905	LIQUID, A-6	5/8/95	TPHGB Purgeable TPH/BTEX
950566906	LIQUID, A-7	5/8/95	TPHGB Purgeable TPH/BTEX
950566907	LIQUID, A-8	5/8/95	TPHGB Purgeable TPH/BTEX
950566908	LIQUID, A-9	5/8/95	TPHGB Purgeable TPH/BTEX
950566909	LIQUID, A-10	5/8/95	TPHGB Purgeable TPH/BTEX
950566910	LIQUID, A-11	5/8/95	TPHGB Purgeable TPH/BTEX
950566911	LIQUID, A-12	5/8/95	TPHGB Purgeable TPH/BTEX
950566912	LIQUID, A-13	5/8/95	TPHGB Purgeable TPH/BTEX
950566913	LIQUID, AR-1	5/8/95	TPHGB Purgeable TPH/BTEX
950566914	LIQUID, AR-2	5/8/95	TPHGB Purgeable TPH/BTEX
950566915	LIQUID, AR-3	5/8/95	TPHGB Purgeable TPH/BTEX
950566916	LIQUID, TB-1	5/8/95	TPHGB 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

Eileen A. Manning
Project Manager

Quality Assurance Department

Sequoia Analytical

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

Attention: Maree Doden

Client Proj. ID: 330-109.2G/4931, Oakland
Sample Descript: A-2
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9505669-01

Sampled: 05/08/95
Received: 05/09/95

Analyzed: 05/12/95
Reported: 05/18/95

QC Batch Number: GC051195BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Benzene	**0.50**	**1.4**
Toluene	**0.50**	**1.4**
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	**0.50**	**0.50**
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	93

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

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Pacific Environmental Group	Client Proj. ID: 330-109.2G/4931, Oakland	Sampled: 05/08/95
2025 Gateway Place, Suite 440	Sample Descript: A-3	Received: 05/09/95
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/11/95
Attention: Maree Doden	Lab Number: 9505669-02	Reported: 05/18/95

QC Batch Number: GC051195BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	86

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

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Pacific Environmental Group	Client Proj. ID: 330-109.2G/4931, Oakland	Sampled: 05/08/95
2025 Gateway Place, Suite 440	Sample Descript: A-4	Received: 05/09/95
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/12/95
Attention: Maree Doden	Lab Number: 9505669-03	Reported: 05/18/95

QC Batch Number: GC051195BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	***1000***	***5100***
Benzene	**10**	**700**
Toluene	10	N.D.
Ethyl Benzene	**10**	**79**
Xylenes (Total)	**10**	**160**
Chromatogram Pattern:		**Gas**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	120

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

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

Attention: Maree Doden

Client Proj. ID: 330-109.2G/4931, Oakland
Sample Descript: A-5
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9505669-04

Sampled: 05/08/95
Received: 05/09/95

Analyzed: 05/11/95
Reported: 05/18/95

QC Batch Number: GC051195BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	90

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

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Pacific Environmental Group	Client Proj. ID: 330-109.2G/4931, Oakland	Sampled: 05/08/95
2025 Gateway Place, Suite 440	Sample Descript: A-6	Received: 05/09/95
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/11/95
Attention: Maree Doden	Lab Number: 9505669-05	Reported: 05/18/95

QC Batch Number: GC051195BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**100**
Benzene	**0.50**	**7.9**
Toluene	0.50	N.D.
Ethyl Benzene	**0.50**	**4.1**
Xylenes (Total)	**0.50**	**8.6**
Chromatogram Pattern:		**Gas**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	94

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

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Pacific Environmental Group	Client Proj. ID: 330-109.2G/4931, Oakland	Sampled: 05/08/95
2025 Gateway Place, Suite 440	Sample Descript: A-7	Received: 05/09/95
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/11/95
Attention: Maree Doden	Lab Number: 9505669-06	Reported: 05/18/95

QC Batch Number: GC051195BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	92

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

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Pacific Environmental Group	Client Proj. ID: 330-109.2G/4931, Oakland	Sampled: 05/08/95
2025 Gateway Place, Suite 440	Sample Descript: A-8	Received: 05/09/95
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/12/95
Attention: Maree Doden	Lab Number: 9505669-07	Reported: 05/18/95

QC Batch Number: GC051195BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	5000	23000
Benzene	50	3600
Toluene	50	560
Ethyl Benzene	50	520
Xylenes (Total)	50	2100
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	98

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

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Pacific Environmental Group	Client Proj. ID: 330-109.2G/4931, Oakland	Sampled: 05/08/95
2025 Gateway Place, Suite 440	Sample Descript: A-9	Received: 05/09/95
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/12/95
Attention: Maree Doden	Lab Number: 9505669-08	Reported: 05/18/95

QC Batch Number: GC051195BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	82

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

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Pacific Environmental Group	Client Proj. ID: 330-109.2G/4931, Oakland	Sampled: 05/08/95
2025 Gateway Place, Suite 440	Sample Descript: A-10	Received: 05/09/95
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/11/95
Attention: Maree Doden	Lab Number: 9505669-09	Reported: 05/18/95

QC Batch Number: GC051195BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	93

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

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Pacific Environmental Group	Client Proj. ID: 330-109.2G/4931, Oakland	Sampled: 05/08/95
2025 Gateway Place, Suite 440	Sample Descript: A-11	Received: 05/09/95
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/12/95
Attention: Maree Doden	Lab Number: 9505669-10	Reported: 05/18/95

QC Batch Number: GC051195BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	74

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

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Pacific Environmental Group	Client Proj. ID: 330-109.2G/4931, Oakland	Sampled: 05/08/95
2025 Gateway Place, Suite 440	Sample Descript: A-12	Received: 05/09/95
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/11/95
Attention: Maree Doden	Lab Number: 9505669-11	Reported: 05/18/95

QC Batch Number: GC051195BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	103

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

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Pacific Environmental Group	Client Proj. ID: 330-109.2G/4931, Oakland	Sampled: 05/08/95
2025 Gateway Place, Suite 440	Sample Descript: A-13	Received: 05/09/95
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/12/95
Attention: Maree Doden	Lab Number: 9505669-12	Reported: 05/18/95

QC Batch Number: GC051195BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	100

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

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

Attention: Maree Doden

Client Proj. ID: 330-109.2G/4931, Oakland
Sample Descript: AR-1
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9505669-13

Sampled: 05/08/95
Received: 05/09/95

Analyzed: 05/12/95
Reported: 05/18/95

QC Batch Number: GC051195BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	250	3700
Benzene	2.5	19
Toluene	2.5	N.D.
Ethyl Benzene	2.5	5.7
Xylenes (Total)	2.5	47
Chromatogram Pattern:		
Weathered Gas		C6-C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	105

