PACIFIC
ENVIRONMENTAL
GROUP, INC.

June 16, 1997
Project 311-127.5A

Mr. Scott Seery
Alameda County Health Care Services
1131 Harbor Bay Parkway
Oakland, California 94502

Re: Unocal Service Station 5367
500 Bancroft Avenue at Dowling Boulevard
San Leandro, California

Dear Mr. Seery:

On behalf of Tosco Marketing Company (Tosco), Pacific Environmental Group, Inc. (PACIFIC) has prepared this letter to formally notify you of the status of remedial activities at the above referenced site. As noted in PACIFIC's May 15, 1997 letter report titled ***Remedial Action Performance Summary - January through March 1997*** (a copy of which was forwarded to you) the remedial system at this site was shut down on March 13, 1997. The following sections provide the rationale for discontinuing operation of the system.

During February and March of this year, the soil vapor extraction (SVE) system was operated in a pulsed mode in an attempt to increase petroleum hydrocarbon vapor recovery. However, influent concentrations in the SVE system remained at nondetectable levels. Vapor samples collected from the extraction wells also exhibited hydrocarbon concentrations at or near the detection limits. In our opinion, continued operation of the SVE system would provide little incremental increase in mass removal.

The extent of the dissolved-phase hydrocarbon plume has been delineated by off-site wells MW-6, MW-7, MW-9, and MW-10, and on-site wells MW-4 and MW-5. These wells have consistently exhibited total purgeable petroleum hydrocarbons quantified as gasoline (TPPH-g) and benzene concentrations at nondetectable levels throughout the monitoring history, with the exception of sporadic results slightly above the detection limits. Concentrations are generally decreasing across the plume. Analysis of recent samples collected from monitoring wells MW-2 and MW-8 show nondetectable petroleum hydrocarbon levels. Groundwater monitoring is continuing on the semi-annual schedule.

2025 Gateway Place, Suite 440, San Jose, California 95110 (408) 441-7500 FAX (408) 441-7539

Given the diminished hydrocarbon vapor recovery, the apparent stability of the dissolved hydrocarbon plume, and recent State guidance recommending passive remediation as the preferred alternative, we believe that discontinuing active remediation at the site is an appropriate action at this time. Should future groundwater monitoring results indicate a significant change in site conditions, the need for active remediation will be reevaluated.

Should you have any questions regarding the contents of this letter, please do not hesitate to call our office.

Sincerely,

Pacific Environmental Group, Inc.

Andrew D. Lehane
Project Engineer
RCE 55798

cc: Ms. Tina Berry, Tosco Marketing Company

PACIFIC
ENVIRONMENTAL
GROUP, INC.

May 15, 1997
Project 311-127.5A

Ms. Tina Berry
Tosco Marketing Company
Environmental Compliance Department
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

Re: ***Remedial Action Performance Summary - January through March 1997***
Unocal Service Station 5367
500 Bancroft Avenue at Dowling Boulevard
San Leandro, California

Dear Ms. Berry:

This letter presents a remedial action performance summary for the site referenced above. Attachment A presents the remedial performance summary, which includes hydrocarbon mass removal and key operating parameters. Certified analytical reports and chain-of-custody documentation are presented as Attachment B, and field data sheets are included as Attachment C. The status of recent remedial activities is presented below.

Remedial System Performance Evaluation

- During the current reporting period, the groundwater extraction (GWE) system ran continuously except for when the bag filter was changed on the February 6, 1997 visit. The GWE system's function was for dewatering to enhance soil vapor recovery.
- During February and March the soil vapor extraction (SVE) system was operated in pulsed mode in an attempt to increase petroleum hydrocarbon vapor recovery. However, influent concentrations remained at nondetectable levels. Vapor samples collected from the extraction wells showed low hydrocarbon concentrations. The SVE and dewatering system was shut down on March 13, 1997. Pacific Environmental Group, Inc. (PACIFIC) recommends discontinuing operation of the remedial system since additional operation would provide little incremental increase in mass removal.

- Throughout operation of the remedial system, a total of 179.2 pounds (29.4 gallons) TPPH-g were removed by the SVE system, and 108.3 pounds (17.7 gallons) TPPH-g were removed by the GWE system.

Recommendations

- The extent of the dissolved-phase hydrocarbon plume has been delineated by off-site wells MW-6, MW-7, MW-9, and MW-10, and on-site wells MW-4 and MW-5. These wells have consistently shown TPPH-g and benzene concentrations at nondetectable levels throughout the monitoring history, with the exception of occasional hits reported slightly above the detection level. Concentrations are generally decreasing across the plume. Analyses of recent samples collected from monitoring wells MW-2 and MW-8 show nondetectable petroleum hydrocarbon levels.
- PACIFIC recommends installing ORC's in MW-1 and MW-3 to enhance biodegradation and attenuation of the dissolved hydrocarbon plume. Groundwater monitoring should continue on the semi-annual schedule.

Should you have any questions regarding the contents of this remedial action performance summary, please do not hesitate to call our office.

Sincerely,

Pacific Environmental Group, Inc.

Jessica Nelligan
Staff Engineer

Andrew D. Lehane
Project Engineer
RCE 55798

REGISTERED PROFESSIONAL ENGINEER
ANDREW D. LEHANE
55798
EXP. 12-31-00
CIVIL
STATE OF CALIFORNIA

Attachments: Attachment A - Remedial Action Performance Summary
Attachment B - Certified Analytical Reports and Chain-of-Custody Documentation
Attachment C - Field Data Sheets

cc: Mr. Scott Seery, Alameda County Health Care Services
Mr. Mike Bakaldin, San Leandro Fire Department

3111275A/QPR1Q97

ATTACHMENT A

REMEDIAL ACTION PERFORMANCE SUMMARY

ATTACHMENT A

REMEDIAL ACTION PERFORMANCE SUMMARY: FIRST QUARTER 1997

GROUNDWATER-BASED REMEDIAL SYSTEM

Site Name: Unocal Service Station 5367
Site Address: 500 Bancroft Avenue at Dowling, San Leandro
Abatement Equipment: Two 1,000-lb. Carbon Vessels
Start-Up **Date: March 1996**

Permitting Agency: City of San Leandro
Permit No.: SD-023
Permit Expiration Date: 3/15/97
Estimated Shutdown Date: Unknown

REMEDIAL OBJECTIVES

- o Mass Removal
- o Regulatory Compliance

OPERATIONAL DATA

Treatment System Data

	January	February	March	
Operational Status	Operational	Operational	Deactivated	
Groundwater Volume Treated (gals)	2,252	122,260	244,770	Table 1 Page A-3

Treatment System Analytical Data Summary

	Influent	Effluent	
EPA Method 8020 Analyses	Detected	ND	Table 2 Page A-4

TPH and Benzene Summary

	January	February	March		
Influent TPPH-gasoline (µg/L)	19,000	19,000	36,000		Table 1 Page A-3
Influent Benzene (µg/L)	44	61	91		Table 1 Page A-3
Effluent TPPH-gasoline (µg/L)	ND	ND	ND		Table 2 Page A-4
Effluent Benzene (µg/L)	ND	ND	ND	Cumulative	Table 2 Page A-4
Mass TPPH-gasoline Removed (lbs)	0.3	19.3	56.2	108.3	Table 1 Page A-3
Mass Benzene Removed (lbs)	0.00	0.05	0.16	0.39	Table 1 Page A-3

17.78 gals

0.064 gals

REMEDIAL ACTION PERFORMANCE EVALUATION

Mass Removal *Approximately 75.8 pounds of TPPH-gasoline and 0.21 pound of benzene were removed during the current reporting period. The treatment system was deactivated March 13, 1997.*

Regulatory Compliance *The remedial system operated in compliance with all discharge requirements.*

ACTIONS/RECOMMENDATIONS

- o *Discontinue operation of the SVE and dewatering system during the second quarter of 1997.*

NOTES:

NS = Not sampled
ND = Not detected above detection limit
N/A = Not available or not applicable
gals = Gallons
µg/L = Micrograms per liter
lbs = Pounds
† = System start-up March 1996 performed by PSI (prior consultant); analytical results for March and April not available.
Note: When appropriate, tabulated data is followed by associated graphical presentation.

ATTACHMENT A (cont.)

