

PACIFIC
ENVIRONMENTAL
GROUP INC.

ENVIRONMENTAL
PROTECTION

15 MAY -3 PM 1:12

May 2, 1995
Project 330-084.2B

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

Re: Quarterly Report - First Quarter 1995
Remedial System Performance Evaluation
ARCO Service Station 0374
6407 Telegraph Avenue at Alcatraz Avenue
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 first 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 February 23, 1995 and analyzed for the presence of total petroleum hydrocarbons calculated as gasoline (TPH-g), benzene, toluene, ethylbenzene, xylenes (BTEX compounds). The certified analytical report, chain-of-custody documentation, and field data sheets are presented as Attachment A. Field and laboratory procedures are presented as Attachment B.

Depth to water data collected on February 23, 1995 indicate that groundwater levels across the site have fallen an average of 0.75 foot since November 12, 1994. Groundwater flow was to the southwest with an approximate gradient of 0.04. This flow direction and gradient are consistent with historical data. Groundwater elevation data are presented in Table 1. A liquid surface elevation contour map based on the February 23, 1995 data is shown on Figure 1.

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Results of groundwater monitoring this quarter are generally consistent with previous results. TPH-g and benzene were not detected in Wells MW-1, MW-5, and MW-6. TPH-g was not detected in Well MW-2. TPH-g concentrations in Wells MW-3 and MW-4 were 120 and 1,700 parts per billion (ppb), respectively. Benzene concentrations in Wells MW-2, MW-3, and MW-4 were 1.8, 1.3, and 340 ppb, respectively. Separate-phase hydrocarbons were not observed in any site well this quarter, or during any sampling event since December 1991. 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 December 21, 1993.

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 rate, evaluates and analyzes samples of system influent and effluent for TPH-g and BTEX compounds.

Below is a brief description of the GWE system and an evaluation of its performance from December 16, 1994 to March 3, 1995.

GROUNDWATER EXTRACTION SYSTEM

Description

The GWE system utilizes an electric pump in Well W-2, and three 200-pound granular activated carbon (GAC) vessels arranged in series to treat the extracted groundwater. The carbon vessels are connected and valved so that the vessel order can be rotated, following a GAC vessel change-out. Sample ports are located at the treatment system influent, between the GAC vessels, at the effluent, and at the extraction well head. GWE system effluent is discharged into the East Bay Municipal Utility District (EBMUD) sanitary sewer system under a sewer discharge permit that is effective through December 31, 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.

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As indicated by Figures 1 and 2, although no hydraulic control was observed, TPH-g and benzene concentrations in downgradient off-site groundwater monitoring wells were either non-detectable or decreased compared to previous quarters.

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 operational data are collected monthly. The system flow and influent sample analysis data are used to estimate TPH-g mass removal values. During the reporting period, GWE removed approximately 0.33 pound (0.05 gallon) of TPH-g and 0.05 pound (0.01 gallon) of benzene from impacted groundwater beneath the site. To date, GWE has removed approximately 2.08 pounds (0.34 gallon) of TPH-g and 0.29 pound (0.04 gallon) of benzene from impacted groundwater beneath the site. GWE system performance data are presented in Table 3. Treatment system certified analytical reports and chain-of-custody documentation are presented as Attachment C. Progress toward site remediation is presented in the following table.

Analyte	Mass Removed			
	12/16/94 through 03/03/95 (lbs)	(gal)	Cumulative (lbs)	(gal)
<u>Groundwater Extraction</u>				
TPH-g	0.33	0.05	2.08	0.34
Benzene	0.05	0.01	0.29	0.04
lbs = Pounds				
gal = Gallons				
TPH-g = Total petroleum hydrocarbons calculated as gasoline.				

Groundwater Extraction System Operational Data

The GWE system was restarted on January 10, 1995, following completion of repairs and was approximately 86 percent operational during the period following start-up. During the reporting period, the GWE system discharged treated groundwater at an average flow rate of approximately 0.24 gallon per minute (gpm) for a period discharge of 17,783 gallons. Instantaneous flow rates from Well W-2 ranged from 0 to 8.0 gpm. Concentrations for TPH-g and benzene in Well W-2 ranged from 1,100 to 3,500 ppb.

Carbon loading is currently estimated at approximately 2.6 percent by weight (assumes an 8 percent isotherm). During this quarter, the GWE system was in compliance with all conditions stipulated in the discharge permit. Treatment system analytical data are presented in Table 4. On the certified analytical reports, the data have been labeled by sample port number which correspond to the following process points: SP-105 is the

influent, SP-106 is between the first and second GAC vessels, SP-107 is between the second and third GAC vessels, and SP-108 is the effluent. Operation and maintenance field data sheets are presented as Attachment B.

SUMMARY OF WORK

Work Performed First Quarter 1995

- Prepared and submitted fourth quarter 1994 groundwater monitoring and remedial system performance evaluation.
- Replaced lids to GAC vessels 1 and 2.
- Compound was caulked at edge of secondary containment to prevent leakage into service station.
- Repaired telephone line.
- Repaired Parafax telemetry system.
- Sampled site wells for first quarter 1995 groundwater monitoring program. Sampling performed by PACIFIC.
- Reactivated system and performed troubleshooting on GWE system.
- Repaired transfer pump.

Work Anticipated Second Quarter 1995

- Continue to monitor and optimize GWE system.
- Prepare and submit first quarter 1995 groundwater monitoring and remedial system performance evaluation report.
- Sample site wells for second quarter 1995 groundwater monitoring program. Sampling to be performed by PACIFIC.
- Prepare second quarter 1995 groundwater monitoring and remedial system performance evaluation report.
- Issue quarterly self-monitoring report to the EBMUD.

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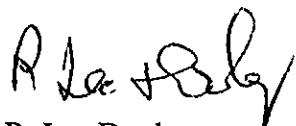
If there are any questions regarding the contents of this letter, please call.

Sincerely,

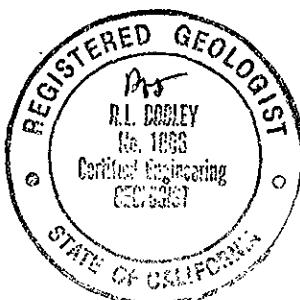
Pacific Environmental Group, Inc.



Shaw 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 - Treatment System Analytical Data -
Total Petroleum Hydrocarbons
(TPH as Gasoline and BTEX Compounds)
 - Figure 1 - Liquid Surface Elevation Contour Map
 - Figure 2 - TPH-g/Benzene Concentration Map
 - Attachment A - Certified Analytical Reports, Chain-of-Custody Documentation, and Field Data Sheets
 - Attachment B - Field and Laboratory Procedures
 - Attachment C - Treatment System Certified Analytical Reports and Chain-of-Custody Documentation

cc: Ms. Susan Hugo, Alameda County Health Care Services Agency
Mr. Kevin Graves, Regional Water Quality Control Board - S.F. Bay Region

Table 1
Liquid Surface Elevation Data

ARCO Service Station 0374
6407 Telegraph Avenue at Alcatraz Avenue
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-1	07/20/89	159.44	8.04	--	151.40
	08/30/89		8.47	--	150.97
	10/04/89		8.50	--	150.94
	01/10/90		6.74	--	152.70
	08/07/90		6.87	--	152.57
	12/06/90		7.35	--	152.09
	12/19/90		7.22	--	152.22
	01/29/91		8.28	--	151.16
	02/20/91		7.98	--	151.46
	04/25/91		6.89	--	152.55
	05/31/91		7.64	--	151.80
	07/08/91		8.17	--	151.27
	08/09/91		8.58	--	150.86
	09/25/91		8.82	--	150.62
	10/17/91		8.96	--	150.48
	11/20/91		8.60	--	150.84
	12/27/91		8.71	--	150.73
	01/19/92		7.83	--	151.61
	02/19/92		6.68	--	152.76
	03/09/92		4.47	--	154.97
	04/15/92	158.91	6.44	--	152.47
	05/12/92		7.31	--	151.60
	06/16/92		7.97	--	150.94
	07/14/92		8.22	--	150.69
	08/07/92		8.46	--	150.45
	09/22/92		6.76	--	152.15
	10/12/92		7.13	--	151.78
	11/23/92		7.24	--	151.67
	12/16/92		6.44	--	152.47
	01/21/93		5.03	--	153.88
	02/22/93		4.93	--	153.98
	03/25/93		5.13	--	153.78
	04/27/93		5.68	--	153.23
	08/04/93		7.91	--	151.00
	10/13/93		8.81	--	150.10
	02/03/94		7.51	--	151.40
	04/29/94		7.20	--	151.71
	08/02/94		8.02	--	150.89
	11/12/94		6.70	--	152.21
	02/23/95		7.77	--	151.14
MW-2	07/20/89	158.46	8.15	--	150.31
	08/30/89		8.42	--	150.04
	10/04/89		8.40	--	150.06
	01/10/90		6.12	--	152.34
	08/07/90		6.35	--	152.11
	12/06/90		7.15	--	151.31
	12/19/90		7.38	--	151.08
	01/29/91		8.41	--	150.05
	02/20/91		8.26	--	150.20
	04/25/91		7.70	--	150.76
	05/31/91		8.10	--	150.36
	07/08/91		8.34	--	150.12
MW-3	08/09/91		8.51	--	149.95
	09/25/91		8.66	--	149.80
MW-4	10/17/91		8.80	--	149.66

Table 1 (continued)
Liquid Surface Elevation Data

ARCO Service Station 0374
 6407 Telegraph Avenue at Alcatraz Avenue
 Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-2	11/20/91		8.66	--	149.80
(cont.)	12/27/91		8.57	Sheen	149.89
	01/19/92		8.25	--	150.21
	02/19/92		7.50	--	150.96
	03/09/92		7.40	--	151.06
	04/15/92	157.92	7.72	--	150.20
	05/12/92		8.01	--	149.91
	06/16/92		8.25	--	149.67
	07/14/92		8.33	--	149.59
	08/07/92		8.42	--	149.50
	09/22/92		6.13	--	151.79
	10/12/92		6.80	--	151.12
	11/23/92		7.15	--	150.77
	12/16/92		6.66	--	151.26
	01/21/93		5.93	--	151.99
	02/22/93		6.01	--	151.91
	03/25/93		5.91	--	152.01
	04/27/93		6.63	--	151.29
	08/04/93		8.02	--	149.90
	10/13/93		8.64	--	149.28
	02/03/94		8.08	--	149.84
	04/29/94		8.14	--	149.78
	08/02/94		8.31	--	149.61
	11/12/94		7.74	--	150.18
	02/23/95		7.53	--	150.39
MW-3	07/20/89	154.18	7.58	--	146.60
	08/30/89		8.00	--	146.18
	10/04/89		7.73	Emulsion	146.45
	01/10/90		7.78	--	146.40
	08/07/90		7.66	--	146.52
	12/06/90		7.75	--	146.43
	12/19/90		7.58	--	146.60
	01/29/91		7.60	--	146.58
	02/20/91		7.51	--	146.67
	04/25/91		6.37	--	147.81
	05/31/91		7.19	--	146.99
	07/08/91		7.60	--	146.58
	08/09/91		7.94	--	146.24
	09/25/91		8.23	--	145.95
	10/17/91		8.44	--	145.74
	11/20/91		8.78	--	145.40
	12/27/91		8.05	Sheen	146.13
	01/19/92		7.65	--	146.53
	02/19/92		6.48	--	147.70
	03/09/92		5.45	--	148.73
	04/15/92	153.64	7.75	--	145.89
	05/12/92		7.45	--	146.19
	06/16/92		7.51	--	146.13
	07/14/92		7.60	--	146.04
	08/07/92		7.85	--	145.79
	09/22/92		7.73	--	145.91
	10/12/92		7.83	--	145.81
	11/23/92		6.98	--	146.66
	12/16/92		5.96	--	147.68
	01/21/93		4.62	--	149.02

Table 1 (continued)
Liquid Surface Elevation Data

ARCO Service Station 0374
6407 Telegraph Avenue at Alcatraz Avenue
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-3 (cont.)	02/22/93		5.15	--	148.49
	03/25/93		5.45	--	148.19
	04/27/93		5.79	--	147.85
	08/04/93		7.24	--	146.40
	10/13/93		8.03	--	145.61
	02/03/94		6.66	--	146.98
	04/29/94		7.70	--	145.94
	08/02/94		7.47	--	146.17
	11/12/94		5.91	--	147.73
	02/23/95		7.18	--	146.46
MW-4	07/20/89	157.08	8.09	--	148.99
	08/30/89		8.45	Sheen	148.63
	10/04/89		8.57	Sheen	148.51
	01/10/90		7.26	--	149.82
	08/07/90		6.87	--	150.21
	12/06/90		8.02	Sheen	149.06
	12/19/90		7.69	--	149.39
	01/29/91		8.39	Sheen	148.69
	02/20/91		8.16	--	148.92
	04/25/91		7.14	--	149.94
	05/31/91		7.64	--	149.44
	07/08/91		8.34	--	148.74
	08/09/91		8.60	--	148.48
	09/25/91		8.80	--	148.28
	10/17/91		8.98	--	148.10
	11/20/91		8.78	--	148.30
	12/27/91		8.82	--	148.26
	01/19/92		8.18	--	148.90
	02/19/92		7.62	--	149.46
	03/09/92		6.68	--	150.40
	04/15/92	156.53	6.96	--	149.57
	05/12/92		7.45	--	149.08
	06/16/92		7.94	--	148.59
	07/14/92		8.21	--	148.32
	08/07/92		8.41	--	148.12
	09/22/92		6.14	--	150.39
	10/12/92		6.45	--	150.08
	11/23/92		7.48	--	149.05
	12/16/92		6.95	--	149.58
	01/21/93		5.53	--	151.00
MW-5	02/22/93		5.83	--	150.70
	03/25/93		5.96	--	150.57
	04/27/93		6.30	--	150.23
	08/04/93		7.71	--	148.82
	10/13/93		8.53	--	148.00
	02/03/94		9.27	--	147.26
	04/29/94		9.50	--	147.03
	08/02/94		8.69	--	147.84
	11/12/94		6.88	--	149.65
	02/23/95		9.38	--	147.15
MW-5	04/15/92	151.33	8.05	--	143.28
	05/12/92		8.44	--	142.89
	06/16/92		8.74	--	142.59
	07/14/92		9.70	--	141.63