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330-109.2G/4931, Oakland	Sampled: 05/08/95
2025 Gateway Place, Suite 440	Sample Descript: AR-2	Received: 05/09/95
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/12/95
Attention: Maree Doden	Lab Number: 9505669-14	Reported: 05/18/95

QC Batch Number: GC051195BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	85

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330-109.2G/4931, Oakland	Sampled: 05/08/95
2025 Gateway Place, Suite 440	Sample Descript: AR-3	Received: 05/09/95
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/12/95
Attention: Maree Doden	Lab Number: 9505669-15	Reported: 05/18/95

QC Batch Number: GC051195BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	93

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

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

Attention: Maree Doden

Client Proj. ID: 330-109.2G/4931, Oakland
Sample Descript: TB-1
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9505669-16

Sampled: 05/08/95
Received: 05/09/95

Analyzed: 05/12/95
Reported: 05/18/95

QC Batch Number: GC051195BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	75

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

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

Client Project ID: 330-109.2G/4931, Oakland
Matrix: LIQUID
Work Order #: 9505669 01-16

Reported: May 19, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC051195BTEX07A	GC051195BTEX07A	GC051195BTEX07A	GC051195BTEX07A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	R. Geckler	R. Geckler	R. Geckler	R. Geckler
MS/MSD #:	9504J5009	9504J5009	9504J5009	9504J5009
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	5/11/95	5/11/95	5/11/95	5/11/95
Analyzed Date:	5/11/95	5/11/95	5/11/95	5/11/95
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.6	9.7	9.7	30
MS % Recovery:	96	97	97	100
Dup. Result:	12	10	10	30
MSD % Recov.:	120	100	100	100
RPD:	22	3.0	3.0	0.0
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 LCS Control Limits	71-133	72-128	72-130	71-120

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

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

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.

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

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: PEG/Arco
REC. BY (PRINT): RI

WORKORDER: 9505669
DATE OF LOG-IN: 5/9/95

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s): Present / (Absent)
   Intact / Broken*
2. Custody Seal Nos.: Put in Remarks Section
3. Chain-of-Custody Records: (Present) / Absent*
4. Traffic Reports or Packing List: Present (Absent)
5. Airbill: Airbill / Sticker
   Present / (Absent)
6. Airbill No.: —
7. Sample Tags: (Present) / Absent*
   Sample Tag Nos.: (Listed) / Not Listed on Chain-of-Custody
8. Sample Condition: (Intact) / Broken* / Leaking*
9. Does information on custody reports, traffic reports and sample tags agree? (Yes) / No*
10. Proper preservatives used: (Yes) / No*
11. Date Rec. at Lab: 5/9/95
12. Temp. Rec. at Lab: —
13. Time Rec. at Lab: 1217

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION(ETC.)
1	A-C	A-2	3 VOA's	Liq	5/8/95	
2		-3				
3		-4				
4		-5				
5		-6				
6		-7				
7		-8				
8		-9				
9		-10				
10		-11				
11		-12				
12		-13				
13		AR-1				
14		-2				
15	↓	-3	↓			
16	A-B	TB	2 VOA's	↓	↓	

AL 5/9/95

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

ARCO Products Company
Division of AtlanticRichfieldCompany

3301926 **Task Order No.** 17076 00

Chain of Custody

ARCO Facility no. 4931	City (Facility) OAKLAND	Project manager (Consultant) KELLY BROWN	Laboratory name SEQUOIA
ARCO engineer MIKE WHELAN	Telephone no. (ARCO)	Telephone no. (Consultant) 408 4417500	Fax no. (Consultant) 408 441-7539
Consultant name PACIFIC ENVIRONMENTAL GROUP	Address (Consultant) 2025 GATEWAY PLACE #440, SAN JOSE, CA 95110		Contract number 07-073

Method of shipment: COURIER

Special detection Limit/reporting: 95056697

Special QA/QC:

Remarks: 1 of 1

Lab number:

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

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 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 ☐ Semi VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐	
A-2	1A-C	3		X		X	HCl	5-8-95	1515		X										
A-3	2								1500												
A-4	3								1450												
A-5	4								1335												
A-6	5								1310												
A-7	6								1240												
A-8	7								1225												
A-9	8								1210												
A-10	9								1250												
A-11	10								1150												
A-12	11								1125												
A-13	12								1215												
AR-1	13								1350												
AR-2	14								1320												
AR-3	15								1300												
TB-1	16 (A-B)	2							N/A												

Condition of sample:

Temperature received:

	Date	Time		Date	Time
Relinquished by sampler	5-9-95	730	Received by	5/9/95	0800
Relinquished by	5/9/95	11:10	Received by		
Relinquished by	5/9/95	1210	Received by laboratory	5/9/95	1217

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

ATTACHMENT C

TREATMENT SYSTEM
CERTIFIED ANALYTICAL REPORTS,
CHAIN-OF-CUSTODY DOCUMENTATION,
AND FIELD DATA SHEETS

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Maree Doden

Project: 330-109.5B/4931, Oakland

Enclosed are the results from samples received at Sequoia Analytical on April 14, 1995. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
9504A2001	LIQUID, A	4/13/95	TPHGB Purgeable TPH/BTEX
9504A2002	LIQUID, B	4/13/95	TPHGB Purgeable TPH/BTEX
9504A2003	LIQUID, C	4/13/95	TPHGB Purgeable TPH/BTEX
9504A2004	LIQUID, D	4/13/95	TPHGB 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

Eileen A. Manning
Project Manager

Quality Assurance Department

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330-109.5B/4931, Oakland	Sampled: 04/13/95
2025 Gateway Place, Suite 440	Sample Descript: A	Received: 04/14/95
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 04/25/95
Attention: Maree Doden	Lab Number: 9504A20-01	Reported: 05/09/95

QC Batch Number: GC042595BTEXDM2
Instrument ID: GC2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	88

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

SEQUOIA ANALYTICAL - ELAP #1197

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330-109.5B/4931, Oakland	Sampled: 04/13/95
2025 Gateway Place, Suite 440	Sample Descript: B	Received: 04/14/95
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 04/25/95
Attention: Maree Doden	Lab Number: 9504A20-02	Reported: 05/09/95

QC Batch Number: GC042595BTEXDM2
Instrument ID: GC2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	88

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

SEQUOIA ANALYTICAL - ELAP #1197

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330-109.5B/4931, Oakland	Sampled: 04/13/95
2025 Gateway Place, Suite 440	Sample Descript: C	Received: 04/14/95
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 04/25/95
Attention: Maree Doden	Lab Number: 9504A20-03	Reported: 05/09/95

QC Batch Number: GC042595BTEXDM2
Instrument ID: GC2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	86

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

SEQUOIA ANALYTICAL - ELAP #1197

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330-109.5B/4931, Oakland	Sampled: 04/13/95
2025 Gateway Place, Suite 440	Sample Descript: D	Received: 04/14/95
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 04/25/95
Attention: Maree Doden	Lab Number: 9504A20-04	Reported: 05/09/95