REMEDIAL ACTION PERFORMANCE SUMMARY: FIRST QUARTER 1997

SOIL-BASED REMEDIAL SYSTEM

Site Name: Unocal Service Station 5367
Site Address: 500 Bancroft Avenue at Dowling, San Leandro
Abatement Equipment: Two 1,000-lb. Carbon Vessels
Start-Up Date: March 1996

Permitting Agency: BAAQMD
Permit Number: 25758
Permit Expiration Date: 2/13/97
Estimated Shutdown Date: Unknown

REMEDIAL OBJECTIVES

- Mass Removal
- Regulatory Compliance

OPERATIONAL DATA

Treatment System Data

	January	February	March	
Operational Status	Operational	Pulsing - Down	Deactivated	
Average System Flow Rate (scfm)	40	45	149	Table 3 Page A-4

TPPH and Benzene Summary

	January		February		March			
Influent TPPH-gasoline (ppmv)	ND	ND	ND	N/A	ND	N/A		Table 3 Page A-4
Influent Benzene (ppmv)	ND	ND	ND	N/A	ND	N/A		Table 3 Page A-4
Effluent TPPH-gasoline (ppmv)	ND	ND	ND	N/A	ND	N/A		Table 4 Page A-5
Effluent Benzene (ppmv)	ND	ND	ND	N/A	ND	N/A	Cumulative	Table 4 Page A-5
Mass TPH Removed (lbs)		0.0		0.0		0.0	179.2	Table 3 Page A-4
Mass Benzene Removed (lbs)		0.00		0.00		0.00	0.46	Table 3 Page A-4

29.42 gal

0.075 gal

REMEDIAL ACTION PERFORMANCE EVALUATION

Mass Removal *The SVE system operated in pulsed mode to increase hydrocarbon mass removal. However, influent concentrations remained at non-detectable levels throughout the current reporting period.*

Regulatory Compliance *The remedial system operated in compliance with all BAAQMD permit requirements.*

ACTIONS/RECOMMENDATIONS

- *Discontinue operation of the SVE and dewatering system since mass removal does not appear feasible.*

NOTES:

ND = Not detected above detection limits
N/A = Not available or not applicable
ppmv = Parts per million by volume
scfm = Standard cubic foot per minute
‡ = Average TPPH reading for March 1996 using field instruments (provided by prior consultant).
Note: When appropriate, tabulated data is followed by associated graphical presentation.

Table 1

Groundwater Extraction System Performance Data

Unocal Service Station 5367
500 Bancroft Avenue at Dowling
San Leandro, California

Sample ID	Date Sampled	Volume Reading (gallons)	Average Flow Rate (gpm)	TPPH as Gasoline: Influent Concentration (µg/L)	TPPH as Gasoline: Removed This Period (lbs)	TPPH as Gasoline: Removed To Date (lbs)	Benzene: Influent Concentration (µg/L)	Benzene: Removed This Period (lbs)	Benzene: Removed To Date (lbs)
INFL	03/18/96 a	0	5.9	NS	N/A	0.0	NS	N/A	0.00
INFL	05/16/96 b	133,800	1.6	17,000 c	19.0	19.0	98 c	0.11	0.11
INFL	06/06/96	216,850	2.7	5,500	7.8	26.8	35	0.05	0.16
INFL	07/17/96	233,320	0.3	1,700	0.5	27.2	14	0.003	0.16
INFL	08/05/96	249,570	0.6	1,800	0.2	27.5	10	0.002	0.16
INFL	09/10/96	249,820	N/A	9,700	0.0	27.5	29	0.000	0.16
INFL	10/15/96	266,527	0.3	54,000	4.4	31.9	200	0.016	0.18
INFL	11/14/96 d	267,653	N/A	NS c	0.5	32.4	NS c	0.002	0.18
INFL	12/11/96 d	267,663	N/A	12,000	0.0	32.4	56	0.000	0.18
INFL	01/09/97	270,121 e	N/A	19,000	0.3	32.8	44	0.001	0.18
INFL	02/06/97	122,000 e	3.0	19,000	19.3	52.1	61	0.053	0.23
INFL	03/06/97	314,460	4.8	36,000	44.1	96.2	91	0.122	0.35
INFL	03/13/97 g	367,040	5.2	NS c	12.1	108.3	NS c	0.033	0.39

REPORTING PERIOD:	**12/11/96 - 03/13/97 (g)**
TOTAL DAYS OF OPERATION:	**291**
PERIOD DAYS OF OPERATION:	**66**
TOTAL GALLONS EXTRACTED:	**637,151**
PERIOD GALLONS EXTRACTED:	**369,282**
TOTAL POUNDS TPPH-GASOLINE REMOVED:	**108.3**
TOTAL GALLONS TPPH-GASOLINE REMOVED:	**17.7**
TOTAL POUNDS BENZENE REMOVED:	**0.39**
TOTAL GALLONS BENZENE REMOVED:	**0.05**
PERIOD POUNDS TPPH-GASOLINE REMOVED:	**75.8**
PERIOD POUNDS BENZENE REMOVED:	**0.21**
PERIOD AVERAGE FLOW RATE (gpm):	**3.9**

TPPH = Total purgeable petroleum hydrocarbons
gpm = Gallons per minute
µg/L = Micrograms per liter
lbs = Pounds
NS = Not sampled
N/A = Not available or not applicable

a. GWE system start-up by PSI.
b. Project transferred to Pacific Environmental Group.
c. No analytical data available; assume steady-state concentrations.
d. Pumps are on but not cycling any groundwater.
e. Totalizer replaced 1/9/97 (starting at 00010 gals).
f. Days of operation and average flow rate estimated.
g. GWE and SVE systems deactivated on 3/13/97.

Mass removed is an approximation calculated using averaged concentrations.

Table 2
Groundwater Extraction System Analytical Data
Total Petroleum Hydrocarbons
(TPPH and BTEX Compounds)

Unocal Service Station 5367
500 Bancroft Avenue at Dowling
San Leandro, California

Date Sampled	TPPH (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)
Influent Samples					
05/16/96	17,000	98	92	1,300	3,900
06/06/96	5,500	35	17	200	780
07/17/96	1,700	14	<5.0	91	89
08/05/96	1,800	10	<5.0	160	410
09/10/96	9,700	29	<10	600	1,600
10/15/96	54,000	200	90	2,800	8,900
12/11/96	12,000	56	21	820	2,700
01/09/97	19,000	44	<20	1,200	2,700
02/06/97	19,000	61	10	1,200	2,700
03/06/97	36,000	91	1,300	1,600	7,800
Midpoint Samples					
05/16/96	<50	<0.50	<0.50	<0.50	<0.50
06/06/96	<50	<0.50	<0.50	<0.50	<0.50
07/17/96	<50	<0.50	<0.50	<0.50	<0.50
08/05/96	<50	<0.50	<0.50	<0.50	<0.50
09/10/96	<50	<0.50	<0.50	<0.50	0.60
10/15/96	<50	<0.50	<0.50	<0.50	0.60
11/14/96	<50	<0.50	<0.50	<0.50	<0.50
12/11/96	<50	<0.50	<0.50	<0.50	<0.50
01/09/97	<50	<0.50	<0.50	<0.50	<0.50
02/06/97	<50	<0.50	<0.50	<0.50	<0.50
03/06/97	<50	<0.50	<0.50	<0.50	<0.50
Effluent Samples					
05/16/96	<50	<0.50	<0.50	<0.50	<0.50
06/06/96	<50	<0.50	<0.50	<0.50	<0.50
07/17/96	<50	<0.50	<0.50	<0.50	<0.50
08/05/96	<50	<0.50	<0.50	<0.50	<0.50
09/10/96	<50	<0.50	<0.50	<0.50	<0.50
10/15/96	<50	<0.50	<0.50	<0.50	<0.50
11/14/96	<50	<0.50	<0.50	<0.50	<0.50
12/11/96	<50	<0.50	<0.50	<0.50	<0.50
01/09/97	<50	<0.50	<0.50	<0.50	<0.50
02/06/97	<50	<0.50	<0.50	<0.50	<0.50
03/06/97	<50	<0.50	<0.50	<0.50	<0.50

TPPH = Total purgeable petroleum hydrocarbons
µg/L = Micrograms per liter
a. Project transferred to Pacific Environmental Group, Inc. from PSI.

Table 3

Soil Vapor Extraction System Performance Data

Unocal Service Station 5367
500 Bancroft Avenue at Dowling
San Leandro, California