Table 1 (continued)
Liquid Surface Elevation Data

ARCO Service Station 0374
6407 Telegraph Avenue at Alcatraz Avenue
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-5	08/07/92		9.10	--	142.23
(cont.)	09/22/92		9.26	--	142.07
	10/25/92		9.24	--	142.09
	11/23/92			Well Inaccessible	
	12/16/92		8.20	--	143.13
	01/21/93		7.89	--	143.44
	02/22/93		7.29	--	144.04
	03/25/93		7.51	--	143.82
	04/27/93		7.72	--	143.61
	08/05/93		8.66	--	142.67
	10/13/93		9.00	--	142.33
	02/03/94		9.38	--	141.95
	04/29/94			Well Inaccessible	
	08/02/94		8.71	--	142.62
	11/12/94		8.65	--	142.68
	02/23/95		9.23	--	142.10
MW-6	04/15/92	153.84	4.55	--	149.29
	05/12/92		5.32	--	148.52
	06/16/92		5.91	--	147.93
	07/14/92		6.08	--	147.76
	08/07/92		6.36	--	147.48
	09/22/92		6.53	--	147.31
	10/25/92		6.54	--	147.30
	11/23/92		5.75	--	148.09
	12/16/92		4.69	--	149.15
	01/21/93		3.82	--	150.02
	02/22/93		3.78	--	150.06
	03/25/93		3.93	--	149.91
	04/27/93		4.30	--	149.54
	08/05/93		5.39	--	148.45
	10/13/93		7.12	--	146.72
	02/03/94		5.17	--	148.67
	04/29/94		4.66	--	149.18
	08/02/94		5.64	--	148.20
	11/12/94		6.32	--	147.52
	02/23/95		5.60	--	148.24
SPH	= Separate-phase hydrocarbons				
MSL	= Mean sea level				
TOC	= Top of casing				

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

ARCO Service Station 0374
 6407 Telegraph Avenue at Alcatraz Avenue
 Oakland, California

Well Number	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	TPH as Diesel (ppb)	Oil and Grease (ppb)
MW-1	07/21/89	33	0.77	1.6	15	5	NA	NA
	08/30/89	<20	<0.50	<0.50	<0.50	<0.50	NA	NA
	10/04/89	<20	<0.50	<0.50	<0.50	<0.50	NA	NA
	01/10/90	<20	<0.50	<0.50	<0.50	<0.50	NA	NA
	08/07/90	<20	<0.50	<0.50	<0.50	<0.50	NA	NA
	12/06/90	<50	3.6	2.7	0.60	5.8	NA	NA
	02/20/91	<50	<0.50	<0.50	<0.50	<0.50	NA	NA
	07/08/91	<30	<0.30	<0.30	<0.30	<0.30	NA	NA
	09/25/91	<30	57	57	54	1.7	NA	NA
	11/20/91	57	9.2	3.7	0.63	25	NA	NA
	03/09/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	04/15/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	07/14/92	<50	<0.5	0.7	<0.5	1.3	NA	NA
	10/12/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	01/21/93	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	04/27/93	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	08/04/93	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	10/13/93	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	02/03/94	<50	1.4	2.1	<0.5	2	NA	NA
	04/29/94	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	08/02/94	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	11/12/94	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	02/23/95	<50	<0.50	<0.50	<0.50	<0.50	NA	NA
MW-2	07/21/89	4,200	280	210	38	24	NA	NA
	08/30/89	4,200	160	260	45	240	NA	NA
	10/04/89	4,300	860	300	29	330	NA	NA
	01/10/90	8,000	890	710	120	760	NA	NA
	08/07/90	6,000	880	76	25	80	NA	NA
	12/06/90	1,600	330	69	18	63	NA	NA
	02/20/91	1,300	160	46	13	48	NA	NA
	07/08/91	310	76	18	7.7	24	NA	NA
	09/25/91	83	17	0.69	2.2	4.1	NA	NA
	11/20/91	180	46	6.1	3	8.7	NA	NA
	03/09/92	690	170	25	21	58	NA	NA
	04/15/92	86	20	2.3	3.8	85	NA	NA
	07/14/92	160	46	1.4	1.2	35	NA	NA
	10/12/92	230	59	7	55	11	NA	NA
	01/21/93	450	70	6.6	22	54	NA	NA
	04/27/93	<50	6.6	<0.5	0.7	1.1	NA	NA
	08/04/93	<50	2.1	<0.5	<0.5	<0.5	NA	NA
	10/13/93	<50	14	<0.5	<0.5	<0.5	NA	NA
	02/03/94	<50	4.4	<0.5	<0.5	0.8	NA	NA
	04/29/94	150	38	0.7	4.3	4.8	NA	NA
	08/02/94	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	11/12/94	95	28	0.7	2.5	7.5	NA	NA
	02/23/95	<50	1.8	<0.50	<0.50	<0.50	NA	NA
MW-3	07/21/89	430	9	4.8	<0.50	50	NA	NA
	08/30/89	1,200	85	46	84	55	NA	NA
	10/04/89	7,000	580	900	120	670	NA	NA
	01/10/90	940	130	59	21	73	NA	NA
	08/07/90	2,300	180	64	59	120	NA	NA

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

ARCO Service Station 0374
6407 Telegraph Avenue at Alcatraz Avenue
Oakland, California

Well Number	Date Sampled	TPH as				TPH as Diesel (ppb)	Oil and Grease (ppb)
		Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)		
MW-3	12/06/90	460	52	55	14	39	350
(cont.)	02/20/91	470	36	30	9.3	31	<100 <5,000
	07/08/91	2500	240	470	74	320	NA NA
	09/25/91	1,100	120	110	34	120	NA NA
	11/20/91	1,000	180	140	43	140	NA NA
	03/10/92	1,200	200	110	53	130	NA NA
	04/15/92	1,600	200	13	110	81	NA NA
	07/14/92	5,200	620	44	310	250	NA NA
	10/12/92	850	150	5.2	55	46	NA NA
	01/21/93	620	100	12	35	35	NA NA
	04/27/93	1,700	180	83	64	100	NA NA
	08/04/93	380	70	12	29	41	NA NA
	10/13/93	780	90	6	40	31	NA NA
	02/03/94	340	42	8.7	9.2	28	NA NA
	04/29/94	830	150	38	27	48	NA NA
	08/02/94	220	25	1.7	7.6	8.3	NA NA
	11/12/94	160	6.0	<0.5	3.2	4.1	NA NA
	02/23/95	120	1.3	<0.50	1.1	1.6	NA NA
MW-4	07/21/89	8,700	720	360	120	640	NA NA
	08/30/89	7,300	630	220	N/A	320	NA NA
	10/04/89	21,000	2,300	1,300	280	1,300	NA NA
	01/10/90	4,300	470	250	63	430	NA NA
	08/07/90	69,000	8,700	4,200	540	4,600	28,000 <5,000
	12/06/90	Separate-Phase Hydrocarbon Sheen					
	02/20/91	5,200	690	200	95	580	<100 <5,000
	07/08/91	1,700	280	68	37	170	NA NA
	09/25/91	6,300	2,100	290	210	590	NA NA
	11/20/91	2,700	1,200	200	110	320	NA NA
	03/10/92	690	180	80	18	43	NA NA
	04/15/92	8,500	2,100	750	280	1,000	NA NA
	07/14/92	10,000	2,900	530	290	930	NA NA
	10/12/92	19,000	5,200	1,600	490	1,800	690 NA
	01/21/93	22,000	4,400	1,300	580	2,200	1,400 NA
	04/27/93	21,000	4,800	1,200	630	2,400	1,100 NA
	08/04/93	23,000	6,600	1,700	770	2,600	1500 NA
	10/13/93	16,000	3,500	800	470	1,800	670 NA
	02/03/94	850	140	84	7.9	59	59 NA
	04/29/94	68	1.1	<0.5	<0.5	1.7	<50 NA
	08/02/94	52	5.7	<0.5	1.2	1.9	<50 NA
	11/12/94	1,600	230	51	81	190	90 NA
	02/23/95	1,700	340	81	52	130	NA NA
MW-5	04/15/92	<50	<0.5	<0.5	<0.5	<0.5	NA NA
	07/14/92	<50	<0.5	<0.5	<0.5	<0.5	NA NA
	10/25/92	<50	<0.5	<0.5	<0.5	<0.5	NA NA
	01/21/93	<50	<0.5	<0.5	<0.5	<0.5	NA NA
	04/27/93	<50	0.5	1	<0.5	0.8	NA NA
	08/05/93	<50	<0.5	<0.5	<0.5	<0.5	NA NA
	10/14/93	<50	<0.5	<0.5	<0.5	<0.5	NA NA
	02/03/94	<50	0.8	1.7	<0.5	15	NA NA
	04/29/94	Well Inaccessible					
	08/02/94	<50	<0.5	<0.5	<0.5	<0.5	NA NA

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

ARCO Service Station 0374
6407 Telegraph Avenue at Alcatraz Avenue
Oakland, California

Well Number	Date Sampled	TPH as			Ethyl-benzene (ppb)	Xylenes (ppb)	TPH as Diesel (ppb)	Oil and Grease (ppb)
		Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)				
MW-5 (cont.)	11/12/94	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	02/23/95	<50	<0.50	0.56	<0.50	0.50	NA	NA
MW-6	04/15/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	07/15/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	10/25/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	01/21/93	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	04/27/93	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	08/05/93	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	10/13/93	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	02/03/94	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	04/29/94	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	08/02/94	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	11/12/94	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	02/23/95	<50	<0.50	<0.50	<0.50	<0.50	NA	NA
ppb = Parts per billion NA = Not analyzed N/A = Not available								

Table 3
Groundwater Extraction System Performance Data

ARCO Service Station 0374
6407 Telegraph Avenue at Alcatraz Avenue
Oakland, California

Sample I.D.	Date Sampled	Totalizer Reading (gallons)	Net Volume (gallons)	Average Flow Rate (gpm)	TPH as Gasoline			Benzene			Primary Carbon Loading (percent)	
					Influent Concentration ($\mu\text{g/L}$)	Net Removed (lbs)	Removed to Date (lbs)	Influent Concentration ($\mu\text{g/L}$)	Net Removed (lbs)	Removed to Date (lbs)		
INFL	12/21/93	a	22	22	0.21	NS	0.00	0.00	NS	0.000	0.00	0.0
INFL	12/23/93	a	4,855	4,833	1.6	9,300	0.38	0.38	1,200	0.024	0.02	0.5
INFL	12/27/93	a	6,871	2,016	0.36	5,700	0.13	0.51	820	0.017	0.04	0.6
INFL	12/29/93	a	7,192	371	0.13	5,800	0.02	0.53	950	0.003	0.04	0.7
INFL	01/03/94	a	7,925	733	0.10	6,500	0.01	0.54	860	0.006	0.05	0.7
INFL	01/05/94	a	8,162	237	0.08	5,200	0.01	0.55	970	0.002	0.05	0.7
INFL	01/11/94	a	8,907	745	0.08	6,300	0.03	0.58	900	0.006	0.06	0.7
INFL	01/13/94	a	9,175	268	0.09	8,600	0.02	0.60	950	0.002	0.06	0.7
INFL	01/24/94	a	9,306	131	0.08	NS	0.01	0.60	NS	0.001	0.06	0.8
INFL	02/24/94	a	14,555	5,249	0.21	4,200	0.28	0.88	520	0.011	0.07	1.1
INFL	03/24/94	a	23,723	9,168	0.24	6,200	0.40	1.40	1,100	0.062	0.13	1.8
INFL	04/26/94	b	29,543	5,820	0.12	6,400	0.15	1.55	1,400	0.061	0.19	1.9
INFL	05/24/94	c	35,082	5,539	0.14	NS	0.20	1.75	NS	0.043	0.24	2.2
INFL	11/17/94	d	35,507	425	N/A	2,100	0.00	1.75	460	0.001	0.24	2.2
INFL	01/10/95	e	36,493	986	0.01	1,100	0.01	1.76	180	0.003	0.24	2.2
INFL	02/07/95		41,399	4,906	0.12	3,500	0.09	1.86	370	0.011	0.25	2.3
INFL	03/03/95	f	53,290	11,891	0.34	NS	0.22	2.08	NS	0.035	0.29	2.6

REPORTING PERIOD: 12/16/94 - 3/03/95 (0)

TOTAL POUNDS REMOVED:

2.08

0.29

TOTAL GALLONS REMOVED:

0.34

0.04

PERIOD POUNDS REMOVED:

0.33

0.05

PERIOD GALLONS REMOVED:

0.06

0.01

TOTAL GALLONS EXTRACTED:

53,340

PERIOD GALLONS EXTRACTED:

17,783

PERIOD AVERAGE FLOW RATE (gpm):

0.24

PRIMARY BED CAPACITY REMAINING:

97.4%

a. All data prior to 9/1/94 provided by prior consultant.

b. Samples taken 4/21/94; totalizer reading from 4/26/94.

c. Last site visit by RESNA on 5/24/94.

d. Pacific Environmental Group, Inc. became consultant for the site 9/1/94.

e. System started on January 10, 1995.

f. Pounds removed of TPH and Benzene estimated from previous data.

System operation began December 21, 1993, under RESNA Industries, Inc.; system shut down 4/27/94 - 11/17/94.

Pounds of hydrocarbons removed to date through March 24, 1994 provided by prior consultant.

Benzene mass removal from 12/21/93 through 4/27/94 estimated from data provided by prior consultant.