QC Batch Number: GC042595BTEXDM2
Instrument ID: GC2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	95

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

SEQUOIA ANALYTICAL - ELAP #1197

Eileen Manning
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Project ID:	330-109.5B/4931, Oakland	
2025 Gateway Place, Suite 440	Matrix:	Liquid	
San Jose, CA 95110			
Attention: Maree Doden	Work Order #:	9504A20 01-02	Reported: May 3, 1995

COC #:

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC042595BTEXDM2	GC042595BTEXDM2	GC042595BTEXDM2	GC042595BTEXDM2
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	W. Thomas	W. Thomas	W. Thomas	W. Thomas
MS/MSD #:	BLK042595	BLK042595	BLK042595	BLK042595
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	4/25/95	4/25/95	4/25/95	4/25/95
Analyzed Date:	4/25/95	4/25/95	4/25/95	4/25/95
Instrument I.D.#:	GC2	GC2	GC2	GC2
Conc. Spiked:	10 ug/L	10 ug/L	10 ug/L	30 ug/L
Result:	9.6	9.2	9.7	28
MS % Recovery:	96	92	97	93
Dup. Result:	9.9	9.5	9.9	29
MSD % Recov.:	99	95	99	97
RPD:	3.1	3.2	2.0	3.5
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 LCS Control Limits	71-133	72-128	72-130	71-120

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

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

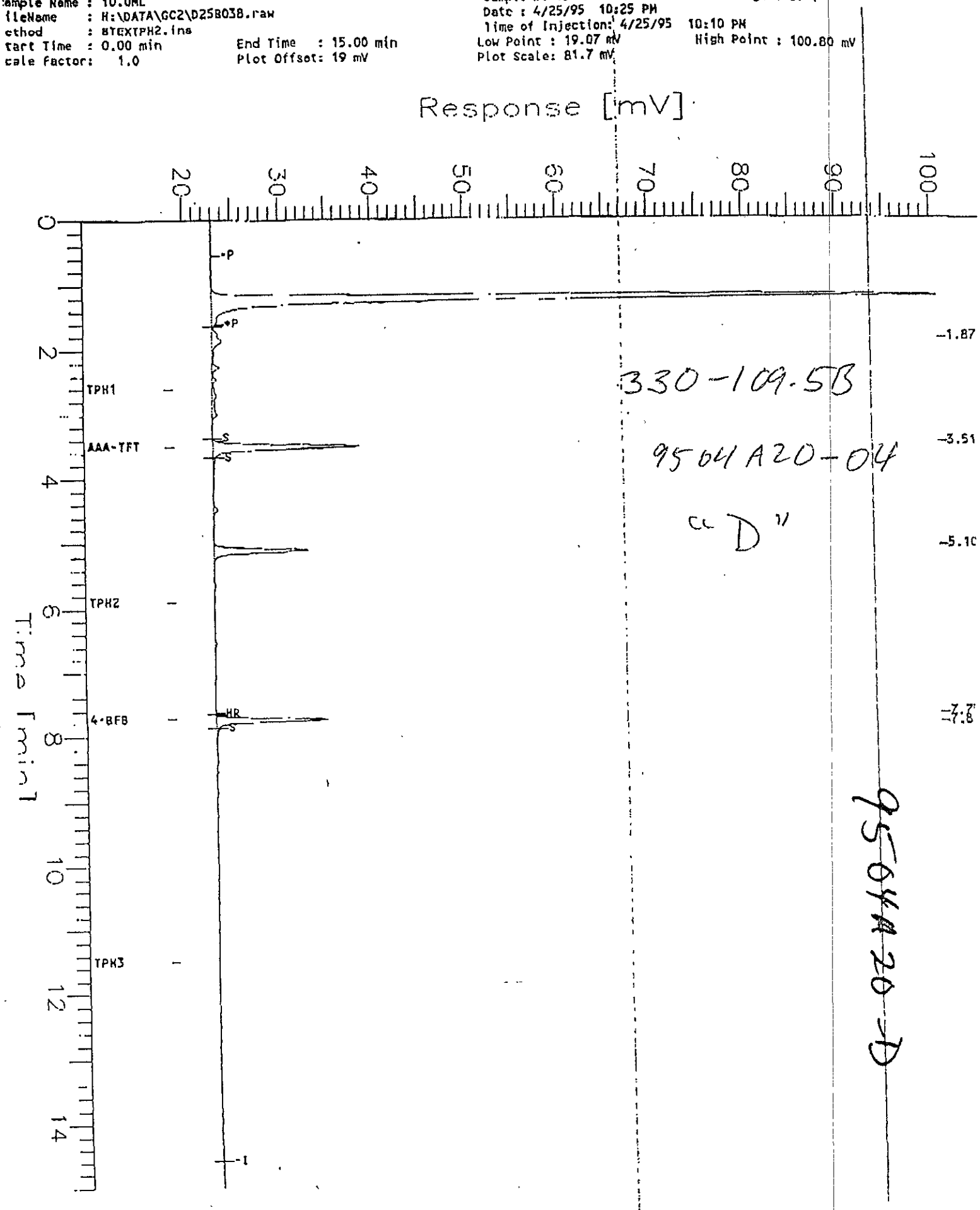
Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire 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.

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

Chromatogram

ample Name : 10.0ML
ileName : H:\DATA\GC2\D25B038.raw
ethod : BTEXTPH2.ins
tart Time : 0.00 min End Time : 15.00 min
cale Factor: 1.0 Plot Offset: 19 mV

Sample #: V5040717 Page 1 of 1
Date : 4/25/95 10:25 PM
Time of Injection: 4/25/95 10:10 PM
Low Point : 19.07 mV High Point : 100.80 mV
Plot Scale: 81.7 mV



330-109.5B

9504A20-04

"D"