Sample ID	Date Sampled	Hourmeter Reading (hours)	Net Hours of Operation (hours)	Flow Rate (scfm)	TPPH as Gasoline: Influent Concentration (ppmv)	TPPH as Gasoline: Removal Rate (lbs/day)	TPPH as Gasoline: Removed to Date (lbs)	Benzene: Influent Concentration (ppmv)	Benzene: Removal Rate (lbs/day)	Benzene: Removed to Date (lbs)
INFL	03/18/96 a	N/A b	0 b	250	25 c	2.4	0.0	N/A c	N/A	N/A
INFL	03/19/96	N/A b	24 b	240	22 c	2.0	2.2	N/A c	N/A	N/A
INFL	03/20/96	N/A b	24 b	260	12 c	1.2	3.8	N/A c	N/A	N/A
INFL	03/21/96	N/A b	24 b	250	4 c	0.4	4.6	N/A c	N/A	N/A
INFL	03/22/96	N/A b	24 b	240	20 c	1.8	5.7	N/A c	N/A	N/A
INFL	04/08/96	N/A b	408 b	270	14 c	1.4	33.4	N/A c	N/A	N/A
INFL	04/26/96	N/A b	432 b	240	10 c	0.9	54.5	N/A c	N/A	N/A
INFL	05/30/96 d	N/A b	0	110	2.4	0.1	54.5	ND	0.00	0.00
INFL	06/06/96	N/A b	168	120	3.3	0.2	55.4	ND	0.00	0.01
INFL	06/26/96	N/A b	480	120	ND	0.1	58.0	ND	0.00	0.03
INFL	07/17/96	N/A b	504	120	ND	0.1	60.3	ND	0.00	0.05
INFL	07/26/96	N/A b	216	110	11	0.5	62.8	ND	0.00	0.06
INFL	08/05/96	6,372.5 e	240	119	ND	0.1	65.7	ND	0.00	0.07
INFL	08/19/96	6,414.1	42	115	2.6	0.1	65.9	ND	0.00	0.07
INFL	09/10/96	6,939.4	525	123	7.3	0.3	70.9	0.040	0.00	0.10
INFL	09/26/96	7,321.0	382	78	33	1.0	81.4	0.10	0.00	0.13
INFL	10/15/96 f	7,777.0	456	90	15	0.5	95.7	0.072	0.00	0.18
INFL	10/28/96	8,090.4	313	78	61	1.8	111.1	0.25	0.01	0.23
INFL	11/14/96	8,497.4	407	270	52	5.3	171.8	0.22	0.02	0.44
INFL	11/27/96	8,552.4	55	100	4.0 g	0.2	178.1	ND g	0.00	0.46
INFL	12/11/96	8,890.8	338	64	ND	0.0	179.2	ND	0.00	0.46
INFL	12/20/96	9,102.0	211	64	ND	0.0	179.2	ND	0.00	0.46
INFL	01/09/97	9,582.1	480	35	ND	0.0	179.2	ND	0.00	0.46
INFL	01/22/97	9,744.6	163	45	ND	0.0	179.2	ND	0.00	0.46
INFL	02/06/97 h	10,092.2	348	45	ND	0.0	179.2	ND	0.00	0.46
INFL	03/06/97 j	10,093.7	2	155	ND	0.0	179.2	ND	0.00	0.46
INFL	03/13/97 k	10,263.0	169	142	NS	0.0	179.2	NS	0.00	0.46
REPORTING PERIOD:	**12/20/96 - 03/17/97 (k)**									
TOTAL POUNDS REMOVED:							**179.2**			**0.46**
TOTAL GALLONS REMOVED:							**29.4**			**0.06**
PERIOD POUNDS REMOVED:						**0.0**			**0.00**	
PERIOD GALLONS REMOVED:						**0.0**			**0.00**	
TOTAL DAYS OF OPERATION:					**268 (b)**					
PERIOD DAYS OF OPERATION:					**48**					
PERIOD PERCENT OPERATIONAL:					**58%**					

TPPH = Total purgeable petroleum hydrocarbons
scfm = Standard cubic feet per minute
ppmv = Parts per million by volume
lbs = Pounds
N/A = Not available or not applicable
ND = Not detected above the detection limit

a. System startup on March 18, 1996.
b. No hourmeter installed on system; assumed continuous operation to estimate mass removal.
c. TPPH concentrations taken using a flame-ionization detector; benzene concentrations not available.
d. PACIFIC became site consultant; prior data provided by former consultant.
e. Hourmeter installed 8/5/96 (initial reading: 6372.5 hours); system was running upon arrival.
f. Assumed influent/effluent labels on samples were switched.
g. 11/27/96 samples exceeded hold time (holiday); resampled 12/2/96.
h. SVE system turned off for pulsing.
j. SVE system re-started for pulsing.
k. SVE and GWE systems shut down 3/13/97.

Mass removed is an approximation calculated using averaged mass removal rates; removal rates are instantaneous.
Concentrations shown in ppmv are calculated from micrograms per liter (as reported by the laboratory).
See certified analytical reports for detection limits.

Table 4

Soil Vapor Extraction System Emission Data

Unocal Service Station 5367
500 Bancroft Avenue at Dowling
San Leandro, California

Sample I.D.	Date Sampled		Net Hours of Operation (hours)	Flow Rate (scfm)	TPPH as Gasoline: Effluent Concentration (ppmv)	TPPH as Gasoline: Destruction Efficiency (percent)	TPPH as Gasoline: Emission Rate (lbs/day)	Benzene: Effluent Concentration (ppmv)	Benzene: Emission Rate (lbs/day)
EFFL	03/18/96	a	0	250	ND	N/A	N/A	N/A	N/A
EFFL	03/19/96		24	240	ND	N/A	N/A	N/A	N/A
EFFL	03/20/96		24	260	ND	N/A	N/A	N/A	N/A
EFFL	03/21/96		24	250	ND	N/A	N/A	N/A	N/A
EFFL	03/22/96		24	240	ND	N/A	N/A	N/A	N/A
EFFL	04/08/96		408	270	ND	N/A	N/A	N/A	N/A
EFFL	04/26/96		432	240	ND	N/A	N/A	N/A	N/A
EFFL	05/30/96	b	0	110	ND	N/A	0.10	ND	0.001
EFFL	06/06/96		168	120	3.1	7.1	0.14	ND	0.001
EFFL	06/26/96		480	120	ND	N/A	0.11	ND	0.001
EFFL	07/17/96		504	120	ND	N/A	0.11	ND	0.001
EFFL	07/26/96		216	110	2.8	74.5	0.12	ND	0.001
EFFL	08/05/96		240	119	ND	N/A	0.11	ND	0.001
EFFL	08/19/96		42	115	ND	N/A	0.10	ND	0.001
EFFL	09/10/96		525	123	ND	N/A	0.11	ND	0.001
EFFL	09/26/96		382	78	ND	N/A	0.07	ND	0.001
EFFL	10/15/96	c	456	90	ND	N/A	0.08	ND	0.001
EFFL	10/28/96		313	78	ND	N/A	0.07	ND	0.001
EFFL	11/14/96		407	270	ND	N/A	0.24	ND	0.002
EFFL	11/27/96		55	100	ND	N/A	0.09	ND	0.001
EFFL	12/11/96		338	64	ND	N/A	0.06	ND	0.001
EFFL	12/20/96		211	64	ND	N/A	0.06	ND	0.001
EFFL	01/09/97		480	35	ND	N/A	0.03	ND	0.0003
EFFL	01/22/97		163	45	ND	N/A	0.04	ND	0.0004
EFFL	02/06/97		348	45	ND	N/A	0.04	ND	0.0004
EFFL	03/06/97	d	2	155	ND	N/A	0.14	ND	0.0014

TPPH = Total purgeable petroleum hydrocarbons
scfm = Standard cubic feet per minute
ppmv = Parts per million by volume, converted from micrograms per liter, as reported by the laboratory
lbs = Pounds
N/A = Not available or not applicable
ND = Not detected above the detection limit

a. System startup on March 18, 1996.
b. Pacific Environmental Group, Inc. becomes consultant to site; all prior data provided by former consultant.
c. Assumed influent/effluent labels on samples were switched.
d. SVE and GWE systems shut down 3/13/97.

Destruction efficiencies and emission rates for ND concentrations are calculated using the detection limit.
Concentrations shown in ppmv are calculated from micrograms per liter.
See certified analytical reports for detection limits.

Table 5
Soil Vapor Extraction System Analytical Data
Individual Wells

Unocal Service Station 5367
500 Bancroft Avenue at Dowling
San Leandro, California

Well I.D.	Date Sampled	TPPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)
MW1	05/30/96	36	ND	0.48	0.46	3.3
	06/26/96	67	ND	ND	0.26	1.7
	07/26/96	160	11	31	4.8	24
	08/19/96	28	ND	0.23	0.28	1.2
	09/26/96	1,100	6.4	11	18	19
	10/28/96	1,000	ND	30	3.5	96
	12/02/96	950	ND	40	5.9	120
	12/20/96	13	ND	ND	ND	0.45
	01/22/97	14	ND	0.27	0.60	2.1
	03/06/97	36	ND	1.1	0.66	3.8
MW2	05/30/96	180	0.25	3.8	4.5	25
	06/26/96	23	ND	0.30	0.52	3.5
	07/26/96	46	0.81	1.9	0.95	2.4
	08/19/96	110	0.17	ND	1.4	1.8
	09/26/96	230	0.70	1.6	2.2	1.4
	10/28/96	250	1.3	3.3	0.50	1.1
	12/02/96	11	ND	ND	ND	0.14
	12/20/96	ND	ND	ND	ND	ND
	01/22/97	20	ND	0.47	0.51	28
	03/06/97	70	0.27	2.9	1.8	8.8
MW3	05/30/96	20	ND	0.25	0.48	3.0
	06/26/96	ND	ND	ND	ND	0.35
	07/26/96	27	0.62	1.2	0.61	2.3
	08/19/96	120	0.43	0.16	2.6	3.9
	09/26/96	46	0.36	0.45	0.24	0.37
	10/28/96	NA	NA	NA	NA	NA
	11/14/96	76	ND	ND	0.31	0.96
	12/02/96	15	ND	ND	ND	0.55
	12/20/96	ND	ND	ND	0.42	0.87
	01/22/97	ND	0.14	ND	0.90	1.3
	03/06/97	120	0.64	11	6.9	27

TPPH = Total pirgeable petroleum hydrocarbons
µg/L = Micrograms per liter
ND = Not detected above the detection limit
NA = Not analyzed (sample air bag leak); well re-sampled 11/14/96
See certified analytical reports for detection limits.