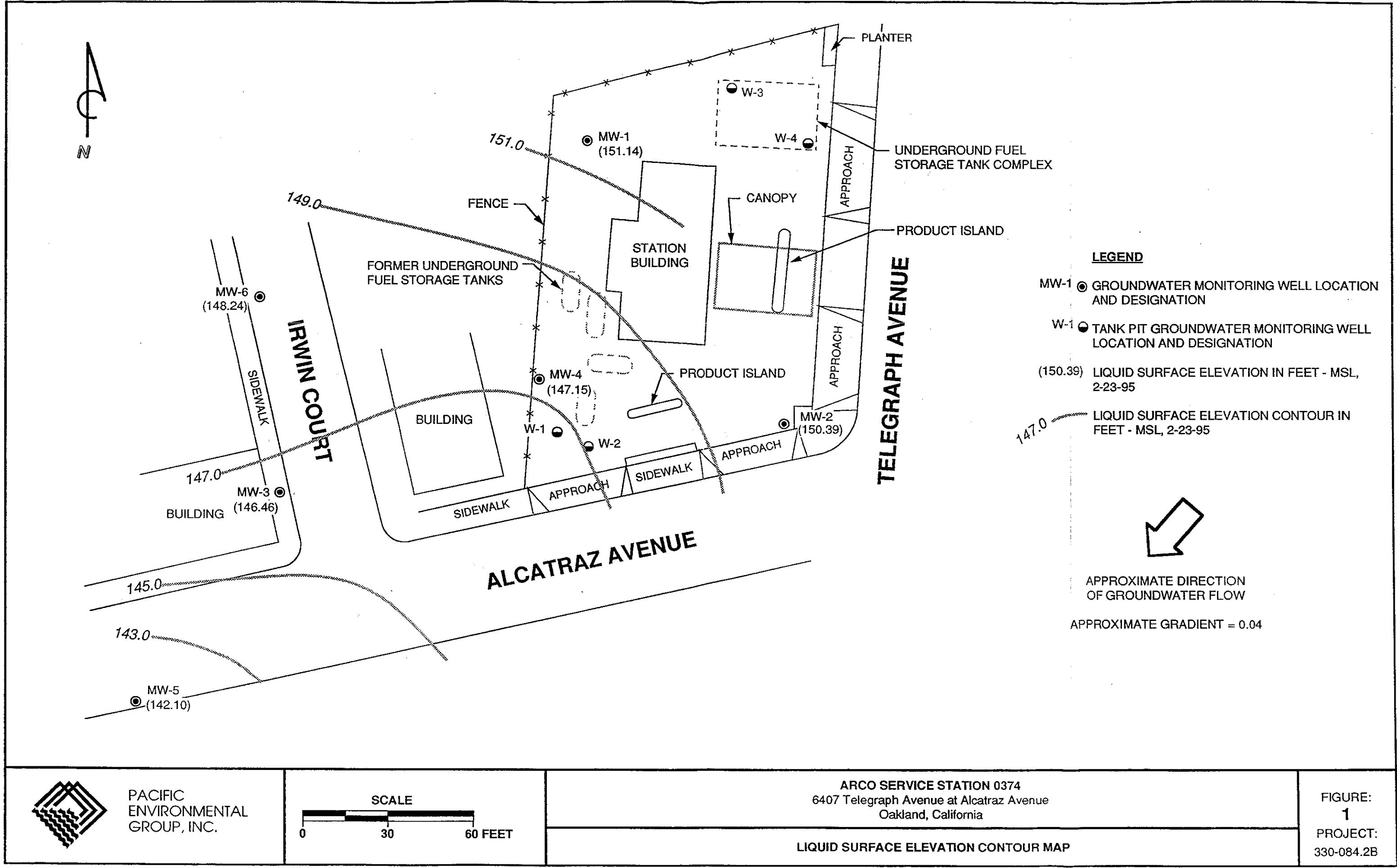
Carbon loading assumes an 8% Isotherm.

See certified analytical reports for detection limits.

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

ARCO Service Station 0374
 6407 Telegraph Avenue at Alcatraz Avenue
 Oakland, California

Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)
Influent Sample (INFL)					
11/17/94	2,100	460	6	37	82
01/10/95	1,100	180	2.7	26	51
02/07/95	3,500	370	120	67	230
Mid-Point Sample (Mid-point)					
11/17/94	<50	<0.50	<0.50	<0.50	<0.50
01/10/95	<50	<0.50	<0.50	<0.50	<0.50
02/07/95	<50	<0.50	<0.50	<0.50	<0.50
Mid-Point Sample (Mid-point)					
11/17/94	<50	<0.50	<0.50	<0.50	<0.50
01/10/95	<50	<0.50	<0.50	<0.50	<0.50
02/07/95	<50	<0.50	<0.50	<0.50	<0.50
Effluent Sample (EFFL)					
11/17/94	<50	<0.50	<0.50	<0.50	<0.50
01/10/95	<50	<0.50	<0.50	<0.50	<0.50
02/07/95	<50	<0.50	<0.50	<0.50	<0.50
ppb	= Parts per billion				
<	= Analyte was not present above the stated detection limit				





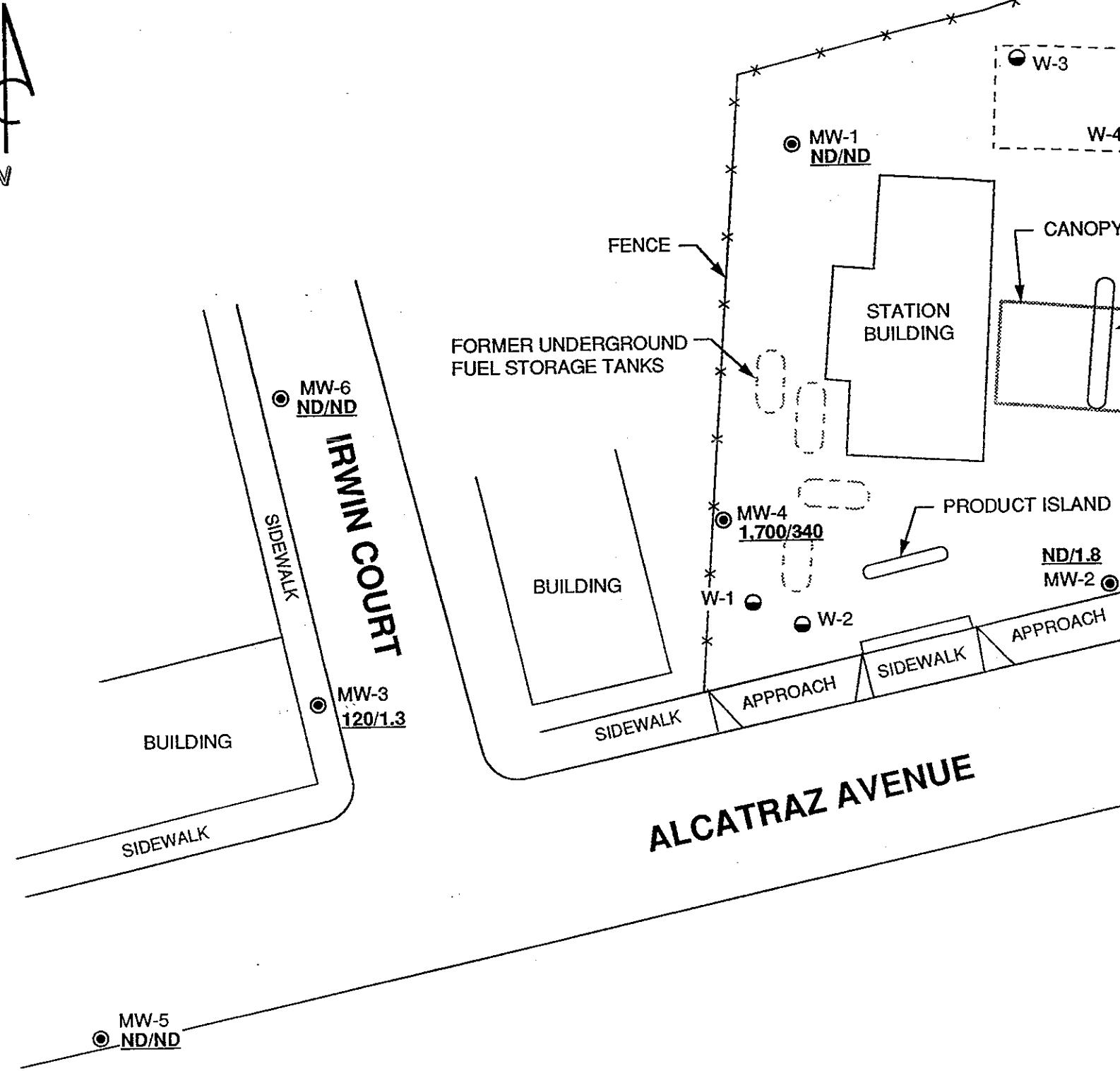
PACIFIC
ENVIRONMENTAL
GROUP, INC.

SCALE
0 30 60 FEET

ARCO SERVICE STATION 0374
6407 Telegraph Avenue at Alcatraz Avenue
Oakland, California

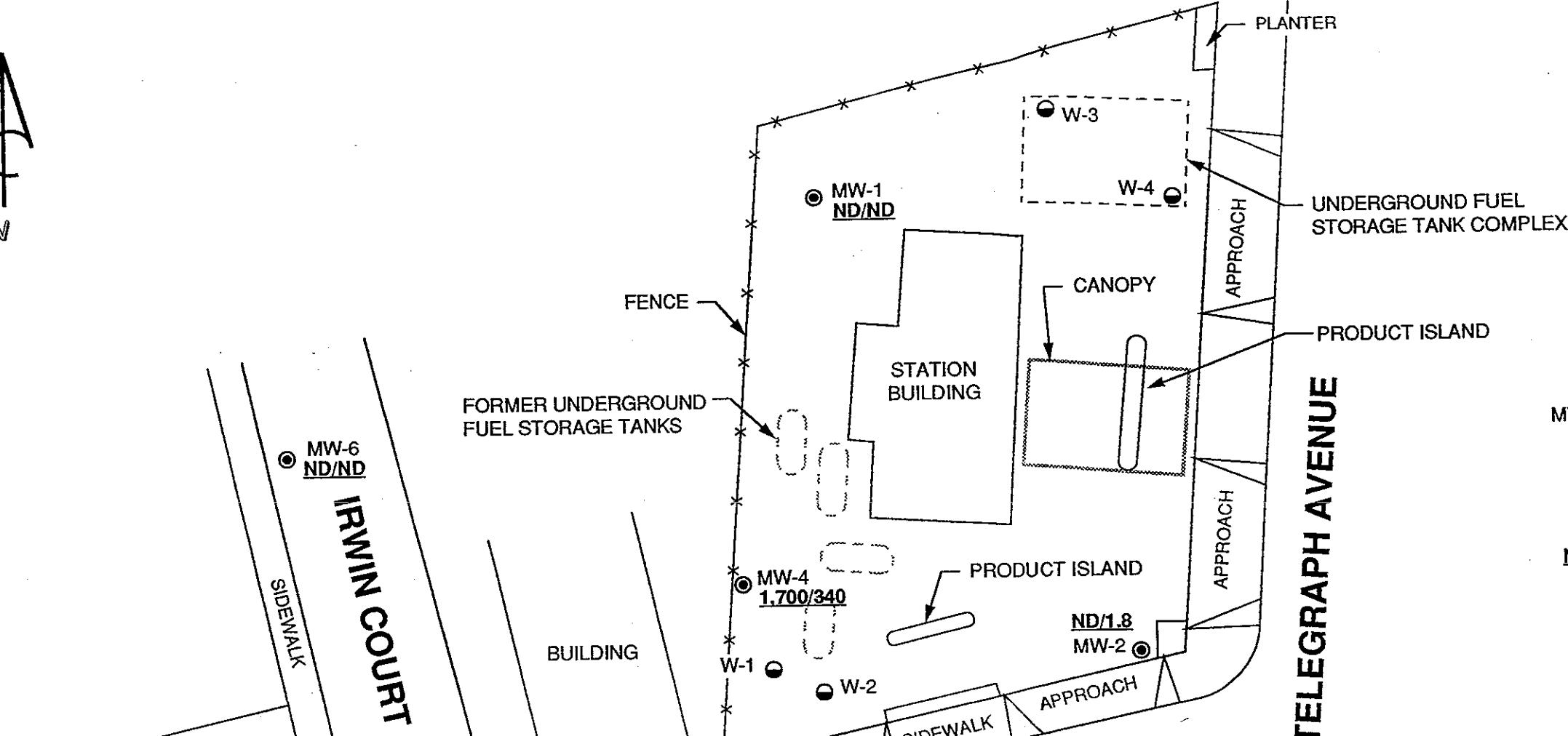
TPH-g/BENZENE CONCENTRATION MAP

FIGURE:
2
PROJECT:
330-084.2B



TELEGRAPH AVENUE

ALCATRAZ AVENUE



LEGEND

- MW-1 ● GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- W-1 ● TANK PIT GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- ND/1.8 TPH-g/BENZENE CONCENTRATION IN GROUNDWATER, IN PARTS PER BILLION, 2-23-95
- ND NOT DETECTED



APPROXIMATE DIRECTION OF GROUNDWATER FLOW

ATTACHMENT A

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



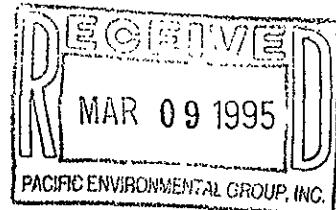
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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Maree Doden

Project: 330-084.2G/0374, Berkeley

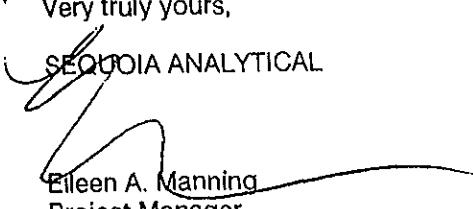
Enclosed are the results from samples received at Sequoia Analytical on February 24, 1995. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
9502G3701	LIQUID, MW-1	2/23/95	TPHGB Purgeable TPH/BTEX
9502G3702	LIQUID, MW-2	2/23/95	TPHGB Purgeable TPH/BTEX
9502G3703	LIQUID, MW-3	2/23/95	TPHGB Purgeable TPH/BTEX
9502G3704	LIQUID, MW-4	2/23/95	TPHGB Purgeable TPH/BTEX
9502G3705	LIQUID, MW-5	2/23/95	TPHGB Purgeable TPH/BTEX
9502G3706	LIQUID, MW-6	2/23/95	TPHGB Purgeable TPH/BTEX
9502G3707	LIQUID, TB-1	2/23/95	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


Arthur Canber
Quality Assurance Department



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Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 330-084.2G/0374, Berkeley Sample Descript: MW-1 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9502G37-01	Sampled: 02/23/95 Received: 02/24/95 Analyzed: 03/02/95 Reported: 03/08/95
Attention: Maree Doden		

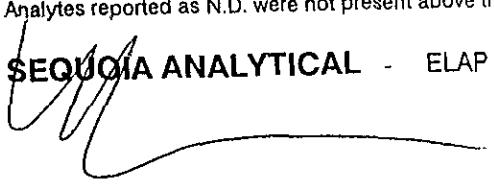
QC Batch Number: GC030295BTEX17A

Instrument ID: GCHP17

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

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


SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Page:



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

Attention: Maree Doden

Client Proj. ID: 330-084.2G/0374, Berkeley
Sample Descript: MW-2
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9502G37-02