9504A20-D

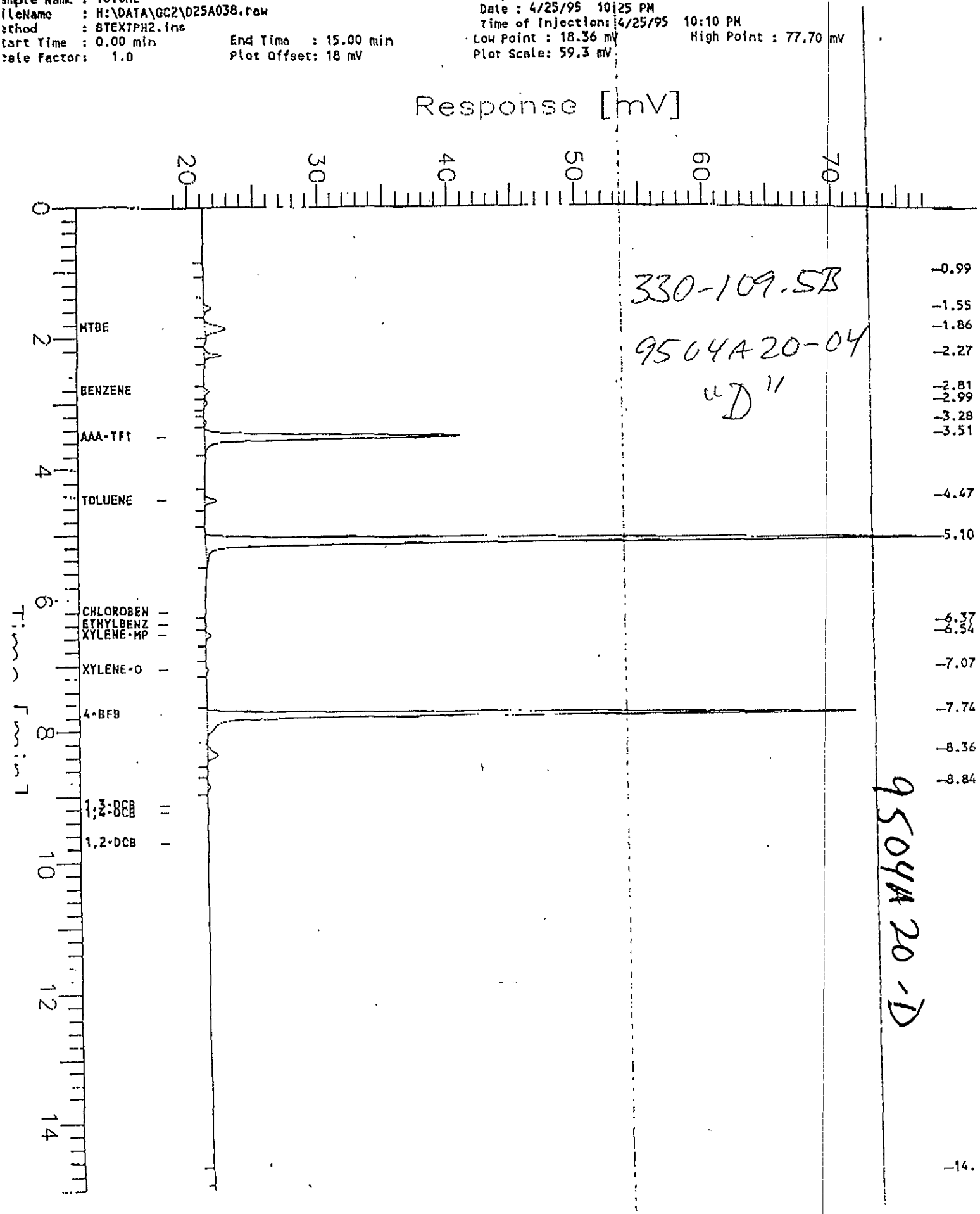
Chromatogram

Sample Name : 10.0ML
FileName : H:\DATA\GC2\D25A038.raw
Method : BTEXTPH2.ins
Start Time : 0.00 min
Scale Factor: 1.0

End Time : 15.00 min
Plot Offset: 18 mV

Sample #: V5040717
Date : 4/25/95 10:25 PM
Time of Injection: 4/25/95 10:10 PM
Low Point : 18.36 mV
Plot Scale: 59.3 mV

High Point : 77.70 mV



330-109.5B

9504A20-04

"D"

9504A20-D

ARCO Products Company
Division of AtlanticRichfieldCompany

330-109.5B **Task Order No.** 1128400

Chain of Custody

ARCO Facility no. 4931	City (Facility) Oakland	Project manager (Consultant) Shaw Garakani	Laboratory name SEQUOIA
ARCO engineer Mike Whelan	Telephone no. (ARCO)	Telephone no. (Consultant) 408 441 7500	Fax no. (Consultant) 408 441 7539
Consultant name Pacific Env Group	Address (Consultant) 2025 Gateway pl #440 San Jose		Contract number 07-073

Method of shipment: 9504A20

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 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 ☐ Semi VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐		
A	1A-C	3		X		X	HCl	4-3-95			X											
B	2	↓		↓		↓	↓	X			↓											
C	3	↓		↓		↓	↓	X			↓											
D	4	↓		↓		↓	↓	X			↓											

Special detection Limit/reporting:

Special QA/QC:

Remarks: *Please Include Chromatograms on D gas/btex sample only (Pictures only)

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:

	Date	Time		Date	Time
Relinquished by sampler	4-14-95	700	Received by		
Relinquished by	4/14/95	1155	Received by		
Relinquished by	4/14/95		Received by laboratory	4/14/95	1313

0830

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

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

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

Project: 330-109.5B/4931, Oakland

Enclosed are the results from samples received at Sequoia Analytical on May 2, 1995. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9505123 -01	LIQUID, INFL	05/01/95	TPHGBW Purgeable TPH/BTEX
9505123 -02	LIQUID, MID-1	05/01/95	TPHGBW Purgeable TPH/BTEX
9505123 -03	LIQUID, MID-2	05/01/95	TPHGBW Purgeable TPH/BTEX
9505123 -04	LIQUID, EFFL	05/01/95	TPHGBW 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

Eileen Manning
Project Manager

Quality Assurance Department

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330-109.5B/4931, Oakland	Sampled: 05/01/95
2025 Gateway Place, Suite 440	Sample Descript: INFL	Received: 05/02/95
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/04/95
Attention: Maree Doden	Lab Number: 9505123-01	Reported: 05/10/95

QC Batch Number: GC050495BTEX20A
Instrument ID: GCHP20

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	96

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330-109.5B/4931, Oakland	Sampled: 05/01/95
2025 Gateway Place, Suite 440	Sample Descript: MID-1	Received: 05/02/95
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/05/95
Attention: Maree Doden	Lab Number: 9505123-02	Reported: 05/10/95

QC Batch Number: GC050495BTEX20A
Instrument ID: GCHP20

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	100

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330-109.5B/4931, Oakland	Sampled: 05/01/95
2025 Gateway Place, Suite 440	Sample Descript: MID-2	Received: 05/02/95
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/05/95
Attention: Maree Doden	Lab Number: 9505123-03	Reported: 05/10/95

QC Batch Number: GC050495BTEX20A
Instrument ID: GCHP20

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	98

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330-109.5B/4931, Oakland	Sampled: 05/01/95
2025 Gateway Place, Suite 440	Sample Descript: EFFL	Received: 05/02/95
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/05/95
Attention: Maree Doden	Lab Number: 9505123-04	Reported: 05/10/95

QC Batch Number: GC050495BTEX20A
Instrument ID: GCHP20

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	96

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

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

Client Project ID: 330-109.5B/4931, Oakland
Matrix: LIQUID
Work Order #: 9505123 01-04

Reported: May 10, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC050495BTEX20A	GC050495BTEX20A	GC050495BTEX20A	GC050495BTEX20A
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 #:	9504l6114	9504l6114	9504l6114	9504l6114
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	5/4/95	5/4/95	5/4/95	5/4/95
Analyzed Date:	5/4/95	5/4/95	5/4/95	5/4/95
Instrument I.D.#:	GCHP20	GCHP20	GCHP20	GCHP20
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.6	9.7	9.7	29
MS % Recovery:	96	97	97	97
Dup. Result:	9.7	9.8	9.7	29
MSD % Recov.:	97	98	97	97
RPD:	1.0	1.0	0.0	0.0
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 LCS Control Limits	71-133	72-128	72-130	71-120

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

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

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.