Figure 1
Groundwater Extraction System Mass Removal Trend

Unocal Service Station 5367
500 Bancroft Avenue at Dowling
San Leandro, California

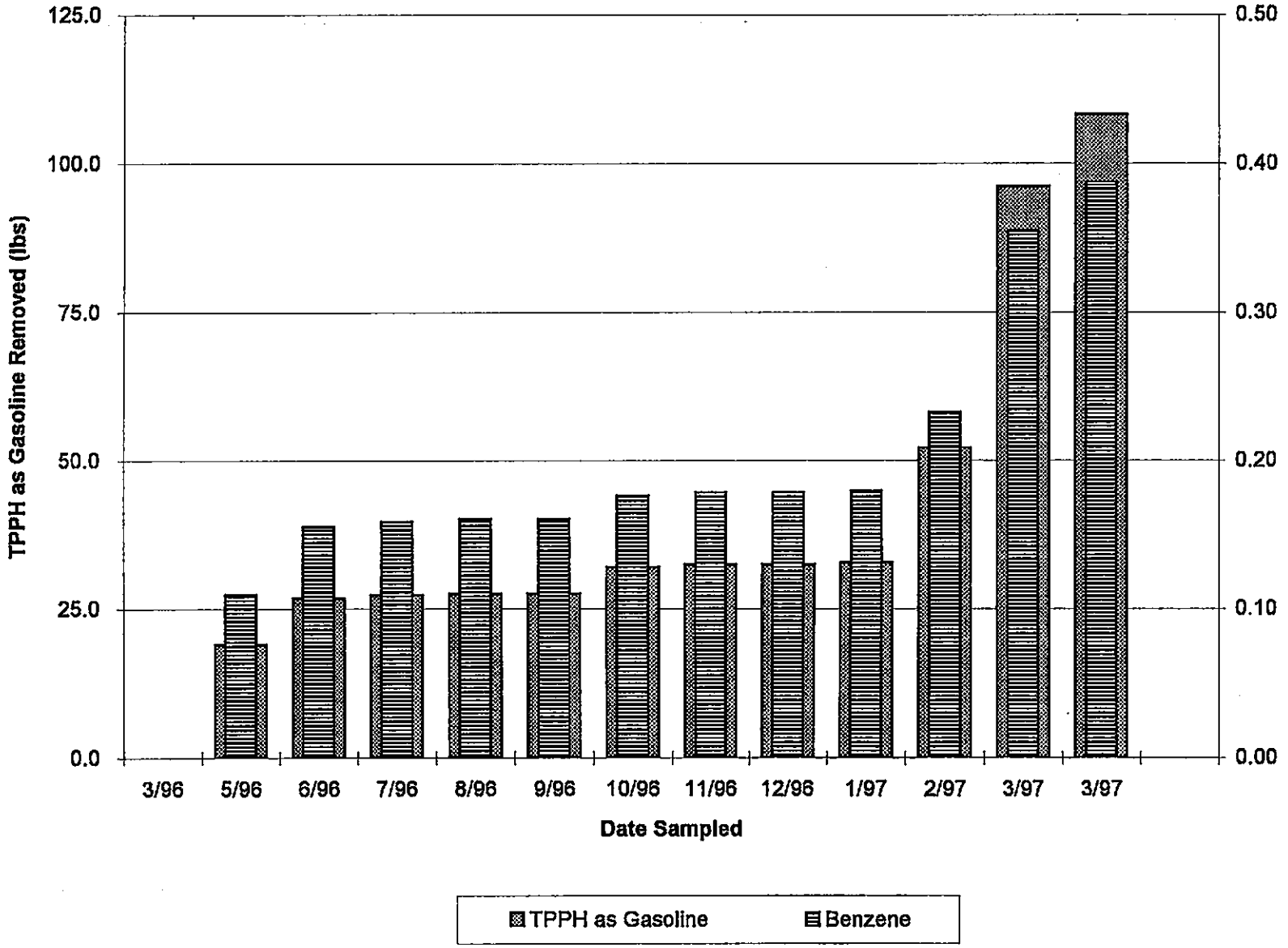


Figure 2
Groundwater Extraction System Hydrocarbon Concentrations

Unocal Service Station 5367
500 Bancroft Avenue at Dowling
San Leandro, California

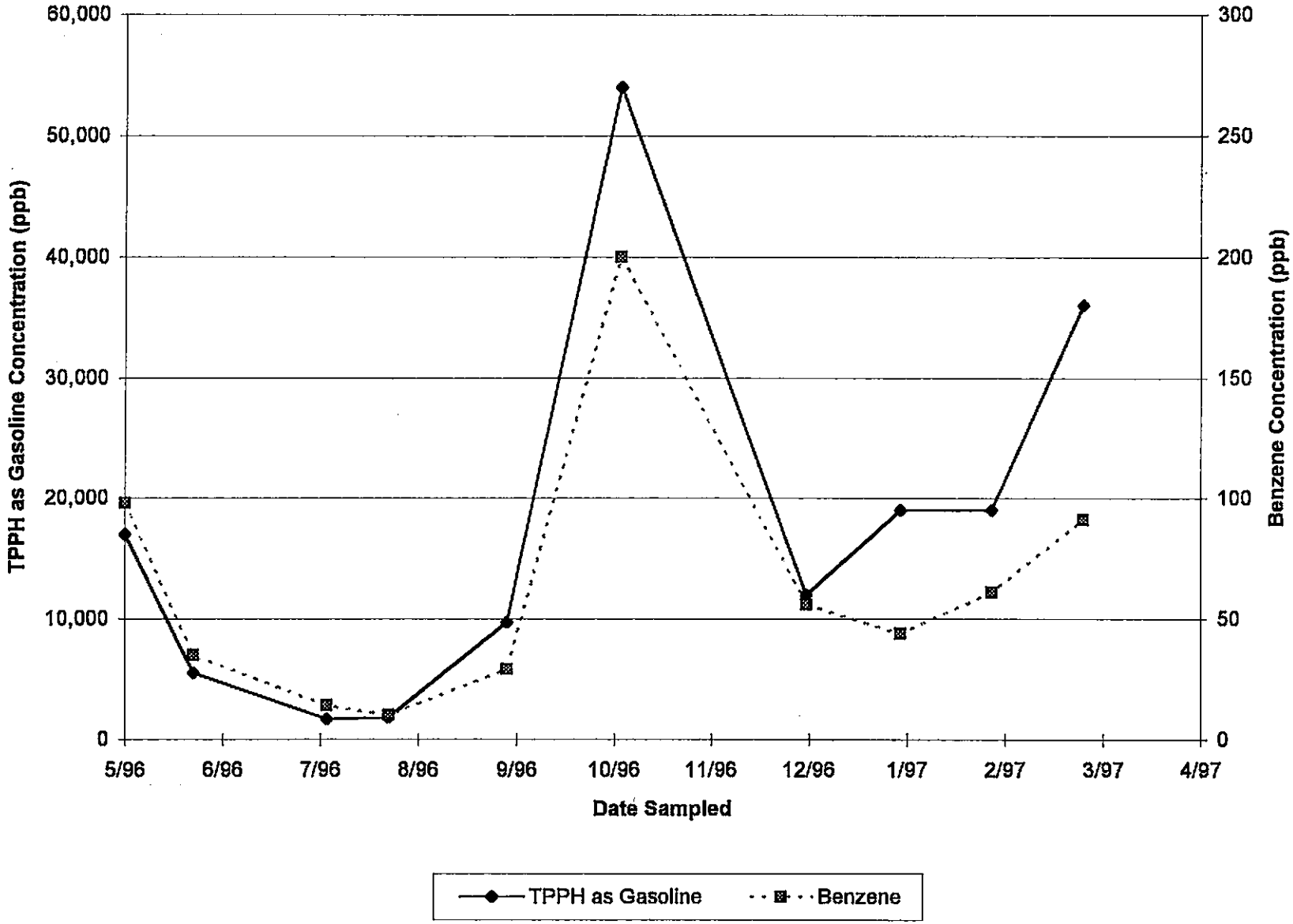


Figure 3
Soil Vapor Extraction System Mass Removal Trend

Unocal Service Station 5367
500 Bancroft Avenue at Dowling
San Leandro, California