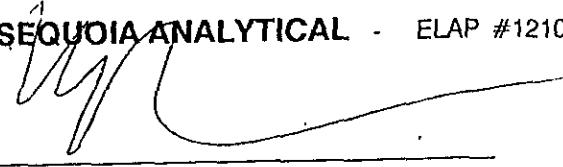
Sampled: 02/23/95
Received: 02/24/95
Analyzed: 03/02/95
Reported: 03/08/95

QC Batch Number: GC030295BTEX17A
Instrument ID: GCHP17

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	1.8
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates		Control Limits %
Trifluorotoluene		70 130
		% Recovery
		101

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


SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Page:

2



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

Attention: Maree Doden

Client Proj. ID: 330-084.2G/0374, Berkeley
Sample Descript: MW-3
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9502G37-03

Sampled: 02/23/95
Received: 02/24/95
Analyzed: 03/02/95
Reported: 03/08/95

QC Batch Number: GC030295BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	120
Benzene	0.50	1.3
Toluene	0.50	N.D.
Ethyl Benzene	0.50	1.1
Xylenes (Total)	0.50	1.6
Chromatogram Pattern:	.....	Gas
Surrogates		Control Limits %
Trifluorotoluene		70 130
		% Recovery
		99

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
2025 Gateway Place, Suite 440
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Client Proj. ID: 330-084.2G/0374, Berkeley
Sample Descript: MW-4
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9502G37-04

Sampled: 02/23/95
Received: 02/24/95
Analyzed: 03/02/95
Reported: 03/08/95

Attention: Maree Doden

QC Batch Number: GC030295BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	..... 500	..... 1700
Benzene	..... 5.0	..... 340
Toluene	..... 5.0	..... 81
Ethyl Benzene	..... 5.0	..... 52
Xylenes (Total)	..... 5.0	..... 130
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

Page:

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Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110 Attention: Maree Doden	Client Proj. ID: 330-084.2G/0374, Berkeley Sample Descript: MW-5 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9502G37-05	Sampled: 02/23/95 Received: 02/24/95 Analyzed: 03/03/95 Reported: 03/08/95
--	--	---

QC Batch Number: GC030295BTEX17A
Instrument ID: GCHP17

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	0.56
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	0.50
Chromatogram Pattern:		

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	89

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager



**Sequoia
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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

Client Proj. ID: 330-084.2G/0374, Berkeley
Sample Descript: MW-6
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9502G37-06

Sampled: 02/23/95
Received: 02/24/95
Analyzed: 03/02/95
Reported: 03/08/95

Attention: Maree Doden

QC Batch Number: GC030295BTEX20B
Instrument ID: GCHP20

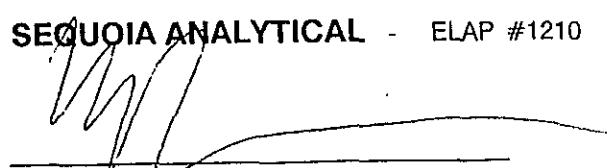
Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

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	102

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
1900 Bates Avenue, Suite L
819 Striker Avenue, Suite 8

Redwood City, CA 94063
Concord, CA 94520
Sacramento, CA 95834

(415) 364-9600
(510) 686-9600
(916) 921-9600

FAX (415) 364-9233
FAX (510) 686-9689
FAX (916) 921-0100

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

Attention: Maree Doden

Client Proj. ID: 330-084.2G/0374, Berkeley
Sample Descript: TB-1
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9502G37-07

Sampled: 02/23/95
Received: 02/24/95
Analyzed: 03/02/95
Reported: 03/08/95

QC Batch Number: GC030295BTEX20B
Instrument ID: GCHP20

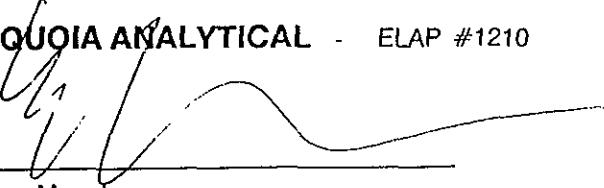
Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

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	112

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
1900 Bates Avenue, Suite L Concord, CA 94520 (510) 686-9600 FAX (510) 686-9689
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: 330-084.2G/0374, Berkeley
Matrix: LIQUID

Work Order #: 9502G37 01-05

Reported: Mar 8, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC030295BTEX17A	GC030295BTEX17A	GC030295BTEX17A	GC030295BTEX17A
Anal. 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 #:	9502G2001	9502G2001	9502G2001	9502G2001
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	3/2/95	3/2/95	3/2/95	3/2/95
Analyzed Date:	3/2/95	3/2/95	3/2/95	3/2/95
Instrument I.D. #:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	10	10	10	31
MS % Recovery:	100	100	100	103
Dup. Result:	10	10	10	31
MSD % Recov.:	100	100	100	103
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	71-133	LCS	72-128	Control Limits	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



**Sequoia
Analytical**

680 Chesapeake Drive 1900 Bates Avenue, Suite L 819 Striker Avenue, Suite 8	Redwood City, CA 94063 Concord, CA 94520 Sacramento, CA 95834	(415) 364-9600 (510) 686-9600 (916) 921-9600	FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100
---	---	--	--

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

Client Project ID: 330-084.2G/0374, Berkeley
Matrix: LIQUID

Work Order #: 9502G37 06-07

Reported: Mar 8, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC030295BTEX20B	GC030295BTEX20B	GC030295BTEX20B	GC030295BTEX20B
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 #:	9502D6104	9502D6104	9502D6104	9502D6104
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	3/2/95	3/2/95	3/2/95	3/2/95
Analyzed Date:	3/2/95	3/2/95	3/2/95	3/2/95
Instrument I.D. #:	GCHP20	GCHP20	GCHP20	GCHP20
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	10	11	11	32
MS % Recovery:	100	110	110	107
Dup. Result:	10	11	11	32
MSD % Recov.:	100	110	110	107
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.

[Signature]
SEQUOIA ANALYTICAL
Eileen A. Manning
Project Manager

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

9502G37.PPP <2>

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: PEG
REC. BY (PRINT): CAWORKORDER: 9562G37
DATE OF LOG-IN: 2/27/95

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

Airbill / Sticker

5. Airbill:

Present / Absent

6. Airbill No.:

Present / Absent*

7. Sample Tags:

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:

2-24-95

12. Temp. Rec. at Lab:

13°13. Time Rec. at Lab: 1610

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

	LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION(ETC.)
1. Custody Seal(s)	01	A/C	MW-1	3VOAS	UQ	2/23	
2. Custody Seal Nos.:	02		-2				
3. Chain-of-Custody Records:	03		-3				
4. Traffic Reports or Packing List:	04		-4		↓		
5. Airbill:	05		-5	2VOAS			should be 2 VOAS
6. Airbill No.:	06		-6	3VOAS			according to LOC
7. Sample Tags:	07	AB	TB-1	2VOAS	↓	↓	
8. Sample Condition:							
9. Does information on custody reports, traffic reports and sample tags agree?							
10. Proper preservatives used:							
11. Date Rec. at Lab:							
12. Temp. Rec. at Lab:							
13. Time Rec. at Lab:							

ARCO Products Company

Division of Atlantic Richfield Company

330-084-26

Task Order No.

17018 00

Chain of Custody

ARCO Facility no	0374	City (Facility)	Berkeley	Project manager (Consultant)	K. Brown	Laboratory name	SEQUORA																	
ARCO engineer	Mike Whelan	Telephone no. (ARCO)		Telephone no (Consultant)	(408) 441 7790	Fax no. (Consultant)	(408) 441 7537 or 9102																	
Consultant name	Pacific Environmental Group	Address (Consultant)	2025 Gateway Pl #440 San Jose				Contract number	07073																
Sample I.D.	Lab no.	Container no.	Matrix		Preservation		Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH EPA M602/8020/8015	TPH Modified 8015 Gas <input type="checkbox"/> Diesel <input checked="" type="checkbox"/>	Oil and Grease 413.1 <input type="checkbox"/> 413.2 <input checked="" type="checkbox"/>	TPH EPA 418.1/SM4503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals <input type="checkbox"/> VOC <input type="checkbox"/> YOAO <input type="checkbox"/>	Semi Metals <input type="checkbox"/> VOC <input type="checkbox"/> YOAO <input type="checkbox"/>	Lead Org/DHS <input type="checkbox"/>	Lead EPA 7420/7421 <input type="checkbox"/>	Method of shipment			
			Soil	Water	Other	Ice			Acid															
MW1	3	X		HCl	2-23-95	10:05	X										-01					Special detection Limit/reporting		
MW2						11:22												-02					Special QA/QC	
MW3						10:48												-03					Remarks	
MW4						11:38												-04						
MW5	2					11:07												-05						
MW6						10:30												-06						
TB-1	2					NA												-07						
Condition of sample:	GOOD							Temperature received:	13°C															
Relinquished by sampler	Paul Wemboldt			Date	2-23-95	Time	15:30	Received by	M. Dodge 2/24/95 0800												Lab number	9502937		
Relinquished by	M. Dodge			Date	2/24/95	Time	3:25	Received by	M. Dodge 2/24/95 3:25												Turnaround time			
Relinquished by				Date	2/24	Time	4:15	Received by laboratory	10C CL		10C CL		10C CL		10C CL		10C CL		10C CL		10C CL		Priority Rush 1 Business Day	<input type="checkbox"/>
																						Rush 2 Business Days	<input type="checkbox"/>	
																						Expedited 5 Business Days	<input type="checkbox"/>	
																						Standard 10 Business Days	<input type="checkbox"/>	

WELL SAMPLING REQUEST

952912

SITE INFORMATION FORM

IdentificationProject # 330 084 26Station # 00374Site Address: 16407 Telegraph Av
BerkeleyCounty: AlamedaProject Manager: K Brown

Requestor:

Client: Arcad

Client P.O.C.:

Date of request:

Field Tasks

H₂O levels All wells TOC
 H₂O Sampling MW1 thru MW7
Gas Btex

 Well Development Other:

Describe task (i.e.: Well groups and analytical params):

Activities occurring on site

(ie; remedial system construction, ongoing projects, etc.)

(Please attach: Site Map, Well Information Data, Site Safety Plan, Well logs as appropriate)

Budgeted hours:

Actual hours; On-Site:

Mob-de-Mob:

Project Type

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

FILE COPYPrefield Contacts/Permits

<input type="checkbox"/> Cal Trans	Initials	Date
<input type="checkbox"/> County	<u>F/S</u>	<u>R1</u> <u>2/21/95</u>
<input type="checkbox"/> City		
<input type="checkbox"/> Private	<u>Copy/Dist.</u>	<u>R1</u> ↓
<input type="checkbox"/> Multi-Consultant Scheduling		

Date(s): _____

Purge Water Containment:

- Drums
- Treatment System
- Other Describe: _____

Site SafetyWellsConcerns

- Flash Safety
- Flagman
- Cones
- Barricades
- No Turn/Lane Closed sign

Other:

Comments, remarks, etc. from Field Staff

(include problems encountered and out-of-scope work)

All Wells secured

Completed by: Paul W.Date: 2-23-95Checked by: John D.Date: 2-21-95

ARCO Products Company Division of Atlantic Richfield Company		330 084 26		Task Order No.		17018 00		Chain of Custody										
ARCO Facility no.	0374	City (Facility)	Berkeley	Project manager (Consultant)		K. Brown		Laboratory name	SEQUORA									
ARCO engineer	Mike Whelan	Telephone no. (ARCO)		Telephone no. (Consultant)		408 441 7790		Contract number										
Consultant name	Pacific Environmental	Address (Consultant)	2025 GATEWAY Pl #440 San Jose				Method of shipment											
Sample I.D.	Lab no.	Container no.	Matrix		Preservation		Sampling date	Sampling time	BTEX	BTEX/TPH	TPH Modified 80/15	Oil and Grease	EPA 625/8240	EPA 625/8270	TCP/P Metals	Spec. WOA	Spec. WOAO	Special detection Limit/reporting
			Soil	Water	Other	Ice			Acid	602/EPA 80/20	EPA M80/20/80/20/80/15	Gas	Diesel	413.1	413.2	EPA 601/80/10	EPA 601/80/10	CAN Metals EPA 80/10/00	TTC	STLC	Lead Organics	Lead EPA 742/97/21
MW1		3	X		ACL	2-23-95	10:05	X										
MW2							11:22		1									
MW3							10:48											
MW4							11:38											
MW5							11:07											
MW6							10:30											
TB-1		2					NA											
Condition of sample:									Temperature received:									
Relinquished by sampler			Date	Time		Received by												
Paul Henningsen			2-23-95	15:30														
Relinquished by			Date	Time		Received by												
Relinquished by			Date	Time		Received by laboratory					Date		Time					

FIELD REPORT

PTH TO WATER/SEPARATE-PHASE HYDROCARBON SURVEY

PROJECT No.: 330 084 26 LOCATION: 6407 Telegraph Av
Berkeley CA DATE: 2-23-95
CLIENT/STATION NO.: 374 FIELD TECHNICIAN: PAUL W DAY OF WEEK: TUES

PROBE TYPE/ID No.
 Oil/Water IF/ _____
 H₂O level indicator #2
 Other: _____

Dw Order	Well ID	Time	Surface Seal	Lid Secure	Gasket	Lock	Expanding Cap	TOC Total Depth (feet) TOB/TOC	TOC First Depth to Water (feet) TOB/TOC	TOC Second Depth to Water (feet) TOB/TOC	SPH Depth (feet) TOB/TOC	SPH Thickness (feet)	SEPARATE-PHASE HYDROCARBONS (SPH)					LIQUID REMOVED (gallons)		
													Fresh	Weathered	Gas	Oil	Lite	Medium	Heavy	
													COLOR							
MW1		8:45	/	/	/	/	/	26.57	7.77	7.96										SPH
MW2		8:55	/	/	/	/	/	26.04	7.53	7.80										H ₂ O
MW3		9:01	/	/	/	/	/	26.72	7.18	7.46										
MW4		8:51	/	/	/	/	/	26.75	9.38	10.84										
MW5		9:10	/	/	/	/	/	22.05	9.23	9.68										
MW6		9:06	/	/	/	/	/	14.50	5.60	6.05										

Comments:

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 08426 LOCATION: 6407 Telegraph Berkeley WELL ID #: MW1CLIENT/STATION No.: 0374FIELD TECHNICIAN: Paul WWELL INFORMATION

Depth to Liquid: — TOB — TOC
 Depth to water: 7.96 TOB 7.77 TOC
 Total depth: TOB 26.57 TOC
 Date: 7-23-95 Time (2400): 8:45