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

ARCO Products Company
Division of AtlanticRichfieldCompany

330-1095B Task Order No. 1703700

Chain of Custody

ARCO Facility no. 4931	City (Facility) OAKLAND	Project manager (Consultant) SHAW GARAKANI	Laboratory name Sequoia
ARCO engineer MIKE WHELAN	Telephone no. (ARCO)	Telephone no. (Consultant) 441 7500 (408)	Fax no. (Consultant) 441 7539	Contract number
Consultant name PACIFIC ENV GROUP		Address (Consultant) 2025 Gate WAY pl # 440 SAN JOSE	Method of shipment 5123

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 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 ☐ Semi VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐	9505123
INFL	1	3		X		X	HCL	5-1-95	1330		X										
MID-1	2	X		X		X	X	X	X		X										
MID-2	3	X		X		X	X	X	X		X										
EFFL	4	X		X		X	X	X	X		X										

Condition of sample:

Temperature received:

	Date	Time		Date	Time
Relinquished by sampler	5-2-95	700	Received by	5/2/95	0745
Relinquished by	5/2/95	11:48	Received by	5-2-95	
Relinquished by	5-2	100	Received by laboratory	5/2/95	1308

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 ☑

ARCO Environmental Engineering: Pink copy -- Consultant

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

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

Project: 330-109.5B/4931, Oakland

Enclosed are the results from samples received at Sequoia Analytical on June 12, 1995. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
950669001	LIQUID, A	6/9/95	TPHGB Purgeable TPH/BTEX
950669002	LIQUID, B	6/9/95	TPHGB Purgeable TPH/BTEX
950669003	LIQUID, D	6/9/95	TPHGB 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

Eileen A. Manning
Project Manager

Bruce Fletcher
Quality Assurance Department

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Maree Doden

Client Proj. ID: 330-109.5B/4931,Oakland
Sample Descript: A
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9506690-01

Sampled: 06/09/95
Received: 06/12/95

Analyzed: 06/14/95
Reported: 06/23/95

QC Batch Number: GC061495BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	93

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

SEQUOIA ANALYTICAL - ELAP #1210

Bruce Fletcher for

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330-109.5B/4931,Oakland	Sampled: 06/09/95
2025 Gateway Place, Suite 440	Sample Descript: B	Received: 06/12/95
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 06/14/95
Attention: Maree Doden	Lab Number: 9506690-02	Reported: 06/23/95

QC Batch Number: GC061495BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	95

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

SEQUOIA ANALYTICAL - ELAP #1210

Bruce Fletcher for

Eileen Manning
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330-109.5B/4931,Oakland	Sampled: 06/09/95
2025 Gateway Place, Suite 440	Sample Descript: D	Received: 06/12/95
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 06/14/95
Attention: Maree Doden	Lab Number: 9506690-03	Reported: 06/23/95

QC Batch Number: GC061495BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	92

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Project ID:	330-109.5B/4931, Oakland	
2025 Gateway Place, Suite 440	Matrix:	LIQUID	
San Jose, CA 95110			
Attention: Maree Doden	Work Order #:	9506690 01-03	Reported: Jun 23, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC061495BTEX06A	GC061495BTEX06A	GC061495BTEX06A	GC061495BTEX06A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	Y. Chueh	Y. Chueh	Y. Chueh	Y. Chueh
MS/MSD #:	950668003	950668003	950668003	950668003
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	6/14/95	6/14/95	6/14/95	6/14/95
Analyzed Date:	6/14/95	6/14/95	6/14/95	6/14/95
Instrument I.D.#:	GCHP6	GCHP6	GCHP6	GCHP6
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	10	10	10	30
MS % Recovery:	100	100	100	100
Dup. Result:	10	10	10	30
MSD % Recov.:	100	100	100	100
RPD:	0.0	0.0	0.0	0.0
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 LCS Control Limits	71-133	72-128	72-130	71-120

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

Eileen A. Manning
Project Manager

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

ARCO Products Company
Division of AtlanticRichfieldCompany

330-109.5B Task Order No. 1703700

Chain of Custody

ARCO Facility no. ~~608~~ 4931	City (Facility) OAKLAND	Project manager (Consultant) SHAW GARAKANI	Laboratory name SEQUOIA
ARCO engineer MILCE WHELAN	Telephone no. (ARCO)	Telephone no. (Consultant) 408 441 7500	Fax no. (Consultant) 408 441 7539
Consultant name PACIFIC ENV GROUP	Address (Consultant) 2025 GATEWAY PL #440 SAN JOSE		Contract number 07-073

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 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 ☐ Semi VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐		
A		3		X		X	HCl	6-9-95			X						01	A-C				
B		↓		X		X	HCl	↓			X						02	↓				
D		↓		X		X	HCl	↓			X						03	↓				

Condition of sample:

Temperature received:

Relinquished by sampler	Date 6-12-95	Time 7:00	Received by M Doden 6/12/95 0730
Relinquished by M Doden	Date 6/12/95	Time	Received by 9:12-9:45
Relinquished by	Date 6/12/95	Time 10:45	Received by laboratory Date 6/12/95 Time 1045

Special detection Limit/reporting

Special QA/QC

Remarks

Lab number 9506696

Turnaround time

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

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

Work Auth. 17037

FIELD SERVICES / O&M REQUEST Work Order # 953123

SITE INFORMATION FORM

Identification

Project # 330-109.5B

Station # 4931

Site Address: 731 West MacArthur Blvd
OAKLAND

County: ALAMEDA

Project Manager: SHAWG.

Requestor: ERIC W.