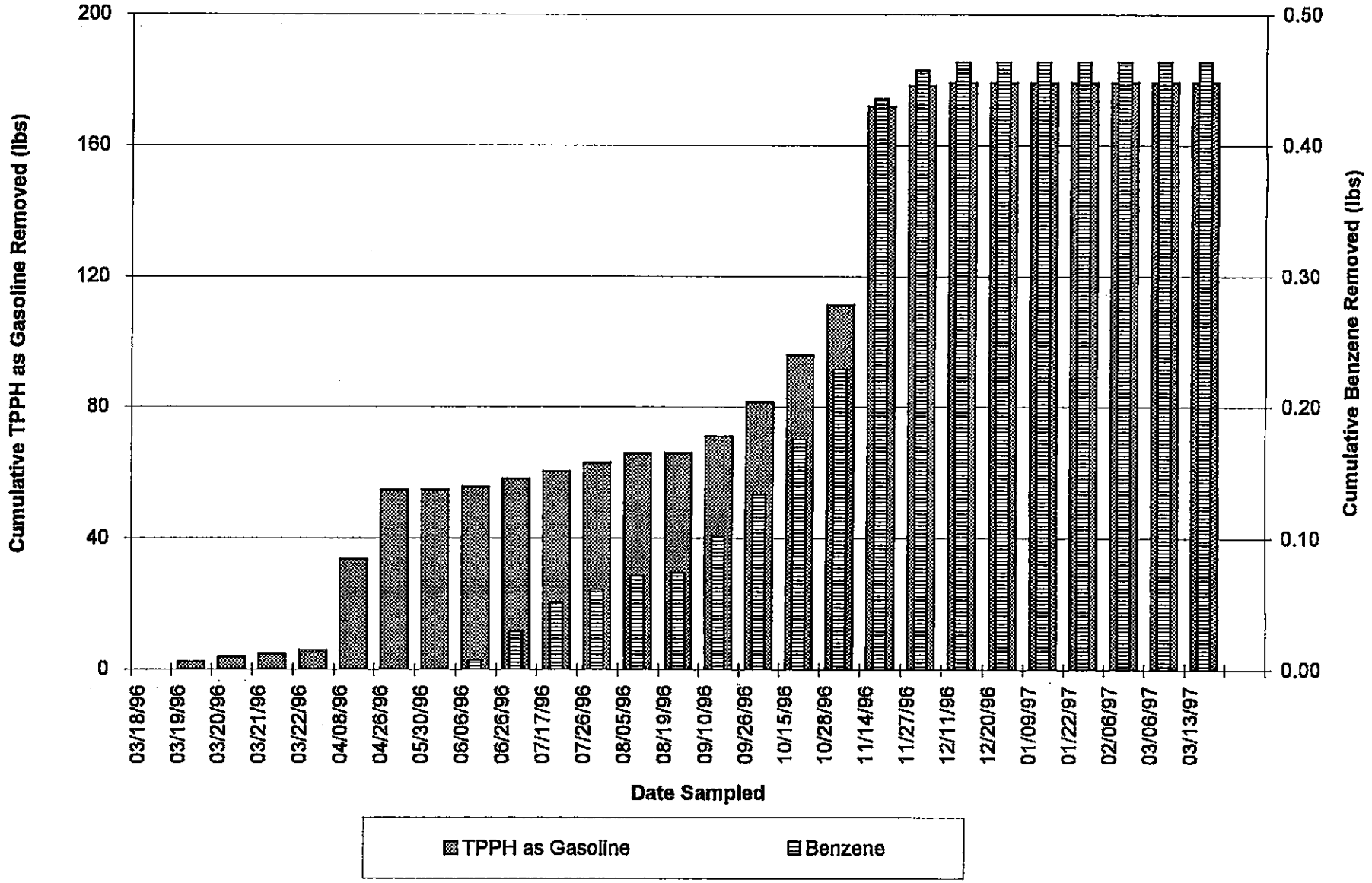
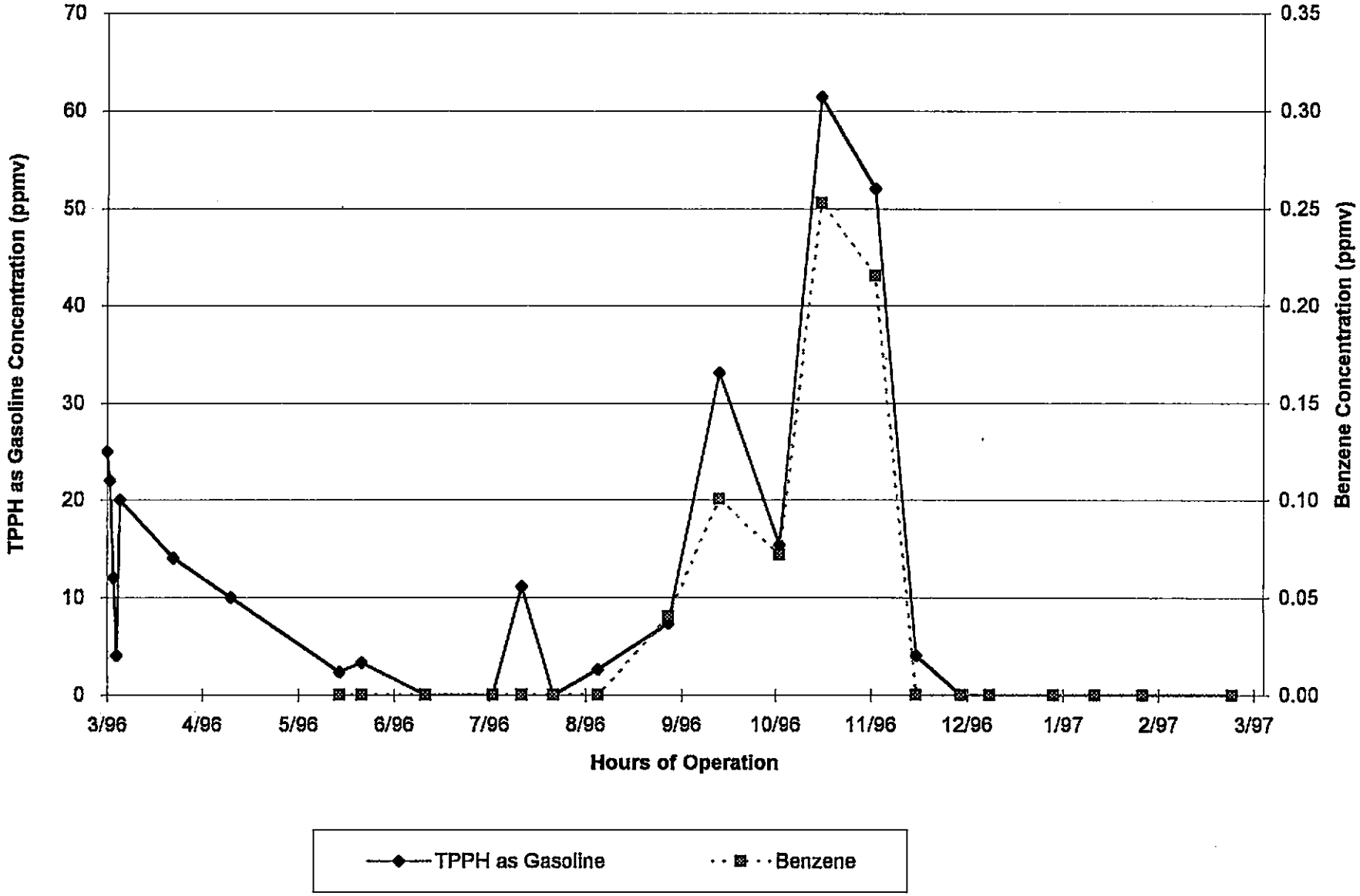


Figure 4
Soil Vapor Extraction System Hydrocarbon Concentrations

Unocal Service Station 5367
500 Bancroft Avenue at Dowling
San Leandro, California



ATTACHMENT B

CERTIFIED ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

Sequoia Analytical

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

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

Attention: Jessica Nelligan

Client Proj. ID: 310-127.5A/ 5367, San Leandro
Sample Descript: Infl
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9701550-01

Sampled: 01/09/97
Received: 01/10/97

Analyzed: 01/16/97
Reported: 01/20/97

QC Batch Number: GC011697BTEX01A
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**2000**	**19000**
Benzene	**20**	**44**
Toluene	20	N.D.
Ethyl Benzene	**20**	**1200**
Xylenes (Total)	**20**	**2700**
Chromatogram Pattern:		
Weathered Gas		C6-C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	97

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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Pacific Environmental Group	Client Proj. ID: 310-127.5A/ 5367, San Leandro	Sampled: 01/09/97
2025 Gateway Place, Suite 440	Sample Descript: Mid-2	Received: 01/10/97
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 01/16/97
Attention: Jessica Nelligan	Lab Number: 9701550-02	Reported: 01/20/97

QC Batch Number: GC011697BTEX01A
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

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

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	93

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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

Pacific Environmental Group	Client Proj. ID: 310-127.5A/ 5367, San Leandro	Sampled: 01/09/97
2025 Gateway Place, Suite 440	Sample Descript: Effl	Received: 01/10/97
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 01/16/97
Attention: Jessica Nelligan	Lab Number: 9701550-03	Reported: 01/20/97

QC Batch Number: GC011697BTEX01A
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

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

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	92

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Jessica Nelligan

Client Project ID: 310-127.5A / 5367, San Leandro
Matrix: LIQUID
Work Order #: 9701550 01-03
Reported: Jan 20, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC011697BTEX01A	GC011697BTEX01A	GC011697BTEX01A	GC011697BTEX01A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	R. Geckler	R. Geckler	R. Geckler	R. Geckler
MS/MSD #:	970138005	970138005	970138005	970138005
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/16/97	1/16/97	1/16/97	1/16/97
Analyzed Date:	1/16/97	1/16/97	1/16/97	1/16/97
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	10	10	10	32
MS % Recovery:	100	100	100	107
Dup. Result:	9.9	10	10	31
MSD % Recov.:	99	100	100	103
RPD:	1.0	0.0	0.0	3.2
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK011497A	BLK011497A	BLK011497A	BLK011497A
Prepared Date:	1/16/97	1/16/97	1/16/97	1/16/97
Analyzed Date:	1/16/97	1/16/97	1/16/97	1/16/97
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	9.7	9.6	9.7	30
LCS % Recov.:	97	96	97	100
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