Probe Type
and
I.D. # Oil/Water interface
 Electronic Indicator # 2
 Other:

CASING	GAL/	LINER FT.
DIAMETER		
<input type="checkbox"/> 2	—	0.17
<input type="checkbox"/> 3	—	0.38
<input checked="" type="checkbox"/> 4	—	0.66
<input type="checkbox"/> 4.5	—	0.83
<input type="checkbox"/> 5	—	1.02
<input type="checkbox"/> 6	—	1.5
<input type="checkbox"/> 8	—	2.6

- | |
|---|
| <input checked="" type="checkbox"/> Groundwater |
| <input type="checkbox"/> Duplicate |
| <input type="checkbox"/> Extraction well |
| <input type="checkbox"/> Trip blank |
| <input type="checkbox"/> Field blank |
| <input type="checkbox"/> Equipment blank |
| <input type="checkbox"/> Other; |

$$\text{TD } 26.57 - \text{ DTW } 7.77 = 18.80 \text{ Gal/Linear Foot} \times \text{Casings } 3 = 12.40 \text{ Calculated Purge } 37.22$$

DATE PURGED: 7-23-95 START: 9:50 END (2400 hr): 10:02 PURGED BY: PWDATE SAMPLED: 7-23-95 START: 10:02 END (2400 hr): 10:07 SAMPLED BY: PW

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. ($\mu\text{mhos/cm}$ @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
<u>9:53</u>	<u>12.50</u>	<u>7.46</u>	<u>2070</u>	<u>62.7</u>	<u>clear</u>	<u>19.6</u>	<u>none</u>
<u>9:58</u>	<u>25.0</u>	<u>7.53</u>	<u>2390</u>	<u>62.3</u>	<u>clear</u>	<u>11.4</u>	<u>none</u>
<u>10:02</u>	<u>37.50</u>	<u>7.60</u>	<u>2510</u>	<u>62.5</u>	<u>clear</u>	<u>17.9</u>	<u>none</u>

Pumped dry Yes: No

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: _____ Airlift Pump: _____
 Centrifugal Pump: # 4 Dedicated: _____
 Other: _____

SAMPLING EQUIPMENT/I.D. #

Bailer: 4-9
 Dedicated: _____
 Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
<u>MW1</u>	<u>7-23-95</u>	<u>10:05</u>	<u>3</u>	<u>40ml</u>	<u>VOL</u>	<u>HCl</u>	<u>Gas Bkg</u>

REMARKS: _____

SIGNATURE: Paul WimbhardtPACIFIC
ENVIRONMENTAL
GROUP, INC.

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 084 26 LOCATION: 6407 Telegraph Berkeley WELL ID #: MW 2

CLIENT/STATION No.: 0374

FIELD TECHNICIAN:

Paul W.

WELL INFORMATION

Depth to Liquid: TOB TOC
 Depth to water: 7.80 TOB 7.53 TOC
 Total depth: TOB 26.04 TOC
 Date: 7-23-95 Time (2400): 8:55

Probe Type and I.D. #
 Oil/Water Interface
 Electronic Indicator #2
 Other;

CASING	GAL/	LINEAR FT.
DIAMETER		
<input type="checkbox"/> 2		0.17
<input type="checkbox"/> 3		0.38
<input checked="" type="checkbox"/> 4		0.66
<input type="checkbox"/> 4.5		0.83
<input type="checkbox"/> 5		1.02
<input type="checkbox"/> 6		1.5
<input type="checkbox"/> 8		2.6

- | | |
|-------------------------------------|-----------------|
| <input checked="" type="checkbox"/> | Groundwater |
| <input type="checkbox"/> | Duplicate |
| <input type="checkbox"/> | Extraction well |
| <input type="checkbox"/> | Trip blank |
| <input type="checkbox"/> | Field blank |
| <input type="checkbox"/> | Equipment blank |
| <input type="checkbox"/> | Other: |

$$\text{TD } 26.04 - \text{ DTW } 7.53 = 18.51 \text{ Gal/Linear Foot} \times \text{Casings } 3 = 55.53 \text{ Calculated Purge } 36.64$$

DATE PURGED: 7-23-95 START: 11:08 END (2400 hr): 11:19 PURGED BY: PW

DATE SAMPLED: 7-23-95 START: 11:19 END (2400 hr): 11:23 SAMPLED BY: RE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
11:12	12.25	8.17	630	65.7	clear	19.9	none
11:15	24.50	8.16	640	66.2	clear	17.9	none
11:18	36.75	8.17	680	66.4	clear	14.7	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: #7
 Dedicated:
 Other:

SAMPLING EQUIPMENT/I.D.

Bailer: 13-5
 Dedicated:
 Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW2	7-23-95	11:22	3	40ml	Vial	HCl	Gas Btu

REMARKS:

SIGNATURE:

Paul Wenzel

PACIFIC
ENVIRONMENTAL
GROUP, INC.

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 084 26 LOCATION: 6407 Telegraph Berkeley WELL ID #: MW3CLIENT/STATION No.: 0374 FIELD TECHNICIAN: Paul W

WELL INFORMATION

Depth to Liquid: TOB TOC
 Depth to water: 7.46 TOB 7.18 TOC
 Total depth: TOB 26.72 TOC
 Date: 2-23-95 Time (2400): _____

Probe Type and I.D. #
 Oil/Water interface _____
 Electronic indicator A-7
 Other; _____

CASING	GAL/
DIAMETER	LINEAR FT.
<input type="checkbox"/> 2	<u>0.17</u>
<input type="checkbox"/> 3	<u>0.38</u>
<input checked="" type="checkbox"/> 4	<u>0.66</u>
<input type="checkbox"/> 4.5	<u>0.83</u>
<input type="checkbox"/> 5	<u>1.02</u>
<input type="checkbox"/> 6	<u>1.5</u>
<input type="checkbox"/> 8	<u>2.6</u>

- Groundwater
 Duplicate
 Extraction well
 Trip blank
 Field blank
 Equipment blank
 Other; _____

$$\text{TD } 26.72 - \text{ DTW } 7.18 = 19.54 \text{ Gal/Linear Foot} \times .66 = 12.89 \text{ x Casings } 3 \text{ Calculated Purge } 38.68$$

DATE PURGED: 2-23-95 START: 10:32 END (2400 hr): 10:46 PURGED BY: PWDATE SAMPLED: 2-23-95 START: 10:46 END (2400 hr): 10:50 SAMPLED BY: PW

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
<u>10:37</u>	<u>13.0</u>	<u>7.82</u>	<u>720</u>	<u>61.7</u>	<u>clear</u>	<u>33.4</u>	<u>PAINT</u>
<u>10:41</u>	<u>26.0</u>	<u>7.90</u>	<u>780</u>	<u>62.4</u>	<u>clear</u>	<u>21.9</u>	<u>none</u>
<u>10:45</u>	<u>39.0</u>	<u>8.00</u>	<u>760</u>	<u>62.8</u>	<u>cloudy</u>	<u>109.4</u>	<u>none</u>

Pumped dry: Yes No

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: TOB/TOC

PURGING EQUIPMENT/I.D.

Bailer: _____ Airlift Pump: _____
 Centrifugal Pump: #-7 Dedicated: _____
 Other: _____

SAMPLING EQUIPMENT/I.D.

Bailer: 17-6
 Dedicated: _____
 Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
<u>MW3</u>	<u>2-23-95</u>	<u>10:48</u>	<u>3</u>	<u>40ml</u>	<u>VOL</u>	<u>HCL</u>	<u>GHS Blq</u>

REMARKS: _____

SIGNATURE: Paul WembastePACIFIC
ENVIRONMENTAL
GROUP, INC.

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 084 26 LOCATION: 6407 Telegraph Berkeley WELL ID #: MW 4
 CLIENT/STATION No.: 0374 FIELD TECHNICIAN: Paul W.

WELL INFORMATION

Depth to Liquid: TOB TOC
 Depth to water: 10.24 TOB 9.38 TOC
 Total depth: TOB 26.75 TOC
 Date: 7-23-95 Time (2400): 8.51

Probe Type Oil/Water interface
 and Electronic Indicator #2
 I.D. # Other:

CASING	GAL/
DIAMETER	LINEAR FT.
<input type="checkbox"/> 2	<u>0.17</u>
<input type="checkbox"/> 3	<u>0.38</u>
<input checked="" type="checkbox"/> 4	<u>0.66</u>
<input type="checkbox"/> 4.5	<u>0.83</u>
<input type="checkbox"/> 5	<u>1.02</u>
<input type="checkbox"/> 6	<u>1.5</u>
<input type="checkbox"/> 8	<u>2.6</u>

- Groundwater
 Duplicate
 Extraction well
 Trip blank
 Field blank
 Equipment blank
 Other;

$$\text{TD } 26.75 - \text{ DTW } 9.38 = 17.37 \times \text{ Gal/Linear Foot } 1.66 = 11.46 \times \text{ Casings } 3 = \text{ Calculated Purge } 34.39$$

DATE PURGED: 7-23-95 START: 11:24 END (2400 hr): 11:34 PURGED BY: PW

DATE SAMPLED: 7-23-95 START: 11:34 END (2400 hr): 11:40 SAMPLED BY: Re

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE °F	COLOR	TURBIDITY	ODOR
<u>11:27</u>	<u>11.50</u>	<u>8.10</u>	<u>980</u>	<u>65.0</u>	<u>clear</u>	<u>24.7</u>	<u>None</u>
<u>11:30</u>	<u>23.0</u>	<u>8.02</u>	<u>1050</u>	<u>66.1</u>	<u>clear</u>	<u>12.9</u>	<u>None</u>
<u>11:33</u>	<u>34.50</u>	<u>7.99</u>	<u>1140</u>	<u>68.2</u>	<u>clear</u>	<u>20.4</u>	<u>None</u>

Pumped dry Yes No

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: TOB/TOC

PURGING EQUIPMENT/I.D. #

Bailer: _____ Airlift Pump: _____
 Centrifugal Pump: #4 Dedicated: _____
 Other: _____

SAMPLING EQUIPMENT/I.D. #

Bailer: 15-2
 Dedicated: _____
 Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
<u>MW 4</u>	<u>7-23-95</u>	<u>11:38</u>	<u>3</u>	<u>40ml</u>	<u>10A</u>	<u>HCl</u>	<u>Gass Brdg</u>

REMARKS: _____

SIGNATURE: Rullie Wenzelhardt



PACIFIC
ENVIRONMENTAL
GROUP, INC.

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 094 26 LOCATION: 6407 Telegraph Av Berkeley WELL ID #: MWS

CLIENT/STATION No.:

FIELD TECHNICIAN: Paul W.WELL INFORMATION

Depth to Liquid: TOB TOC
 Depth to water: 9.68 TOB 9.23 TOC
 Total depth: TOB 27.05 TOC
 Date: 2.23.95 Time (2400): 7:10

Probe Type and I.D. #
 Oil/Water interface
 Electronic Indicator #2
 Other:

CASING	GAL/
DIAMETER	LINEAR FT.
<input type="checkbox"/> 2	0.17
<input type="checkbox"/> 3	0.38
<input checked="" type="checkbox"/> 4	0.66
<input type="checkbox"/> 4.5	0.83
<input type="checkbox"/> 5	1.02
<input type="checkbox"/> 6	1.5
<input type="checkbox"/> 8	2.6

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

$$\text{TD } 27.05 - \text{ DTW } 9.23 = 12.82 \text{ Gal/Linear Foot} \times .66 = 8.46 \text{ x Casings } 3 \text{ Calculated Purge } 25.38$$

DATE PURGED: 2.23.95 START: 10:52 END (2400 hr): 11:05 PURGED BY: PWDATE SAMPLED: 2.23.95 START: 11:05 END (2400 hr): 11:09 SAMPLED BY: PW

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. ($\mu\text{mhos/cm}$ @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
<u>10:56</u>	<u>8.50</u>	<u>8.24</u>	<u>650</u>	<u>63.5</u>	<u>clear</u>	<u>29.7</u>	<u>none</u>
<u>11:00</u>	<u>17.0</u>	<u>8.08</u>	<u>620</u>	<u>63.9</u>	<u>clear</u>	<u>21.4</u>	<u>none</u>
<u>11:04</u>	<u>25.50</u>	<u>8.10</u>	<u>640</u>	<u>64.7</u>	<u>clear</u>	<u>28.4</u>	<u>none</u>

Pumped dry Yes No

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: TOB/TOCPURGING EQUIPMENT/I.D. #

Bailer:
 Centrifugal Pump: #4
 Dedicated:
 Other:

SAMPLING EQUIPMENT/I.D. #

Bailer: 17-6
 Dedicated:
 Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
<u>MWS</u>	<u>2.23.95</u>	<u>11:07</u>	<u>3</u>	<u>40ml</u>	<u>1011</u>	<u>HCl</u>	<u>Glass Block</u>

REMARKS:

SIGNATURE: Paul Wenzel Jr.

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 084 26 LOCATION: 6407 Telegraph Berkeley WELL ID #: MW 6

CLIENT/STATION No.: 0374

FIELD TECHNICIAN: Paul W.

WELL INFORMATION

Depth to Liquid: TOB TOC
 Depth to water: 6.05 TOB 5.60 TOC
 Total depth: TOB 14.50 TOC
 Date: 7-23-95 Time (2400): 9:06

Probe Type and I.D. #
 Oil/Water interface
 Electronic Indicator #7
 Other:

CASING DIAMETER	GAL/ LINEAR FT.
<input type="checkbox"/> 2	0.17
<input type="checkbox"/> 3	0.38
<input checked="" type="checkbox"/> 4	0.66
<input type="checkbox"/> 4.5	0.83
<input type="checkbox"/> 5	1.02
<input type="checkbox"/> 6	1.5
<input type="checkbox"/> 8	2.6

- Groundwater
 Duplicate
 Extraction well
 Trip blank
 Field blank
 Equipment blank
 Other;

$$\text{TD } 14.50 - \text{ DTW } 5.60 = 8.90 \times \text{ Gal/Linear Foot } 160 = 5.87 \times \text{ Casings } 3 = \text{ Calculated Purge } 17.66$$

DATE PURGED: 7-23-95 START: 10:17 END (2400 hr): 10:28 PURGED BY: PWDATE SAMPLED: 7-23-95 START: 10:28 END (2400 hr): 10:31 SAMPLED BY: PW

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
10:20	6.0	8.08	850	60.6	clear	27.6	none
10:23	12.0	7.97	550	60.5	clear	14.7	none
10:27	18.0	7.92	550	60.9	clear	23.1	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/TOCPURGING EQUIPMENT/I.D. #

Bailor:
 Centrifugal Pump: #4
 Dedicated:
 Other:

SAMPLING EQUIPMENT/I.D. #

Bailor: 15-2
 Dedicated:
 Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW6	7-23-95	10:30	3	1/2in	Vial	HCL	Grob Btex

REMARKS:

SIGNATURE:

Paul Wemholt

PACIFIC
ENVIRONMENTAL
GROUP, INC

ATTACHMENT B

FIELD AND LABORATORY PROCEDURES

ATTACHMENT B

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 A.