Client: ARCO

Client P.O.C.: MIKE WHELAN

Date of request: 2/9/95

Project Type

- ☐ 1st Time visit
- ☐ Quarterly
  - ☐ 1st ☐ 2nd ☐ 3rd ☐ 4th
- ☒ Monthly
- ☐ Semi-Monthly
- ☐ Weekly
- ☐ One time event
- ☐ Other: _____

Ideal field date(s): MONTHLY

Prefield Contacts/Permits

	Initials	Date
☐ Cal Trans		
☐ County	F/S	BY - 4/19/95
☐ City		
☐ Private	Copy/Dist.	RY ↓

☐ Multi-Consultant Scheduling date(s): _____

Check Appropriate Category

Budget Hrs. _____

Actual Hrs. 2.5

Mob de Mob 2

Field Tasks: For General Description

SYSTEM SAMPLING

	A	B	C	D
(1) GAS/BTEX	Q	Q	Q	Q

(2) FILL OUT ATTACHED DATA SHEET

Q = Week of Nov. 8
JANUARY 10
APRIL 11
JULY 12

A = EFFLUENT
B = MIDPOINT 2
C = MIDPOINT 1
D = INFLUENT

(3) FILL OUT SPH DATA SHEET

Comments, remarks, etc. from Field Staff (include problems encountered and out-of-scope work)

D (INFLUENT) → C (MID-1) → B (MID-2) → A → to SEWER

Monthly Completed
Samples Taken

PACIFIC ENVIRONMENTAL GROUP, INC.

Completed by: JV Date: 4-13-95

Checked by: _____

White Copy - Originator Yellow Copy - O & M Tech Pink Copy - File

Groundwater Extraction System

ARCO Service Station 4931
731 West MacArthur Boulevard at West Street
Oakland, California

Name: SV Date/Time: 4-13-95

Treatment System Readings			
AR-3 Totalizer (gallons)	N/A	Is there anything unusual on-site?	NO
AR-3 Flowrate (gpm)	6.8 when cycles ~~when~~	Is the Site Safety Plan on-site?	Yes
AR-3 Hourmeter (hours)	N/A	Is there a Fire Extinguisher on-site?	Yes
AR-3 Throttle Valve Position	Y4 open	Is the Discharge Permit on-site?	NO
A-9 Totalizer (gallons)	N/A	Does the Free Product Pump Work?	NO
A-9 Flowrate (gpm)	3.6 when cycles	What is the System Flow rate?	6.9 when cycles
A-9 Hourmeter (hours)	N/A	Free Product Level in Storage Tank	10 gal
A-9 Throttle Valve Position	Y4 open	Was AR-1 Bailed? How Much?	Yes NO SPH
Does the Digital Communicator Work? Batteries Replaced	Yes	Did A-4 have SPH? Depth? IS A prop 65 SIGN POSTED?	NO NO

Comments _____

Groundwater Extraction System

ARCO Service Station 4931
731 West MacArthur Boulevard at West Street

Distrubute a copy of this form to the project supervisor.
3301095A/OMDOC109

November 27, 1994

Groundwater Extraction System

ARCO Service Station 4931
731 West MacArthur Boulevard at West Street
Oakland, California

Name: JV Date/Time: 4-13-95

Treatment System Readings			
System On Upon Arrival?	Yes	Electric Meter (kw-hrs)	89613
~~Effluent~~ INFL Totalizer (gallons)	023	~~Effluent~~ INFL Flowrate (gpm)	6.9
AR-1 Totalizer (gallons)	N/A	Bag Filter INFL Pressure (psi)	9
AR-1 Flowrate (gpm)	1.6 when cycles	Bag Filter EFFL Pressure (psi)	8
AR-1 Hourmeter (hours)	N/A	MID(1) Pressure (psi) MID(2) Pressure(psi)	3 3
AR-1 Throttle Valve Position	1/8 open	EFFL Pressure (psi)	0
AR-2 Totalizer (gallons)	N/A	Does Sump Pump Work	No pump
AR-2 Flowrate (gpm)	0.5 when cycles	Number of Spare Filters On-Site	6
AR-2 Hourmeter (hours)	N/A	Enclosure Swept and Bleached?	Yes
AR-2 Throttle Valve Position	1/8 open	WAS AR-3 BAILED? How Much?	Yes @ 5ph
Does the Autodialer Work? Batteries Replaced	Yes	WAS A-8 BAILED? How Much?	Yes .50 sph

Comments: Replaced Flow meter and Recalib. meter

Rosedale Bag Filter
Modle # 6-18-2P-2150-C-B-N-B

Distrubute a copy of this form to the project supervisor.
3301095A/OMDOC109

November 27, 1994

FIELD REPORT

EPTH TO WATER/SEPARATE-PHASE HYDROCARBON SURVEY

PROJECT No.: 330-109.5B LOCATION: OAK LAND DATE: 4-13-95

CLIENT/STATION NO.: 4931 FIELD TECHNICIAN: JV DAY OF WEEK: THU

PROBE TYPE/ID No.:
- ☐ Oil/Water IF/ _____
- ☐ H_2O level indicator _____
- ☐ Other: _____

Dtw Order	Well ID	Time	Surface Seal	Lid Secure	Gasket	Lock	Expanding Cap	Total Depth (feet)	First Depth to Water (feet) TOB/TOC	Second Depth to Water (feet) TOB/TOC	SEPARATE-PHASE HYDROCARBONS (SPH): SPH Depth (feet) TOB/TOC	SPH Thickness (feet)	COLOR: Fresh	Weathered	Gas	Oil	VISCOSITY: Lite	Medium	Heavy	LIQUID REMOVED (gallons): SPH	H_2O
1	AR3			X				22.10	18.14	18.14	None	None								0	½ gal
2	AR1			X				21.10	19.65	19.65	None	None								0	½ gal
3	AR4			X				20.00	10.60	10.60	None	None								0	½
4	AR8			X				21.00	9.15	9.15	9.14	.01								Sheen	½ gal

Comments:

ARCO Products Company Division of AtlanticRichfieldCompany — 330-109.5B — **Task Order No.** 128400 — **Chain of Custody**

ARCO Facility no. 4931	City (Facility) Oakland	Project manager (Consultant) Shaw Garakani	Laboratory name Sequoia
ARCO engineer Mike Whelan	Telephone no. (ARCO)	Telephone no. (Consultant) 408 441 7500	Fax no. (Consultant) 408 441 7539
Consultant name Pacific Env Group	Address (Consultant) 2025 Gateway pl #440 San Jose		Contract number

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 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 ☐ Semi VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐		
A		3		X		X	HCl	4-13-95			X											
B		↓		↓		↓	↓	X			↓											
C								X														
D		↓		↓		↓	↓	X			↓											

Special detection Limit/reporting

Special QA/QC

Remarks: Please Include Chromatograms on D gas/btex Sample only

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:

	Date	Time	
Relinquished by sampler	4-14-95	7:00	Received by
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by laboratory / Date / Time

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

Work Auth. 17037

FIELD SERVICES / O&M REQUEST

Work O 053194

SITE INFORMATION FORM

Identification

Project # 330-109.5B

Station # 4931

Site Address: 731 West MacArthur Blvd
OAKLAND

County: ALAMEDA

Project Manager: SHAWG.

Requestor: ERIC W.