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

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

Sequoia Analytical

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

Pacific Environmental Group	Client Proj. ID: 310-127.5A/ 5367, San Leandro	Received: 01/10/97
2025 Gateway Place, Suite 440		
San Jose, CA 95110	Lab Proj. ID: 9701550	Reported: 01/20/97
Attention: Jessica Nelligan		

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 7 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

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

WORKORDER: 9701550
DATE OF LOG-IN: 1/13/97

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s): Present / Absent
   Intact / ~~Broken~~*
2. Custody Seal #: Put in Remarks Section
3. Chain-of-Custody: Present / Absent*
4. Traffic Reports or Packing List: Present / Absent
5. Airbill: Airbill / ~~Sticker~~ Present / Absent
6. Airbill #:
7. Sample Tags: Present / Absent
   Sample Tags #s: 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: 1/10/97
12. Time Rec. at Lab: 1527
13. Temp Rec. at Lab: 10°C

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC.)
1	AC	Infl	3 voa	liq	1/9	
2	↓	Mid 2	↓	↓	↓	
3	↓	Effl	↓	↓	↓	

*If Circled, contact Project Manager and attach record of resolution.

Revision 9/10/96
RCPTLOG1.XLS

UNOCAL 76

• 660 Chesapeake Drive • Redwood City, CA 94063 • (415) 364-9600
☐ 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600
☐ 404 N. Wiget Lane • Walnut Creek, CA 94598 • (510) 988-9600
☐ 18939 120th Ave., N.E., Suite 101 • Bothell, WA 98011 • (206) 481-9200
☐ East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200
☐ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Consultant Company: Pacific Env. Group, Inc	Project Name: 310-127.5A
Address: 2025 Gateway Pl. #440	UNOCAL Project Manager: Tina Berry
City: San Jose State: CA Zip Code: 95110	AFE #:
Telephone: (408) 441-7500 FAX #: (408) 441-7539	Site #, City, State: 5367 San Leandro
Report To: Jessica Nelligan Sampler: Don Wattenburger	QC Data: ☑ Level D (Standard) ☐ Level C ☐ Level B ☐ Level A

Turnaround Time: ☑ 10 Work Days ☐ 5 Work Days ☐ 3 Work Days ☐ 2 Work Days ☐ 1 Work Day ☐ 2-8 Hours

CODE: ☐ Misc. ☐ Detect. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water ☑ Waste Water ☐ Other

Analyses Requested 9701550

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH-5 BTEX	Comments
1. INF1	1/9/97 9:00	H_2O	3	VOA	1	X	
2. Mid-2	" "	"	"	"	2	X	
3. EFF1	" "	"	"	"	3	X	
4.							
5.							
6.							
7.							
8.							
9.							
10.							

1/10/97 SH 1400

Relinquished By: Don Wattenburger	Date: 1/9/97	Time: 12:00	Received By:	Date: 1/10/97	Time: 1400
Relinquished By:	Date: 1/10/97	Time: 1527	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab:	Date: 1/10/97	Time: 1527

Were Samples Received in Good Condition? ☐ Yes ☐ No Samples on Ice? ☐ Yes ☐ No Method of Shipment _____ Page __ of __

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? ☑ Yes ☐ No If no, what analyses are still needed? _____

2) Was the report issued within the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____

Approved by: D. Marcum Signature: D. Marcum Company: PEG Date: 1/21/97

Pink - Client
Yellow - Laboratory
White - Laboratory

32

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: Jessica Nelligar

Client Proj. ID: 310-127.5A/5367, San Leandro
Sample Descript: Infl
Matrix: AIR
Analysis Method: 8015Mod/8020
Lab Number: 9701455-01

Sampled: 01/09/97
Received: 01/10/97

Analyzed: 01/10/97
Reported: 01/20/97

QC Batch Number: GC011097BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	N.D.
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	0.10	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	93

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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

Pacific Environmental Group	Client Proj. ID: 310-127.5A/5367, San Leandro	Sampled: 01/09/97
2025 Gateway Place, Suite 440	Sample Descript: Mid	Received: 01/10/97
San Jose, CA 95110	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 01/10/97
Attention: Jessica Nelligar	Lab Number: 9701455-02	Reported: 01/20/97

QC Batch Number: GC011097BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	N.D.
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	**0.10**	**0.12**
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	78

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group	Client Proj. ID: 310-127.5A/5367, San Leandro	Sampled: 01/09/97
2025 Gateway Place, Suite 440	Sample Descript: Effl	Received: 01/10/97
San Jose, CA 95110	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 01/10/97
Attention: Jessica Nelligar	Lab Number: 9701455-03	Reported: 01/20/97

QC Batch Number: GC011097BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	N.D.
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	**0.10**	**0.18**
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	82

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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

Client Project ID: 310-127.5A/5367, San Leandro
Work Order #: 9701455 01-03
Reported: Jan 20, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC011097BTEX17A	GC011097BTEX17A	GC011097BTEX17A	GC011097BTEX17A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab
MS/MSD #:	970125602	970125602	970125602	970125602
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/10/97	1/10/97	1/10/97	1/10/97
Analyzed Date:	1/10/97	1/10/97	1/10/97	1/10/97
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.0	8.5	8.6	26
MS % Recovery:	90	85	86	87
Dup. Result:	9.6	9.2	9.2	27
MSD % Recov.:	96	92	92	90
RPD:	6.5	7.9	6.7	3.8
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK011097A	BLK011097A	BLK011097A	BLK011097A
Prepared Date:	1/10/97	1/10/97	1/10/97	1/10/97
Analyzed Date:	1/10/97	1/10/97	1/10/97	1/10/97
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	8.5	8.3	8.2	24
LCS % Recov.:	85	83	82	80
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

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

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

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Jessica Nelligar

Client Proj. ID: 310-127.5A/5367, San Leandro
Lab Proj. ID: 9701455

Received: 01/10/97
Reported: 01/20/97

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 1 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

CLIENT NAME: PEG
REC. BY (PRINT) LKim

WORKORDER: 9701455
DATE OF LOG-IN: 01/10/97

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s) — Present / Absent; Intact / ~~Broken*~~
2. Custody Seal #: — Put in Remarks Section
3. Chain-of-Custody — Present / Absent*
4. Traffic Reports or Packing List: — Present / Absent
5. Airbill: — Airbill / ~~Sticker~~; Present / Absent
6. Airbill #: _____
7. Sample Tags: — Present / Absent
   Sample Tags #s: — 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: 1/10/97
12. Time Rec. at Lab: 1527
13. Temp Rec. at Lab: —

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC.)
01	A	INFL	bag	air	1/9	
02	1	MID	↓	↓	↓	
03	1	EFFL	↓	↓	↓	

1/10

*if Circled, contact Project Manager and attach record of resolution.

UNOCAL 76

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☐ East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200
☐ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Consultant Company: Pacific Env. Group, Inc
Address: 2025 GATEWAY Pl #440
City: SAN Jose State: CA Zip Code: 95110
Telephone: (408) 4417500 FAX #: (408) 4417539
Report To: Jessica Nelligan Sampler: Don Watergaard

Project Name: 310-127.5A
UNOCAL Project Manager: TINA Berry
AFE #:
Site #, City, State: 5367 SAN Leandro
QC Data: ☒ Level D (Standard) ☐ Level C ☐ Level B ☐ Level A

Turnaround Time: ☐ 10 Work Days ☐ 5 Work Days ☐ 3 Work Days ☐ 2 Work Days ☐ 1 Work Day ☐ 2-8 Hours

CODE: ☐ Misc. ☐ Detect. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water
☐ Waste Water
☒ Other Air

Analyses Requested

9701455

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPPH-G/BTEX									Comments
1.	INFl	1/9/97 8:30	AIR	1	BAG	01										
2.	MID	↓	↓	1	↓	02										
3.	EFFl	↓	↓	1	↓	03										
4.																
5.																
6.																
7.																
8.																
9.																
10.																