ATTACHMENT C

**TREATMENT SYSTEM
CERTIFIED ANALYTICAL REPORTS
AND CHAIN-OF-CUSTODY DOCUMENTATION**



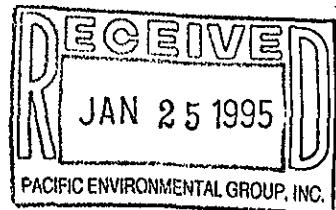
Sequoia
Analytical

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FAX (415) 364-9233
FAX (510) 686-9689
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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Maree Doden

Project: 330-084.5A/0374, Oakland

Enclosed are the results from samples received at Sequoia Analytical on January 11, 1995.
The requested analyses are listed below:

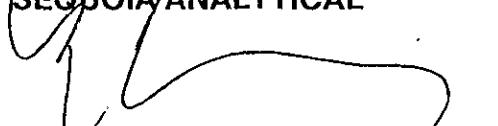
<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9501553 -01	LIQUID, SP-108	01/10/95	TPHGBW Purgeable TPH/BTEX
9501553 -02	LIQUID, SP-107	01/10/95	TPHGBW Purgeable TPH/BTEX
9501553 -03	LIQUID, SP-106	01/10/95	TPHGBW Purgeable TPH/BTEX
9501553 -04	LIQUID, SP-105	01/10/95	TPHGBW Purgeable TPH/BTEX
9501553 -05	LIQUID, SP-102	01/10/95	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**

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1900 Bates Avenue, Suite L
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FAX (916) 921-0100

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

Attention: Maree Doden

Client Proj. ID: 330-084.5A/0374, Oakland
Sample Descript: SP-108
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9501553-01

Sampled: 01/10/95
Received: 01/11/95
Analyzed: 01/12/95
Reported: 01/24/95

QC Batch Number: GC011295BTEX02A
Instrument ID: GCHP2

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		
Trifluorotoluene	Control Limits % 70 130	% Recovery 79

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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FAX (510) 686-9689
FAX (916) 921-0100

Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110 Attention: Maree Doden	Client Proj. ID: 330-084.5A/0374, Oakland Sample Descript: SP-107 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9501553-02	Sampled: 01/10/95 Received: 01/11/95 Analyzed: 01/12/95 Reported: 01/24/95
--	---	---

QC Batch Number: GC011295BTEX02A
Instrument ID: GCHP2

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	76

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Page:

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**Sequoia
Analytical**

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

Attention: Maree Doden

Client Proj. ID: 330-084.5A/0374, Oakland
Sample Descript: SP-106
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9501553-03

Sampled: 01/10/95
Received: 01/11/95
Analyzed: 01/13/95
Reported: 01/24/95

QC Batch Number: GC011295BTEX02A
Instrument ID: GCHP2

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
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Maree Doden

Client Proj. ID: 330-084.5A/0374, Oakland
Sample Descript: SP-105
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9501553-04

Sampled: 01/10/95
Received: 01/11/95
Analyzed: 01/13/95
Reported: 01/24/95

QC Batch Number: GC011295BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	250
Benzene	2.5
Toluene	2.5
Ethyl Benzene	2.5
Xylenes (Total)	2.5
Chromatogram Pattern:	Gas
Surrogates		Control Limits %
Trifluorotoluene		70 130
		% Recovery
		85

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Page:

4



**Sequoia
Analytical**

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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: 330-084.5A/0374, Oakland
Sample Descript: SP-102
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9501553-05

Sampled: 01/10/95
Received: 01/11/95
Analyzed: 01/13/95
Reported: 01/24/95

QC Batch Number: GC011295BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	.....	2400
Benzene	5.0	320
Toluene	5.0	7.4
Ethyl Benzene	5.0	53
Xylenes (Total)	5.0	120
Chromatogram Pattern:	.....	Gas
Surrogates		Control Limits %
Trifluorotoluene		70 130
		% Recovery
		84

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Page:

5



**Sequoia
Analytical**

680 Chesapeake Drive 1900 Bates Avenue, Suite L 819 Striker Avenue, Suite 8	Redwood City, CA 94063 Concord, CA 94520 Sacramento, CA 95834	(415) 364-9600 (510) 686-9600 (916) 921-9600	FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100
---	---	--	--

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

Client Project ID: 330-084.5A/0374, Oakland
Matrix: Liquid

Work Order #: 9501553 -01-05

Reported: Jan 24, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC011195BTEX02A	GC011195BTEX02A	GC011195BTEX02A	GC011195BTEX02A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	N.A.	N.A.	N.A.	N.A.

Analyst:	R. Vincent	R. Vincent	R. Vincent	R. Vincent
MS/MSD #:	950104901	950104901	950104901	950104901
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	N.A.	N.A.	N.A.	N.A.
Analyzed Date:	1/12/95	1/12/95	1/12/95	1/12/95
Instrument I.D. #:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 ug/L	10 ug/L	10 ug/L	30 ug/L
Result:	10	10	10	30
MS % Recovery:	100	100	100	100
Dup. Result:	10	10	10	31
MSD % Recov.:	100	100	100	103
RPD:	0.0	0.0	0.0	3.3
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:

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

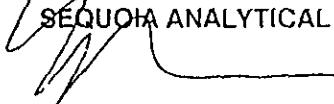
LCS Result:
LCS % Recov.:

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

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

Please Note:

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


SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME:
REC. BY (PRINT):

PEG, ARCD 330-0845A

WORKORDER:
DATE OF LOG-IN:

9501553

11/17/95 11/12/95

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION(ETC.)
1. Custody Seal(s)	Present / Absent Intact / Broken	1	A.C	SP-108	3VCA	liQ	1:10	
2. Custody Seal Nos.:	Put in Remarks Section	2	J	SP-107				
3. Chain-of-Custody Records:	Present / Absent*	3	J	SP-104	↓			
4. Traffic Reports or Packing List:	Present / Absent	4	K.B	SP-105	2VCA			
5. Airbill:	Airbill / Sticker	5	K.C	SP-102	3VCA	✓	+	
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:	11/11/95							
12. Temp. Rec. at Lab:	110							
13. Time Rec. at Lab:	1225							

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

ARCO Products Company

Division of Atlantic Richfield Company

330-0845A

Task Order No.

534-0374-94-5

Chain of Custody

ARCO Facility no.	5374	City (Facility)	Oakland	Project manager (Consultant)	Shaw Garkani	Laboratory name	Segura																		
ARCO engineer	Mike Whelan	Telephone no. (ARCO)		Telephone no. (Consultant)	(408) 441-7500	Fax no. (Consultant)	441-9102																		
Consultant name	Pacific Environmental	Address (Consultant)	2025 Gateway Place Suite 400 San Jose CA 95110																						
Sample I.D.	Lab no.	Container no.	Matrix		Preservation		Sampling date	Sampling time	BTEX 602/EPA 8020	STENTPH EPA M602/8020/9315	TPH Modified 6015 Gas	Oil and Grease 4131	TPH EPA 418.1/MSM503E	EPA 601B/010	EPA 624/024C	EPA 625/8270	TCLP Metals <input type="checkbox"/> VOA <input checked="" type="checkbox"/> TOA <input type="checkbox"/>	Semi <input type="checkbox"/>	Cd/Metals EPA 601/7000 <input type="checkbox"/>	Lead Org/DHS <input type="checkbox"/>	Method of shipment				
			Soil	Water	Other	Ice			Acid	HPL			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
SP-108	3	X	X	X		1-10-95	1400	X													-01				
SP-107	3						1405														-02				
SP-106	3						1410														-03				
SP-105	32						1415														-04				
SP-102	3	↓	↓	↓	↓		1420	↓													-05				
																								Special detection Limit/reporting	
																								Special QA/QC	
																								Remarks	
																								Lab number	9501553
																								Turnaround time	
																								Priority Rush 1 Business Day	<input type="checkbox"/>
																								Rush 2 Business Days	<input type="checkbox"/>
																								Expedited 5 Business Days	<input type="checkbox"/>
																								Standard 10 Business Days	<input type="checkbox"/>
Condition of sample: <u>Black</u>												Temperature received: <u>11C</u>													
Relinquished by sampler <u>Paul Pribe</u>				Date 1-11-95	Time 8:00	Received by <u>M Doden</u>	Date 1-11-95								Time 11:00										
Relinquished by <u>M Doden</u>				Date 1-11-95	Time 10:30	Received by <u>Glenn Wright</u>	Date 1-11-95								Time 11:00										
Relinquished by <u>Glenn Wright</u>				Date 1-11-95	Time 12:35	Received by laboratory <u>J. Minelli</u>	Date 1-11-95	Time 12:35																	

ARCO Products Company

Division of AtlanticRichfieldCompany

330-084,SA Task Order No. 034 0374-94-5

Chain of Custody

ARCO Facility no.	0374	City (Facility)	OAKLAND	Project manager (Consultant)	Shaw Garakani	Laboratory name															
ARCO engineer	Mike Whelan	Telephone no. (ARCO)		Telephone no. (Consultant)	(408) 441-7500	Fax no. (Consultant)	441-9102	Contract number													
Consultant name	Pacific Environmental	Address (Consultant)	2025 Gateway Place, Suite 446, San Jose, CA 95110																		
Sample I.D.	Lab no.	Container no.	Matrix		Preservation		Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH EPA M602/EPA 8015	TPH Modified 8015 Gas <input type="checkbox"/> Diesel <input checked="" type="checkbox"/>	Oil and Grease 413.1 <input type="checkbox"/> 413.2 <input checked="" type="checkbox"/>	TPH EPA 41B/15MS03E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals <input type="checkbox"/> VOA <input type="checkbox"/> VOA	Semi Metals <input type="checkbox"/> VOA <input type="checkbox"/> VOA	CAN Metals EPA 601/8010/0000 TTLG <input type="checkbox"/> STLC <input checked="" type="checkbox"/>	Lead Org JDRS <input type="checkbox"/> Lead EPA 7420/7421 <input type="checkbox"/>	Method of shipment
			Soil	Water	Other	Ice			Acid	HCL											
SP-108	3	X	X	X	X	11-0-95	1400	X												Special detection Limit/reporting	
SP-107	3	↓	↓	↓	↓		1405	↓												Special QA/QC	
SP-106	3	↓	↓	↓	↓		1410													Remarks	
SP-105	32	↓	↓	↓	↓		1415	↓												Lab number	
SP-102	3	↓	↓	↓	↓		1420	↓												Turnaround time	
Condition of sample:									Temperature received:												
Relinquished by sampler	Paul Pribe			Date	1-11-95	Time	8:00	Received by	MDodds								11/95		Priority Rush 1 Business Day		
Relinquished by				Date	1/16/95	Time	10:30	Received by	S. Wright										Rush 2 Business Days		
Relinquished by				Date		Time		Received by laboratory					Date			Expedited 5 Business Days					
																		Standard 10 Business Days			

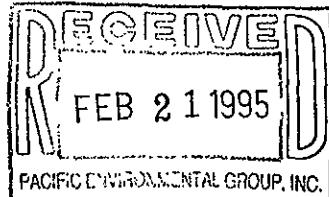


Sequoia
Analytical

680 Chesapeake Drive Redwood City, CA 94063 (415) 364-9600 FAX (415) 364-9233
1900 Bates Avenue, Suite L Concord, CA 94520 (510) 686-9600 FAX (510) 686-9689
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: 330-084.5B/374, Oakland



Enclosed are the results from samples received at Sequoia Analytical on February 8, 1995. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
950258301	LIQUID, SP 105	2/7/95	TPHGB Purgeable TPH/BTEX
950258302	LIQUID, SP 106	2/7/95	TPHGB Purgeable TPH/BTEX
950258303	LIQUID, SP 107	2/7/95	TPHGB Purgeable TPH/BTEX
950258304	LIQUID, SP 108	2/7/95	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

L. Suors
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 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 330-084.5B/374, Oakland Sample Descript: SP105 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9502583-01	Sampled: 02/07/95 Received: 02/08/95 Analyzed: 02/13/95 Reported: 02/17/95
Attention: Maree Doden		

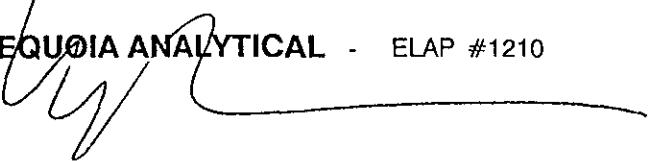
QC Batch Number: GC021395BTEX20A
Instrument ID: GCHP20

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	3500
Benzene	5.0	370
Toluene	5.0	120
Ethyl Benzene	5.0	67
Xylenes (Total)	5.0	230
Chromatogram Pattern:		Gas
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	118

Analyses 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
1900 Bates Avenue, Suite L Concord, CA 94520 (510) 686-9600 FAX (510) 686-9689
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	Client Proj. ID: 330-084.5B/374; Oakland Sample Descript: SP106 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9502583-02	Sampled: 02/07/95 Received: 02/08/95 Analyzed: 02/13/95 Reported: 02/17/95
Attention: Maree Doden		

QC Batch Number: GC021395BTEX20A
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	113

Analyses 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
1900 Bates Avenue, Suite L Concord, CA 94520 (510) 686-9600 FAX (510) 686-9689
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	Client Proj. ID: 330-084.5B/374, Oakland Sample Descript: SP107 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9502583-03	Sampled: 02/07/95 Received: 02/08/95 Analyzed: 02/13/95 Reported: 02/17/95
Attention: Maree Doden		

QC Batch Number: GC021395BTEX20A
Instrument ID: GCHP20

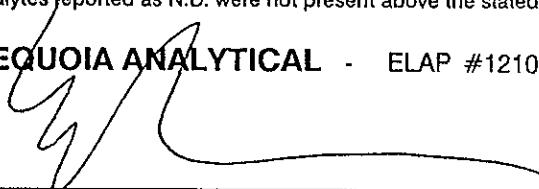
Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