Client: ARCO

Client P.O.C.: MIKE WHELAN

Date of request: 2/9/95

Project Type

- ☐ 1st Time visit
- ☐ Quarterly ☐ 1st ☐ 2nd ☐ 3rd ☐ 4th
- ☒ Monthly
- ☐ Semi-Monthly
- ☐ Weekly
- ☐ One time event
- ☐ Other:

Ideal field date(s): Monthly

~~Profield Contacts/Pe.~~

	~~Initials~~	~~Date~~
☐ Cal Trans		
☐ County		
☐ City F/S	RJ	5/1/95
☐ Private		
☐ Multi-Consultant Scheduling date(s).		

Copy/Dist. Rpt ✓

Check Appropriate Category

Budget Hrs. ____

Actual Hrs. 2

Mob de Mob 1

Field Tasks: For General Description

SYSTEM SAMPLING

	A	B	C	D
(1) GAS/BTEX	Q	Q	Q	Q
(2) FILL OUT ATTACHED DATA SHEET				

Q = WEEK of Nov. 8
JANUARY 10
APRIL 11
JULY 12

A = EFFLUENT
B = MIDPOINT 2
C = MIDPOINT 1
D = INFLUENT

(3) FILL OUT SPH DATA SHEET

Comments, remarks, etc. from Field Staff (include problems encountered and out-of-scope work)

D (INFLUENT) → C (MID-1) → B (MID-2) → A → to SEWER

Completed by: JV Date: 5-1-95

Checked by: ____

PACIFIC ENVIRONMENTAL GROUP, INC.

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Groundwater Extraction System

ARCO Service Station 4931
731 West MacArthur Boulevard at West Street
Oakland, California

Name: JV Date/Time: 5-1-95

Treatment System Readings			
AR-3 Totalizer (gallons)	N/A	Is there anything unusual on-site?	NO
AR-3 Flowrate (gpm)	N/A	Is the Site Safety Plan on-site?	~~NO~~ YES
AR-3 Hourmeter (hours)	N/A	Is there a Fire Extinguisher on-site?	NO
AR-3 Throttle Valve Position	¼ open	Is the Discharge Permit on-site?	NO
A-9 Totalizer (gallons)	N/A	Does the Free Product Pump Work?	NO
A-9 Flowrate (gpm)	N/A	What is the System Flow rate?	7.2
A-9 Hourmeter (hours)	N/A	Free Product Level in Storage Tank	¼ Full
A-9 Throttle Valve Position	¼ open	Was AR-1 Bailed? How Much?	YES .5 gal
Does the Digital Communicator Work?	YES	Did A-4 have SPH? Depth?	NO
Batteries Replaced	NO Batteries Needed	IS A PROP 65 SIGN POSTED?	NO

Comments _____

Groundwater Extraction System

ARCO Service Station 4931
731 West MacArthur Boulevard at West Street

Distrubute a copy of this form to the project supervisor.
3301095A/OMDOC109

November 27, 1994

Groundwater Extraction System

ARCO Service Station 4931
731 West MacArthur Boulevard at West Street
Oakland, California

Name: JV Date/Time: 5-1-95

Treatment System Readings			
System On Upon Arrival?	Yes	Electric Meter (kw-hrs)	80187
Effluent Totalizer (gallons)	12138	Effluent Flowrate (gpm)	7.2
AR-1 Totalizer (gallons)	N/A	Bag Filter INFL Pressure (psi)	8
AR-1 Flowrate (gpm)	N/A	Bag Filter EFFL Pressure (psi)	6
AR-1 Hourmeter (hours)	N/A	MID(1) Pressure (psi) MID(2) Pressure(psi)	6
AR-1 Throttle Valve Position	½ open	EFFL Pressure (psi)	0
AR-2 Totalizer (gallons)	N/A	Does Sump Pump Work	NO Sump pump
AR-2 Flowrate (gpm)	N/A	Number of Spare Filters On-Site	5
AR-2 Hourmeter (hours)	N/A	Enclosure Swept and Bleached?	Yes
AR-2 Throttle Valve Position	½ open	WAS AR-3 BAILED? How Much?	Yes .5 gal (H2O)
Does the Autodialer Work? Batteries Replaced	NO Autodialer on Site	WAS A-8 BAILED? How Much?	Yes .5 gal

Comments

Distrubute a copy of this form to the project supervisor.

FIELD REPORT

EPTH TO WATER/SEPARATE-PHASE HYDROCARBON SURVEY

PROJECT No.: 330-109.58 LOCATION: 731 W. MacArthur DATE: 5-1-95

CLIENT/STATION NO.: 4931 FIELD TECHNICIAN: JV DAY OF WEEK: Mon

PROBE TYPE/ID No.
- ☐ Oil/Water IF/ _____
- ☐ H_2O level indicator _____
- ☐ Other: _____

Dtw Order	Well ID	Time	Surface Seal	Lid Secure	Gasket	Lock	Expanding Cap	Total Depth (feet)	First Depth to Water (feet) TOB/TOC	Second Depth to Water (feet) TOB/TOC	SEPARATE-PHASE HYDROCARBONS (SPH) SPH Depth (feet) TOB/TOC	SPH Thickness (feet)	COLOR: Fresh	COLOR: Weathered	COLOR: Gas	COLOR: Oil	VISCOSITY: Lite	VISCOSITY: Medium	VISCOSITY: Heavy	LIQUID REMOVED (gallons) SPH / H_2O
	AR1			X			T	21.10	10.82	10.82	None									~~0~~ / .5gal
	AR3			X			T	21.10	18.10 EB	18.10	None									~~0~~ / .5gal
	A4			X			T	20.00	10.85	10.85	None									~~0~~ / .5gal
	A8			X			T	21.00	10.22	10.22	None									~~0~~ / .5gal

Comments: _____

ARCO Products Company ◆ Division of AtlanticRichfieldCompany — 330-109.5B Task Order No. 1703700 — **Chain of Custody**

ARCO Facility no. 4931	City (Facility) OAKLAND	Project manager (Consultant) Shaw Garakani	Laboratory name Sequoia
ARCO engineer Mike Whelan	Telephone no. (ARCO)	Telephone no. (Consultant) 441 7500 (408)	Fax no. (Consultant) 441 7539
Consultant name PACIFIC ENV GROUP	Address (Consultant) 2025 Gate Way pl # 440 San Jose		Contract number

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 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 ☐ Semi VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐		
INFL		3		X		X	HCL	5-1-95	1330		X											
MID-1		X		X		X	X	X	X		X											
MID-2		X		X		X	X	X	X		X											
EFFL		X		X		X	X	X	X		X											

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 ☐

Method of shipment

Condition of sample:

Temperature received:

	Date	Time	
Relinquished by sampler	5-2-95	7:00	Received by
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by laboratory / Date / Time

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

FIELD SERVICES / O&M REQUEST JV   Work Order # 3630

SITE INFORMATION FORM   R-1

Identification

Project # 330-109.5B

Station # 4731

Site Address: 931 MacArthur Blvd @ [illegible] Street, Oakland

County: Alameda

Project Manager: Shaw G.