1/10/97 (JH) 1400

Relinquished By: Don Watergaard	Date: 1/9/97	Time: 12:00	Received By: [signature] Date: 1/10/97 Time: 1400
Relinquished By: [signature]	Date: 1/10/97	Time: 1527	Received By: Date: Time:
Relinquished By:	Date:	Time:	Received By Lab: [signature] Date: 1/10/97 Time: 1527

Were Samples Received in Good Condition? ☐ Yes ☐ No Samples on Ice? ☐ Yes ☐ No Method of Shipment ________ Page __ of __

To be completed upon receipt of report:
1) Were the analyses requested on the Chain of Custody reported? ☒ Yes ☐ No If no, what analyses are still needed? ________
2) Was the report issued within the requested turnaround time? ☒ Yes ☐ No If no, what was the turnaround time? ________
Approved by: D. Marcoin Signature: D. Marcoin Company: PEG Date: 1/21/97

Pink - Client
Yellow - Laboratory
White - Laboratory

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: Jessica

Client Proj. ID: Unocal 310-127.5A,San Leandro
Sample Descript: Infl
Matrix: AIR
Analysis Method: 8015Mod/8020
Lab Number: 9701B22-01

Sampled: 01/22/97
Received: 01/23/97

Analyzed: 01/24/97
Reported: 01/28/97

QC Batch Number: GC012497BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	N.D.
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	**0.10**	**0.23**
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	100

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group	Client Proj. ID: Unocal 310-127.5A,San Leandro	Sampled: 01/22/97
2025 Gateway Place, Suite 440	Sample Descript: Mid	Received: 01/23/97
San Jose, CA 95110	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 01/24/97
Attention: Jessica	Lab Number: 9701B22-02	Reported: 01/28/97

QC Batch Number: GC012497BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	N.D.
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	0.10	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	97

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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

Pacific Environmental Group	Client Proj. ID: Unocal 310-127.5A,San Leandro	Sampled: 01/22/97
2025 Gateway Place, Suite 440	Sample Descript: Effl	Received: 01/23/97
San Jose, CA 95110	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 01/24/97
Attention: Jessica	Lab Number: 9701B22-03	Reported: 01/28/97

QC Batch Number: GC012497BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	N.D.
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	**0.10**	**0.18**
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	101

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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

Attention: Jessica

Client Proj. ID: Unocal 310-127.5A,San Leandro
Sample Descript: MW-1
Matrix: AIR
Analysis Method: 8015Mod/8020
Lab Number: 9701B22-04

Sampled: 01/22/97
Received: 01/23/97

Analyzed: 01/24/97
Reported: 01/28/97

QC Batch Number: GC012497BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**10**	**14**
Benzene	0.10	N.D.
Toluene	**0.10**	**0.27**
Ethyl Benzene	**0.10**	**0.60**
Xylenes (Total)	**0.10**	**2.1**
Chromatogram Pattern:		**Gas**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	92

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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

Pacific Environmental Group	Client Proj. ID: Unocal 310-127.5A,San Leandro	Sampled: 01/22/97
2025 Gateway Place, Suite 440	Sample Descript: MW-2	Received: 01/23/97
San Jose, CA 95110	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 01/24/97
Attention: Jessica	Lab Number: 9701B22-05	Reported: 01/28/97

QC Batch Number: GC012497BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**10**	**20**
Benzene	0.10	N.D.
Toluene	**0.10**	**0.47**
Ethyl Benzene	**0.10**	**0.51**
Xylenes (Total)	**0.10**	**28**
Chromatogram Pattern:		**Gas**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	104

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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

Pacific Environmental Group	Client Proj. ID: Unocal 310-127.5A,San Leandro	Sampled: 01/22/97
2025 Gateway Place, Suite 440	Sample Descript: MW-3	Received: 01/23/97
San Jose, CA 95110	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 01/24/97
Attention: Jessica	Lab Number: 9701B22-06	Reported: 01/28/97

QC Batch Number: GC012497BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	N.D.
Benzene	**0.10**	**0.14**
Toluene	0.10	N.D.
Ethyl Benzene	**0.10**	**0.90**
Xylenes (Total)	**0.10**	**1.3**
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	98

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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

Client Project ID: Unocal 310-127.5A / San leandro

Work Order #: 9701B22 01-06

Reported: Jan 28, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC012497BTEX02A	GC012497BTEX02A	GC012497BTEX02A	GC012497BTEX02A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	G. Fish	G. Fish	G. Fish	G. Fish
MS/MSD #:	970167502	970167502	970167502	970167502
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/24/97	1/24/97	1/24/97	1/24/97
Analyzed Date:	1/24/97	1/24/97	1/24/97	1/24/97
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µgL	10 µgL	10 µgL	30 µg/L
Result:	8.7	8.7	8.7	29
MS % Recovery:	87	87	87	97
Dup. Result:	8.7	8.7	8.7	29
MSD % Recov.:	87	87	87	97
RPD:	0.0	0.0	0.0	0.0
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK012497A	BLK012497A	BLK012497A	BLK012497A
Prepared Date:	1/24/97	1/24/97	1/24/97	1/24/97
Analyzed Date:	1/24/97	1/24/97	1/24/97	1/24/97
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µgL	10 µgL	10 µgL	30 µg/L
LCS Result:	8.9	8.9	8.9	29
LCS % Recov.:	89	89	89	97
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

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

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

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

Client Project ID: Unocal 310-127.5A / San leandro

Work Order #: 9701B22 01-06

Reported: Jan 28, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC012497BTEX17A	GC012497BTEX17A	GC012497BTEX17A	GC012497BTEX17A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	G. Fish	G. Fish	G. Fish	G. Fish
MS/MSD #:	970167502	970167502	970167502	970167502
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/24/97	1/24/97	1/24/97	1/24/97
Analyzed Date:	1/24/97	1/24/97	1/24/97	1/24/97
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µgL	10 µgL	10 µgL	30 µg/L
Result:	8.6	8.5	8.4	25
MS % Recovery:	86	85	84	83
Dup. Result:	9.9	9.6	9.7	29
MSD % Recov.:	99	96	97	97
RPD:	14	12	14	15
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK012497A	BLK012497A	BLK012497A	BLK012497A
Prepared Date:	1/24/97	1/24/97	1/24/97	1/24/97
Analyzed Date:	1/24/97	1/24/97	1/24/97	1/24/97
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µgL	10 µgL	10 µgL	30 µg/L
LCS Result:	9.8	9.5	9.5	28
LCS % Recov.:	98	95	95	93
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

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

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

Sequoia Analytical

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Pacific Environmental Group	Client Proj. ID: Unocal 310-127.5A,San Leandro	Received: 01/23/97
2025 Gateway Place, Suite 440		
San Jose, CA 95110	Lab Proj. ID: 9701B22	Reported: 01/28/97
Attention: Jessica		

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 11 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: PEG
REC. BY (PRINT) LKim

WORKORDER: 9701892
DATE OF LOG-IN: 1-23-97

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s): Present / Absent; Intact / ~~Broken*~~
2. Custody Seal #: Put in Remarks Section
3. Chain-of-Custody: Present / Absent*
4. Traffic Reports or Packing List: Present / Absent
5. Airbill: Airbill / Sticker Present / Absent
6. Airbill #:
7. Sample Tags: Present / Absent
   Sample Tags #s: 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: 1/23/97
12. Time Rec. at Lab: 1040
13. Temp Rec. at Lab: —

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC.)
1	A	Infl	tedlar	air	1/22	
2		mid	↓	↓	↓	
3		Effl				
4		mw-1				
5		↓ 2				
6		↓ 3				

1/23 LKim

*If Circled, contact Project Manager and attach record of resolution.

Revision 9/10/96

UNOCAL 76

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❑ East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200
❑ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Consultant Company: Pacific Env. Group Inc	Project Name: 310-127.5A
Address: 2025 Gateway Pl #440	UNOCAL Project Manager: Tina Berry
City: San Jose State: CA Zip Code: 95110	AFE #:
Telephone: (408) 441-7500 FAX #: (408) 441-7539	Site #, City, State: 5367 San Leandro
Report To: Jessica Sampler: Don Watenpaugh	QC Data: ☒ Level D (Standard) ❑ Level C ❑ Level B ❑ Level A

Turnaround Time: ☒ 10 Work Days ❑ 5 Work Days ❑ 3 Work Days ❑ 2 Work Days ❑ 1 Work Day ❑ 2-8 Hours

CODE: ❑ Misc. ❑ Detect. ❑ Eval. ❑ Remed. ❑ Demol. ❑ Closure

❑ Drinking Water ❑ Waste Water ☒ Other AIR

Analyses Requested

9701B22

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH-g/BTEX								Comments
1. INFI	1/22/97 11:00	AIR	1	BAG	1 A	X								
2. MID	↓	↓	↓	↓	2	↓								
3. EFFI	↓	↓	↓	↓	3	↓								
4. MW-1	↓	↓	↓	↓	4	↓								
5. MW-2	↓	↓	↓	↓	5	↓								
6. MW-3	↓	↓	↓	↓	6	↓								
7.														
8.														
9.														
10.														