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	113

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
1900 Bates Avenue, Suite L Concord, CA 94520 (510) 686-9600 FAX (510) 686-9689
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: 330-084.5B/374, Oakland
Sample Descript: SP108
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9502583-04

Sampled: 02/07/95
Received: 02/08/95
Analyzed: 02/13/95
Reported: 02/17/95

QC Batch Number: GC021395BTEX20A
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	108

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
1900 Bates Avenue, Suite L Concord, CA 94520 (510) 686-9600 FAX (510) 686-9689
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: 330-084.5B/374, Oakland
Matrix: LIQUID

Work Order #: 9502583 01

Reported: Feb 17, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC021395BTEX20A	GC021395BTEX20A	GC021395BTEX20A	GC021395BTEX20A
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 #:	950208501	950208501	950208501	950208501
Sample Conc.:	N.D.	0	0	0
Prepared Date:	2/13/95	2/13/95	2/13/95	2/13/95
Analyzed Date:	2/13/95	2/13/95	2/13/95	2/13/95
Instrument I.D. #:	GCHP20	GCHP20	GCHP20	GCHP20
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	8.9	8.7	8.9	26
MS % Recovery:	89	87	89	87
Dup. Result:	9.1	8.9	9.1	27
MSD % Recov.:	91	89	91	90
RPD:	2.2	2.3	2.2	3.8
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:

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

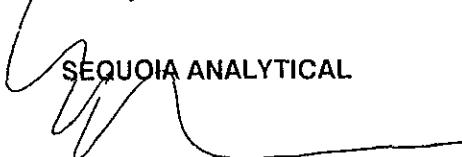
LCS Result:
LCS % Recov.:

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

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

Please Note:

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


SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

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

9502583.PPP <1>

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME:
REC. BY (PRINT):A-ACC
ChrisWORKORDER:
DATE OF LOG-IN:TS02 583
2110195

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:

2/8/95

12. Temp. Rec. at Lab:

17°C

13. Time Rec. at Lab:

1243

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

	LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION(ETC.)
1. Custody Seal(s)	3	105	SP 105	Worn	Liquid	2/7/95	
2. Custody Seal Nos.:	1		SP 106				
3. Chain-of-Custody Records:	5		107				
4. Traffic Reports or Packing List:	7		108				
5. Airbill:							
6. Airbill No.:							
7. Sample Tags:							
8. Sample Condition:							
9. Does information on custody reports, traffic reports and sample tags agree?							
10. Proper preservatives used:							
11. Date Rec. at Lab:							
12. Temp. Rec. at Lab:							
13. Time Rec. at Lab:							

ARCO PRODUCTS COMPANY

Division of Atlantic Richfield Company

Task Order No.

0276200

Chain of Custody

ARCO Facility no.	374	City (Facility)	Catalinach		Project manager (Consultant)	SHAW GRATAKANI		Laboratory name	SEQUAIA												
ARCO engineer	Mike Wheeler		Telephone no. (ARCO)			Telephone no. (Consultant)	4411 7500	Fax no. (Consultant)	4411 7539												
Consultant name	Pacific Env Group		Address (Consultant)		8025 Gate Lucy pl #440 San Jose				Contract number	07-073											
Sample I.D.	Lab no.	Container no.	Matrix		Preservation	Sampling date	Sampling time	BTEX 802/EPA 8020	BTEX/TPH EPA M602/8020/8015	TPH Modified 5015 Gas	Oil and Grease 413.1	TPH EPA 418.1/ISM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Headspace	Semi-Halide EPA 8010/7000 TTLC	CAN Method EPA 8010/7000 Lead Org/DHS	Lead EPA 7420/7421	Method of shipment	
SP101	3	X	X	116	1-7-95	13:00	X													-01	
SP102	X	Y	X	/	/	/	X													-02	
SP101	X	Y	Y	/	/	/	X													-03	
SP108	Y	X	Y	↓	↓	N	X													-04	
Condition of sample: G-001								Temperature received: 11°C												Remarks	
Relinquished by sampler M. Doder				Date 2-8-95	Time 7:50	Received by M. Doder		2/8/95												Lab number 9502583	
Relinquished by M. Doder				Date 2/8/95	Time	Received by M. Doder		2/8/95												Turnaround time 1 Business Day	
Relinquished by M. Doder				Date 2/8/95	Time	Received by M. Doder		2/8/95												Priority Rush 2 Business Days	
Relinquished by M. Doder				Date 2/8/95	Time	Received by M. Doder		2/8/95												Rush 2 Business Days	
Relinquished by M. Doder				Date 2/8/95	Time	Received by M. Doder		2/8/95												Expedited 5 Business Days	
Relinquished by M. Doder				Date 2/8/95	Time	Received by M. Doder		2/8/95												Standard 10 Business Days	

ARCO Products Company

Division of Atlantic Richfield Company

330-084.5B

Task Order No.

0276200

Chain of Custody

ARCO Facility no.	374	City (Facility)	OAKLAND	Project manager (Consultant)	SHAW GAIKANI	Laboratory name	SEQUOIA																	
ARCO engineer	MICHAEL WHELAN	Telephone no. (ARCO)		Telephone no. (Consultant)	408/7500408	Fax no. (Consultant)	408/7539																	
Consultant name	PACIFIC ENV GROUP	Address (Consultant)	8025 GATEWAY PL #440 SAN JOSE																					
Sample I.D.	Lab no.	Container no.	Matrix		Preservation		Sampling date	Sampling time	BTEX 60/2/EPA 8020	BTEX/TPH EPA M502/8020/8015	TPH Modified Soils Gas <input type="checkbox"/> Diesel <input type="checkbox"/>	Oil and Grease 413.1 <input type="checkbox"/> 413.2 <input type="checkbox"/>	TPH EPA 410.1/MS503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals <input type="checkbox"/> VOC <input type="checkbox"/>	Spent Metals <input type="checkbox"/> VOC <input type="checkbox"/>	CAN Metals EPA 8010/7000 TCLC <input type="checkbox"/> STLC <input type="checkbox"/>	Lead Org IDHS <input type="checkbox"/>	Lead EPA 7420/7421 <input type="checkbox"/>	Method of shipment		
			Soil	Water	Other	Ice			Acid															
SP105	3	X	X	HCl	2-7-95	13:00		X														Special detection Limit/reporting		
SP106	X	V	X	/				X																
SP107	X	Y	Y	/				X																
SP108	Y	X	Y	↓		↓		X																
																								Special QA/QC
																								Remarks
																								Lab number
																								Turnaround time
																								Priority Rush 1 Business Day <input type="checkbox"/>
																								Rush 2 Business Days <input type="checkbox"/>
																								Expedited 5 Business Days <input type="checkbox"/>
																								Standard 10 Business Days <input type="checkbox"/>
Condition of sample:												Temperature received:												
Relinquished by sampler				Date 2-8-95	Time 7:00	Received by M.D. 2/8/95																		
Relinquished by M.D. 2/8/95				Date 2/8/95	Time 11:00	Received by M.D. 2/8/95																		
Relinquished by				Date	Time	Received by laboratory	Date	Time																

FIELD SERVICES / O&M REQUEST

Work Order # 3382

SITE INFORMATION FORM

Identification

Project # 330-084-SA

Station # 0374

Site Address 6017 FOXCROFT

(A) 100-1000

(B) 100-1000

(C) 100-1000

(D) 100-1000

(E) 100-1000

(F) 100-1000

(G) 100-1000

(H) 100-1000

(I) 100-1000

(J) 100-1000

(K) 100-1000

(L) 100-1000

(M) 100-1000

(N) 100-1000

(O) 100-1000

(P) 100-1000

(Q) 100-1000

(R) 100-1000

(S) 100-1000

(T) 100-1000

(U) 100-1000

(V) 100-1000

(W) 100-1000

(X) 100-1000

(Y) 100-1000

(Z) 100-1000

Project Type

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

Ideal field date(s):

1st week of the 27 of Dec.

Prefield Contacts/Permits

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

Check Appropriate Category

Budget Hrs. _____

Actual Hrs. 2.5

Mob de Mob .57

2

Field Tasks: For General Description

- (1) CONTACT ME IN OFFICE IF PARAFAX IS CAUSING PROBLEMS See OK
- (2) TAKE LIDS INTO FIELD FOR SITE VISIT
- (3) REPLACE LIDS ON VESSELS #1 AND #2
- (4) LOCATE AUTO SHUT DOWN SWITCH AND SET AT 10 PSI
- (5) LOCATE SHUT-UP FOR SUE (INSIDE of Compound)
- (6) LOCATE BREAKER for SUE System AND RECORD THE AMPERAGE of 7AT FUSE OR BREAKER ~~no Breaker~~
- (7) OPERATE IRRIGATION SYSTEM ~~#1~~ AS A CHECK ON SYSTEM'S FUNCTION
- (8) SET TIMER ON IRRIGATION SYSTEM, but KEEP SYSTEM IRRIG. SYSTEM DRY
- (9) WATER PLANTS AROUND SYSTEM (Compound)
- (10) TURN ON SYSTEM
- (11) IDENTIFY LEAKS (If you FIND ONE, SHUT IT DOWN ? No major Leaks LEAKS Rainy Weather Spot Small Leaks Small Leak in roof Carbon lid)
- (12) WHAT TS SYSTEM FLOW RATE 85 RPM
- (13) DOES PUMP NEED SERVICING NO
- (14) FILL OUT DATA SHEET
- (15) PERFORM MONTHLY
- Comments, remarks, etc. from Field Staff (include problems encountered and out-of-scope work)
- (16) LEAVE SITE SAFETY PLAN

Completed by: PJP

Date: 1-1-95

Checked by: _____

Yellow Copy - O & M Tech

PACIFIC ENVIRONMENTAL GROUP, INC.

White Copy - Originator

Pink Copy - File

FIELD SERVICES / O&M REQUEST

Work Order # 2950

SITE INFORMATION FORM

Identification

Project # 330-084.5A

Station # 0374

Site Address 14127 Foothill Blvd

City LAUREL

County ALAMOGORDO

Project Manager J. HALL

Requestor ERIC W.

Client ARCO

Client P.O.C. MIKE WHITELAN

Date of request 1/9/95

Project Type

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

Ideal field date(s):

Prefield Contacts/Permits

<input type="checkbox"/> Cal Trans	Initials	Date
<input type="checkbox"/> County		
<input type="checkbox"/> City	FIS	R/ 1/16/95
<input type="checkbox"/> Private		
<input type="checkbox"/> Multi-Confidential Scheduling		
date(s):		

Check Appropriate Category

Budget Hrs.

Actual Hrs. 7

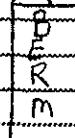
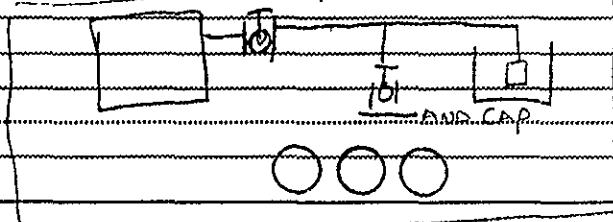
Mob de Mob 2

Field Tasks: For General Description

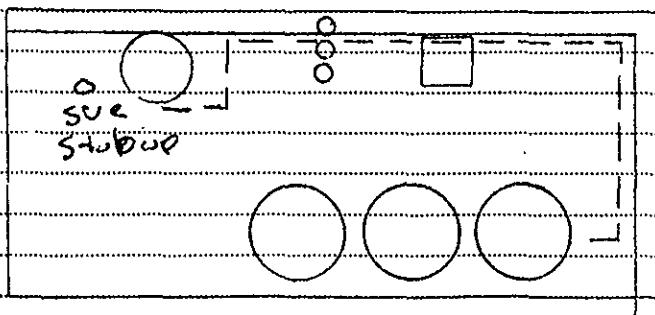
IN ADDITION TO STARTUP,

PURCHASE 2 VALVES,
1 AND 1" SCHEDULE 80
PIPELINEPLUMB SUMP, AND PLUMB SURGE TANK TO
TO DRUMS.

for Sump



LOCATION
OF NEW
PIPE
(WHERE
POSSIBLE)

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

--- NEW PIPING

PLAN VIEW

PACIFIC ENVIRONMENTAL GROUP, INC.