Requestor: Erik W

Client: ARCO

Client P.O.C.: Mike Whelan

Date of request: 5/19/95

Project Type

- ❑ 1st Time visit
- ❑ Quarterly
  - ❑ 1st ❑ 2nd ❑ 3rd ❑ 4th
- ❑ Monthly
- ❑ Semi-Monthly
- ❑ Weekly
- ❑ One time event
- ❑ Other:

	Initials	Date
F/S	RY	6/12/95
Copy/Dist.	RY	↓

Ideal field date(s): Next Monthly Visit

Prefield Contacts/Permits

- ❑ Cal Trans
- ❑ County
- ❑ City
- ❑ Private
- ❑ Multi-Consultant Scheduling date(s):

Check Appropriate Category

Budget Hrs.

Actual Hrs. 0 Completed with Monthly

Mob de Mob

Field Tasks: For General Description

Come by my office and pick up fire extinguisher. Deliver extinguisher to site

Inside box is a Prop. 65 sign for the compound. Post sign at the site

Comments, remarks, etc. from Field Staff (include problems encountered and out-of-scope work)

Task Completed

Completed by: JV   Date: 6-9-95

Checked by:

PACIFIC ENVIRONMENTAL GROUP, INC.

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Work Order # 953347

FIELD SERVICES / ROUTINE O&M REQUEST

Identification

Project #	330-109.5B
Station #	4931
Site Address:	731 West Mac Arthur @ West Street
County:	Alameda
Project Manager:	Shaw Garakani
Requestor:	Steve Johnston
Client:	ARCO
Client P.O.C.:	Michael Whelan
Revision Date:	June 1, 1995
Laboratory:	Sequoia Analytical

Request Frequency: Monthly

	Initials	Date
F/S	RY	6/12/95
Copy/Dist.	RY	↓

Site Remedial Technologies:

Groundwater Extration (GWE) [X]

Complete attached Data Sheets as prescribed in the following table:

Scheduling Table

Data Sheet Section(s) / Part(s)	To be Completed	Budgeted Hrs	Actual Hrs	Mob-de Mob	Completed
GWE(A, B, C, D, E)	monthly†		2	2	Yes
GWE (F)	quarterly				Yes

† = sampling to be performed

Definition of frequencies:

weekly = N/A
semi-monthly = N/A
monthly = once every month on week 1
quarterly = once every quarter in months 3, 6, 9,12 on week 1
semi-annually = N/A

Field Technician Response:

Completed by: JV
Date: 6-9-95
Arrival time: 930
Departure time: 1430
Sample this visit?: Yes
Engineer contacted? Yes

Date: 6-9-95

Groundwater Extraction & Treatment System
ARCO Service Station 4931
731 West MacArthur
330-109.5b
May 30, 1995

System Description:

Groundwater Pumps

Well	Type	Size	Control	Set Depth (TOB)
A-9				
AR-1				
AR-2				
AR-3				

Carbon Vessels: Westates 1200 pound vessels (3)
Filter: Rosedale 6-18-2P-2-150 CBNB

PART A: SYSTEM DATA

System on upon arrival? UP (if no, specify reason in comments)

MEASUREMENT	ON ARRIVAL	ON DEPARTURE
TOTALIZER (gallons)	36412	36487
FILTER INLET PRESSURE (psig)	8	(ideal range <10 psig) 8
CARBON #1 INLET PRESSURE (psig)	5	(ideal range <10 psig) 5
CARBON #2 INLET PRESSURE (psig)	3	(ideal range <6 psig) 3
CARBON #3 INLET PRESSURE (psig)	0	(ideal range <3 psig) 0
DISCHARGE PRESSURE (psig)	0	(ideal range 0 to 1 psig) 0
DISCHARGE FLOW RATE (gpm)	6.1	6.1

PART B: COMMENTS

PART C: WELL DATA

WELL	DTW (TOB)	TOTALIZER (gallons)	FLOWRATE (gpm)	COMMENTS/ ADJUSTMENTS
AR-1	17.90	N/A	N/A	
AR-2	17.70	N/A		
AR-3	18.32	N/A		
A-9	18.20	N/A		

PART D: SAMPLING & READINGS I

SAMPLE	ANALYSIS	COMPLETED
SAMPLE POINT D (INFLUENT)	TPH-gasoline/BTEX compounds	Yes
SAMPLE POINT A (EFFLUENT)	TPH-gasoline/BTEX compounds	Yes
SAMPLE POINT B (MID 2)	TPH-gasoline/BTEX compounds	Yes

PART E: SYSTEM MAINTENANCE

NUMBER OF SPARE FILTERS ON SITE?	4	CHANGE FILTERS? (if necessary)	Yes
ELECTRIC METER READING (kw hrs)	81469	AR-3 PUMP OPERATING	Yes
CLEAN TOTALIZERS	Yes	AR-2 PUMP OPERATING	Yes
A-9 PUMP OPERATING	Yes.	AR-1 PUMP OPERATING	Yes
DOES THE DIGITAL COMMUNICATOR WORK?	Yes	DO FLOAT SWITCHES WORK?	Yes
SEWER LEVEL OVERFLOWING?	NO	WHAT IS THE FREE PRODUCT LEVEL IN STORAGE TANK?	Y4 F.11
SUMP PUMP OPERATIONAL?	NO SUMP	TEST ALARM SWITCHES	Yes
WAS AR-1 OR A-8 BAILED, IF SO, HOW MUCH?	Yes NO SPH	HIGH LEVEL ALARM TRIPPED?	N/A
ALL VISIBLE LEAKS REPAIRED?	Yes	SYSTEM ENCLOSURE SWEPT?	Yes
PROPOSITION 65 SIGN ON-SITE?	Yes	FIRE EXTINGUISHER ON-SITE?	Yes

ARCO Products Company ◆ Division of AtlanticRichfieldCompany — 330-109.5B Task Order No. 703700 — **Chain of Custody**

ARCO Facility no. ~~608~~ 4931	City (Facility) OAKLAND	Project manager (Consultant) SHAW GARAKANI	Laboratory name SEQUOIA
ARCO engineer Mike Whelan	Telephone no. (ARCO)	Telephone no. (Consultant) 408 441 7500	Fax no. (Consultant) 408 441 7539
Consultant name PACIFIC ENV GROUP	Address (Consultant) 2025 Gate Way Pl # 440 San Jose		Contract number

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 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 ☐ Semi VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐		
A		3		X		X	HCl	6-9-95			X											
B		1		X		Y	HCl	1			X											
D		↓		X		Y	HCl	↓			X											

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 sampler	Date 6-12-95	Time 700	Received by
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by laboratory / Date / Time

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

APC-3292 (2-91)