Completed by: PSP Date: 1-9-95
Checked by: _____

White Copy - Originator

Yellow Copy - O & M Tech

Pink Copy - File

W/O 2738

Initials	Date
F/S	RJ 1/13/95
Copy/Dist.	RJ ↓

Groundwater Extraction System

ARCO Service Station 0374
 6407 Telegraph at Alcatraz Avenue
 Oakland, California
 330-084.5A

Name: PS P

Date/Time: 1-10-95 2:46

Treatment System Readings			
System On Upon Arrival?	Start up	Electric Meter (kw-hrs)	01371
Effluent Totalizer (gallons)	36493	Effluent Flowrate (gpm)	8
W-2 Totalizer (gallons)	NA	Bag Filter INFL Pressure (psi)	8
W-2 Flowrate (gpm)	NA	Bag Filter EFFL Pressure (psi)	7
W-2 Hourmeter (hours)	NA	MID Pressure (1) Psi	3.5
		MID PRESSURE (2) Psi	1.5
W-2 Throttle Valve Position	100° open	EFFL Pressure (psi)	NA
Does Sump Pump Work?	Yes	DOES TRANSFER PUMP WORK?	Yes
Number of Spare Filters On-Site	5 Bulk Coarse	DOES PRESSURE SWITCH SHUT DOWN SYSTEM?	Yes
Enclosure Swept and Bleached?	No	IRRIGATION SYST. TESTED?	
PLANTS WATERED?		SYSTEM FLOW RATE?	8
Does PARAFAX Work?	? Yes	COMPRESSOR SEC. INLET?	
Batteries Replaced?	?	SURGE TANK LEVEL SWITCHES TESTED?	No or less
SURGE TANK CLEANED?	No	SURGE TANK LEVEL SWITCHES TESTED?	Yes

Comments _____

FIELD SERVICES / O&M REQUEST

Work Order # 2738

SITE INFORMATION FORM

IdentificationProject # 330-084 SAStation # 0374Site Address 6707 Foothill St.City AntiochState CACounty Contra CostaProject Manager: SHAW G.Requestor: ERIE W.Client: ALCOClient P.O.C.: MIKE WHELANDate of request: 1/9/95Project Type

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

Ideal field date(s): 1/9/95Prefield Contacts/Permits

	Initials	Date
<input type="checkbox"/> Cal Trans		
<input type="checkbox"/> County		
<input type="checkbox"/> City	<u>FIS</u>	<u>1/12/95</u>
<input type="checkbox"/> Private		
<input type="checkbox"/> Multi-Consultant Scheduling		
date(s)		

Check Appropriate CategoryBudget Hrs. Actual Hrs. 2.5Mob de Mob Field Tasks: For General DescriptionSAMPLE SYSTEMMONTHLYGAS / BTEXand SURGE TANKSP LandedasBEFORE BAG FILTERLABEL ASSP-102 SP-102SP-105 SP-106SP-106 SP-107SP-107 SP-108SP-108 SP-105MID-1MID-2ATEFLAT INFFILL OUT DATA SHEETMAKE SURE PRESSURE CAN NOT EXCEED 10 PSIComments, remarks, etc. from Field Staff (include problems encountered and out-of-scope work)Totaliz 000 36.49311 Data SheetAPPROX 8 GPMPSI 8 7.5 6 3.5 1.5Labbed Sample as per E.W.Completed by: PSL Date: 1/10/95

Checked by: _____

ARCO Projects Company Div. Atlantic Richfield Company			3300845A		Task Order No. 10374-94-5		Chain of Custody																	
ARCO Facility no.	0374	City (Facility)	OAKLAND		Project manager (Consultant)	Shaw Garakani		Laboratory name																
ARCO engineer	Mike Wheeler		Telephone no. (ARCO)			Telephone no. (Consultant)	(408) 441-7500	Fax no. (Consultant)																
Consultant name	Pacific Environmental		Address (Consultant)		2025 Gateway Place Suite 400 San Jose CA 95110		Contract number																	
Sample I.D.	Lab no.	Container no.	Matrix		Preservation		Sampling date	Sampling time	BTEX	BTEX/TPH	TPH Modified 80/15	TPH Gas	Oil and Grease	TPH	EPA 601/8010	EPA 624/6240	EPA 625/6270	TCLP	Sumi	Metals	VOC	CAM Metals EPA 601/8000	Lead Org/JDS	Method of shipment
			Soil	Water	Other	Ice			Acid	HPL	602/EPA 8020	EPA M602/BP20/8015	Diesel	413.1	413.2	EPA 410.1/MS503E				TLC	VOC	STLC	Lead EPA 7420/7121	
SP-108	3		X	X	X	11-0-95	1400	X																
SP-107	3						1405																	
SP-106	3						1410																	
SP-105	3						1415																	
SP-102	3		↓				1420	↓																
Condition of sample:								Temperature received:																
Relinquished by sampler				Date 1-11-95	Time 8:00	Received by																		
Relinquished by				Date	Time	Received by																		
Relinquished by				Date	Time	Received by laboratory					Date		Time											
Priority Rush 1 Business Day																						<input type="checkbox"/>		
Rush 2 Business Days																						<input type="checkbox"/>		
Expedited 5 Business Days																						<input type="checkbox"/>		
Standard 10 Business Days																						<input checked="" type="checkbox"/>		

2/7

FIELD SERVICES / O&M REQUEST

51 Work Order # 3073 RY

SITE INFORMATION FORM

Identification

Project # 330-084.5A

Station # 1407

Site Address: 1407 E. 2nd Street
 City: Bakersfield
 State: CA
 Zip: 93301
 County: Kern County

Project Manager: SHAW (L)

Requestor: ERIC W.

Client: APCO

Client P.O.C.: MIKE WITZLAU

Date of request: 1/25/95

Project Type

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

Ideal field date(s): DURING MONTHLY

Profield Contacts/Permits

- | | | |
|--|------------|--------|
| <input type="checkbox"/> Cal Trans | Initials | Date |
| <input type="checkbox"/> County | | |
| <input type="checkbox"/> City | FIS | 2/8/95 |
| <input type="checkbox"/> Private | | |
| <input type="checkbox"/> Multi-Consultant Scheduling | Copy/Dist. | RJ |
| date(s): | | |

Check Appropriate Category

Budget Hrs. 1

Actual Hrs. 1

Mob de Mob

Field Tasks: For General Description

COME TO ME FOR PARAFAX DISK

WHEN IN FIELD, GIVE ME A CALL

WHILE ON PHONE I WILL CONTACT PARAFAX IF WE CAN'T SOLVE PROBLEM OURSELVES

CHECK LIDS FOR DAMAGE: CARBON VESSEL #1 IS BOWED NO LEAKS

CHECK PRESSURE SETTING IN CUTOFF FOR SYSTEM - 8 PSI

REDUCE SETTING IF SYSTEM PARTS DAMAGED OK

CHECK FOR PROP 65 SIGN YES

HOW ARE THE LIDS FOR THE FIRST TWO DEBRIS? IS THERE A LEAK?
IS (HOW MUCH WATER DOES LEAK? IF YES ABOVE?)

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

TASK COMPLETED

Completed by: JV

Date: 2-7-95

Checked by: _____

PACIFIC ENVIRONMENTAL GROUP, INC.

White Copy - Originator

Yellow Copy - O & M Tech

Pink Copy - File

Work Auth# 02762 00 FIELD SERVICES / O&M REQUEST Work Order # 952843

SITE INFORMATION FORM

Identification

Project # 330-084.5B

Station # 0374

Site Address 11107 TELERIGATOR
Ave. (1) AC STREETS AVE.
CITYLAND
County ALAMEDA

Project Manager: SHAWG.

Requestor: ERIC W.

Client: ARCO

Client P.O.C.: MIKE WHISLAN

Date of request: 2/6/95

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		
City	F/S	2/8/95
Private		
Copy/Dist.	EY	↓
Multi-Consultant Scheduling dates:		

Check Appropriate Category

Budget Hrs. —

Actual Hrs. 2

Mob de Mob 1.5

Field Tasks: For General Description

SAMPLE

GAS/BTEX

BI MONTHLY

Bi monthly is every other
month
(FEB, APRIL, JUNE, AUGUST
OCT, DEC)

SP105

BI MONTHLY

SP106

BI MONTHLY

SP107

BI MONTHLY

SP108

BI MONTHLY

FILL OUT DATA SHEET

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

SP105 → SP106 → SP107 → SP108
(JULY) (MAY) (MAY) (JULY)

Monthly Sampling Completed

Groundwater Extraction System

ARCO Service Station 0374
6407 Telegraph at Alcatraz Avenue
Oakland, California

Name: JV

Date/Time: 2-7-95

Treatment System Readings			
System On Upon Arrival?	<u>NO Air compressor switch was turn off</u>	Electric Meter (kw-hrs)	<u>01565</u>
Effluent Totalizer (gallons)	<u>0041399</u>	Effluent Flowrate (gpm)	<u>6</u>
W-2 Totalizer (gallons)	<u>N/A</u>	Bag Filter INFL Pressure (psi)	<u>7</u>
W-2 Flowrate (gpm)	<u>N/A</u>	Bag Filter EFFL Pressure (psi)	<u>7</u>
W-2 Hourmeter (hours)	<u>N/A</u>	MID Pressure (1) Psi	<u>3.5</u>
		MID PRESSURE (2) Psi	<u>1.5</u>
W-2 Throttle Valve Position	<u>Full open</u>	EFFL Pressure (psi)	<u>0</u>
Does Sump Pump Work?	<u>Yes</u>	DOES TRANSFER PUMP WORK?	<u>Yes</u>
Number of Spare Filters On-Site	<u>5</u>	DOES PRESSURE SWITCH SHUT DOWN SYSTEM?	<u>Yes</u>
Enclosure Swept and Bleached?	<u>Ok</u>	IRRIGATION SYST. TESTED?	<u>No</u>
PLANTS WATERED?		SYSTEM FLOW RATE?	<u>6 gpm</u>
Does PARAFAX Work?	<u>NO</u>	COMPRESSOR SERVICED?	<u>Not this visit</u>
Batteries Replaced?	<u>Where</u>	SURGE TANK LEVEL SWITCHES TESTED?	
SURGE TANK CLEANED?	<u>NO</u>		<u>Yes</u>

Comments _____

ARCO Products Company

Division of Atlantic Richfield Company

330-084515

Task Order No.

0276200

Chain of Custody

ARCO Facility no.	374	City (Facility)	Oakland	Project manager (Consultant)	SHAW GAIKANI	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)	8025 GATE WAY pl # 440 San Jose	Contract number																				
Sample I.D.	Lab no.	Container no.	Matrix		Preservation		Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH EPA M627/8020/8015	TPH Modified 8015 Gas Diesel	Oil and Grease 413.1 <input type="checkbox"/> 413.2 <input checked="" type="checkbox"/>	TPH EPA 418.1/SM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCIP Metals <input type="checkbox"/> VOC <input type="checkbox"/> VVA <input type="checkbox"/>	Semivolatile Organics <input type="checkbox"/> STLC <input type="checkbox"/>	CMM Metals EPA 601/7000 TTC <input type="checkbox"/>	Lead Org/DHS <input type="checkbox"/> Lead EPA 720/7421 <input type="checkbox"/>	Method of shipment			
			Soil	Water	Other	Ice															Acid			
Sp105	3	X	X	HCl	2-7-95	13:10	X																	
Sp106	X	X	X	/			X																	
Sp107	X	X	X	/			X																	
Sp108	X	X	X	/			X																	
Special detection Limit/reporting																								
Special QA/QC																								
Remarks																								
Lab number																								
Turnaround time																								
Priority Rush 1 Business Day <input type="checkbox"/>																								
Rush 2 Business Days <input type="checkbox"/>																								
Expedited 5 Business Days <input type="checkbox"/>																								
Standard 10 Business Days <input checked="" type="checkbox"/>																								
Condition of sample:									Temperature received:															
Relinquished by sampler <i>Jay</i>									Date 2-8-95	Time 7:00	Received by													
Relinquished by									Date	Time	Received by													
Relinquished by									Date	Time	Received by laboratory					Date	Time							

FIELD SERVICES / O&M REQUEST JV Work Order # 3595

SITE INFORMATION FORM

Identification

Project # 330-084-5B

Station # 034

Site Address 12475 E. 20th St.

City TAKOMA PARK

County D.C. & MD

Project Manager SHAW G.

Requestor ERIC W.

Client ARCO

Client P.O.C. MIKE WITZLAU

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):

2/13/95

Prefield Contacts/Permits

- | | | |
|--|----------|---------|
| <input type="checkbox"/> Cal Trans | Initials | Date |
| <input type="checkbox"/> County | | |
| <input type="checkbox"/> City F/S | RJ | 2/15/95 |
| <input type="checkbox"/> Private | | |
| <input type="checkbox"/> Multi-Consultant Scheduling | | |
| dates(s): | | |

Check Appropriate Category

Budget Hrs. _____

Actual Hrs. 3

Mob de Mob 5

Field Tasks: For General Description

- RESTART SYSTEM

SYSTEM SHUTDOWN ON HIGH INLET PRESSURE. CALL FROM FIELD WITH PRESSURE SWITCH SETTING (RAISE TO 8 PSI IF NOT THAT HIGH).
 — MANUALLY ACTIVATE PAPAFAX

- BACKFLUSH 1ST DRUM AND SECOND DRUM

CALL FROM FIELD

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

Arco Station Closed Enclosed

Power still on site Pole in Rd

Pre filter 4 psi Pre C1 3 psi Pre C2 1 psi C3 0 psi
at 5:50 pm

Pressure switch set 8 psi

Back flush 1st carbon no change
Papafax fax to office

Completed by: PSF Date: 2/14/95

Checked by: _____

PACIFIC ENVIRONMENTAL GROUP, INC.

Work Order # 0276200 FIELD SERVICES / O&M REQUEST

Work Order # 952967

SITE INFORMATION FORM

Identification

Project # 330-084.5B

Station # 10374r

Site Address 17107 TECUMSEH
BLK 10 APT 1034A
OAKWOOD

County ALAMEDA

Project Manager SHAWG

Requestor ERIC W.

Client ARCO

Client P.O.C. MIKE WHALEN

Date of request 8/6/95

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		
City	F/S	8/18/95
Private		
Multi-Consultant Scheduling date(s)	Copy/Dist. RF	

Check Appropriate Category

Budget Hrs. _____

Actual Hrs. 2

Mob de Mob 2

Field Tasks: For General Description

SAMPLE

GAS/BTEX

Bi monthly

Bi monthly is every other

month

(FEB, APRIL, JUNE, AUGUST
OCT, DEC)

SP105

Bi monthly

SP106

Bi monthly

SP107

Bi monthly

SP108

Bi monthly

FILL OUT DATA SHEET

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

SP105 → SP106 → SP107 → SP108
(INFO) (MPD) (MSD) (EFFL)

System down on arrival High Tank Level
Check out system Found Transfer Pump to
Be burnt out Removed transfer pump and
Took it to be repaired

Completed by: JV Date: 3-3-95

Checked by: _____

Groundwater Extraction System

ARCO Service Station 0374
6407 Telegraph at Alcatraz Avenue
Oakland, California

Name: JV Date/Time: 3-3-95

Treatment System Readings			
System On Upon Arrival?	NO High Level	Electric Meter (kw-hrs)	✓
Effluent Totalizer (gallons)	IN TRANSFER TANK 000 53290	Effluent Flowrate (gpm)	—
W-2 Totalizer (gallons)	✓	Bag Filter INFL Pressure (psi)	—
W-2 Flowrate (gpm)	✓	Bag Filter EFPL Pressure (psi)	—
W-2 Hourmeter (hours)	✓	MID Pressure (1) Psi	—
		MID PRESSURE (2) Psi	—
W-2 Throttle Valve Position	✓	EFFL Pressure (psi)	—
Does Sump Pump Work?	YES	DOES TRANSFER PUMP WORK?	NO
Number of Spare Filters On-Site	—	DOES PRESSURE SWITCH SHUT DOWN SYSTEM?	✓
Enclosure Swept and Bleached?	✓	IRRIGATION SYST. TESTED?	✓
Plants Watered?	—	SYSTEM FLOW RATE?	—
Does PARAFAX Work?	✓	COMPRESSOR SERVICED?	—
Batteries Replaced?	—	SURGE TANK LEVEL SWITCHES TESTED?	—
GURGE TANK CLEANED?	—		

Comments System down do to High Tank Level
 Check out system Found Transfer pump
 MOTOR to Be Burned out I removed it to
 Take it for Repairs