Relinquished By: Don Watenpaugh	Date: 1/22/97	Time: 18:30	Received By: D. Alarcón	Date: 1/22/97	Time: 18:30
Relinquished By: D. Alarcón	Date: 1/23/97	Time: 0850	Received By: [illegible]	Date: 1/23/97	Time: [illegible]
Relinquished By: [illegible]	Date: 1/23/97	Time: 1040	Received By Lab: [illegible]	Date: 1/23/97	Time: 1040

Were Samples Received in Good Condition? ❑ Yes ❑ No   Samples on Ice? ❑ Yes ❑ No   Method of Shipment ______   Page __ of __

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? ☒ Yes ❑ No If no, what analyses are still needed? ______

2) Was the report issued within the requested turnaround time? ☒ Yes ❑ No If no, what was the turnaround time? ______

Approved by: D. Alarcón   Signature: KD. Alarcón   Company: PEG   Date: 1/30/97

Pink - Client   Yellow - Laboratory   White - Laboratory

Sequoia Analytical

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

Attention: Jessica Nelligan

Client Proj. ID: 310-127.5A/5367, San Leandro
Sample Descript: Infl
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9702522-01

Sampled: 02/06/97
Received: 02/07/97

Analyzed: 02/18/97
Reported: 02/19/97

QC Batch Number: GC021897BTEX03A
Instrument ID: GCHP3

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	19000
Benzene	10	61
Toluene	10	10
Ethyl Benzene	10	1200
Xylenes (Total)	10	2700
Chromatogram Pattern:		Gas

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

Tod Granicher
Project Manager

Sequoia Analytical

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

Attention: Jessica Nelligan

Client Proj. ID: 310-127.5A/ 5367, San Leandro
Sample Descript: INFL
Matrix: AIR
Analysis Method: 8015Mod/8020
Lab Number: 9702297-01

Sampled: 02/06/97
Received: 02/07/97

Analyzed: 02/10/97
Reported: 02/16/97

QC Batch Number: GC021097BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	N.D.
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	**0.10**	**0.11**
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	90

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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

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

Attention: Jessica Nelligan

Client Proj. ID: 310-127.5A/ 5367, San Leandro
Sample Descript: INFL
Matrix: AIR
Analysis Method: 8015Mod/8020
Lab Number: 9702297-01

Sampled: 02/06/97
Received: 02/07/97

Analyzed: 02/10/97
Reported: 02/16/97

QC Batch Number: GC021097BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	N.D.
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	**0.10**	**0.11**
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	90

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
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Pacific Environmental Group	Client Proj. ID: 310-127.5A/ 5367, San Leandro	Sampled: 02/06/97
2025 Gateway Place, Suite 440	Sample Descript: EFFL	Received: 02/07/97
San Jose, CA 95110	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 02/10/97
Attention: Jessica Nelligan	Lab Number: 9702297-03	Reported: 02/16/97

QC Batch Number: GC021097BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	N.D.
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	**0.10**	**0.17**
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	91

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

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Pacific Environmental Group	Client Proj. ID: 310-127.5A/ 5367, San Leandro	Sampled: 02/06/97
2025 Gateway Place, Suite 440	Sample Descript: EFFL	Received: 02/07/97
San Jose, CA 95110	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 02/10/97
Attention: Jessica Nelligan	Lab Number: 9702297-03	Reported: 02/16/97

QC Batch Number: GC021097BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	N.D.
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	**0.10**	**0.17**
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	91

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Jessica Nelligan

Client Project ID: 310-127.5A / 5367, San Leandro
Work Order #: 9702297 01-03
Reported: Feb 18, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC020597BTEX17B	GC020597BTEX17B	GC020597BTEX17B	GC020597BTEX17B
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	J. Heider	J. Heider	J. Heider	J. Heider
MS/MSD #:	9701G1304	9701G1304	9701G1304	9701G1304
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	2/7/97	2/7/97	2/7/97	2/7/97
Analyzed Date:	2/7/97	2/7/97	2/7/97	2/7/97
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.7	9.7	9.7	30
MS % Recovery:	97	97	97	100
Dup. Result:	9.1	9.2	9.3	28
MSD % Recov.:	91	92	93	93
RPD:	6.4	5.3	4.2	6.9
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK020897A	BLK020897A	BLK020897A	BLK020897A
Prepared Date:	2/7/97	2/7/97	2/7/97	2/7/97
Analyzed Date:	2/7/97	2/7/97	2/7/97	2/7/97
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	9.5	9.6	9.7	30
LCS % Recov.:	95	96	97	100
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

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

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

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Jessica Nelligan

Client Project ID: 310-127.5A / 5367, San Leandro
Work Order #: 9702297 01-03
Reported: Feb 18, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC020597BTEX17B	GC020597BTEX17B	GC020597BTEX17B	GC020597BTEX17B
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	J. Heider	J. Heider	J. Heider	J. Heider
MS/MSD #:	9701G1304	9701G1304	9701G1304	9701G1304
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	2/7/97	2/7/97	2/7/97	2/7/97
Analyzed Date:	2/7/97	2/7/97	2/7/97	2/7/97
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.7	9.7	9.7	30
MS % Recovery:	97	97	97	100
Dup. Result:	9.1	9.2	9.3	28
MSD % Recov.:	91	92	93	93
RPD:	6.4	5.3	4.2	6.9
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK020897A	BLK020897A	BLK020897A	BLK020897A
Prepared Date:	2/7/97	2/7/97	2/7/97	2/7/97
Analyzed Date:	2/7/97	2/7/97	2/7/97	2/7/97
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	9.5	9.6	9.7	30
LCS % Recov.:	95	96	97	100
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

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

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

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: PEG
REC. BY (PRINT) Rich Herling

WORKORDER: 9702297
DATE OF LOG-IN: 02.07.1997

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s) — Present / (Absent) Intact / Broken*
2. Custody Seal #: — Put in Remarks Section
3. Chain-of-Custody — (Present) / Absent*
4. Traffic Reports or Packing List: — Present / (Absent)
5. Airbill: — Airbill / Sticker Present / (Absent)
6. Airbill #: ____
7. Sample Tags: — (Present) / Absent
   Sample Tags #s: — (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: 2/7/97
12. Time Rec. at Lab: 1250
13. Temp Rec. at Lab: 21°C

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC.)
01	A	Infl	(1) Tedlar	Air	2/6/97	
02	A	Mid	1	1	1	
03	A	Effl	1	1	1	

2/7/97

*if Circled, contact Project Manager and attach record of resolution.

Revision 9/10/96
RCPTLOG1.XLS

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: PEG
REC. BY (PRINT): Rich Herling
WORKORDER: 9702297
DATE OF LOG-IN: 02.07.1997

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s): Present / ~~Absent~~ Intact / Broken*
2. Custody Seal #: Put in Remarks Section
3. Chain-of-Custody: Present / Absent*
4. Traffic Reports or Packing List: Present / Absent
5. Airbill: Airbill / Sticker Present / Absent
6. Airbill #:
7. Sample Tags: Present / Absent
   Sample Tags #s: 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: 2/7/97
12. Time Rec. at Lab: 1250
13. Temp Rec. at Lab: 21°C

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC.)
01	A	Infl	(1) Tedlar	Air	2/6/97	
02	A	Mid	1	1	1	
03	A	Effl	1	1	1	

2/7/97

*if Circled, contact Project Manager and attach record of resolution.

Revision 9/10/96
RCPTLOG1.XLS

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: Jessica Nelligan

Client Proj. ID: 311-127.5A/5367, San Leandro
Sample Descript: Infl
Matrix: AIR
Analysis Method: 8015Mod/8020
Lab Number: 9703297-01

Sampled: 03/06/97
Received: 03/07/97

Analyzed: 03/08/97
Reported: 03/11/97

QC Batch Number: GC030897BTEX02A
Instrument ID: GCHP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	N.D.
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	**0.10**	**0.27**
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	81

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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

Attention: Jessica Nelligan

Client Proj. ID: 311-127.5A/5367, San Leandro
Sample Descript: Infl
Matrix: AIR
Analysis Method: 8015Mod/8020
Lab Number: 9703297-01

Sampled: 03/06/97
Received: 03/07/97

Analyzed: 03/08/97
Reported: 03/11/97

QC Batch Number: GC030897BTEX02A
Instrument ID: GCHP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	N.D.
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	**0.10**	**0.27**
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	81

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

SEQUOIA ANALYTICAL - ELAP #1210

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

Pacific Environmental Group	Client Proj. ID: 311-127.5A/5367, San Leandro	Sampled: 03/06/97
2025 Gateway Place, Suite 440	Sample Descript: Effl	Received: 03/07/97
San Jose, CA 95110	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 03/08/97
Attention: Jessica Nelligan	Lab Number: 9703297-03	Reported: 03/11/97

QC Batch Number: GC030897BTEX02A
Instrument ID: GCHP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	N.D.
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	0.10	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	94

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

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

Pacific Environmental Group	Client Proj. ID: 311-127.5A/5367, San Leandro	Sampled: 03/06/97
2025 Gateway Place, Suite 440	Sample Descript: Effl	Received: 03/07/97
San Jose, CA 95110	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 03/08/97
Attention: Jessica Nelligan	Lab Number: 9703297-03	Reported: 03/11/97

QC Batch Number: GC030897BTEX02A
Instrument ID: GCHP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	N.D.
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	0.10	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	94

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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

Pacific Environmental Group	Client Proj. ID: 311-127.5A/5367, San Leandro	Sampled: 03/06/97
2025 Gateway Place, Suite 440	Sample Descript: MW-2	Received: 03/07/97
San Jose, CA 95110	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 03/08/97
Attention: Jessica Nelligan	Lab Number: 9703297-05	Reported: 03/11/97

QC Batch Number: GC030897BTEX02A
Instrument ID: GCHP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	70
Benzene	0.10	0.27
Toluene	0.10	2.9
Ethyl Benzene	0.10	1.8
Xylenes (Total)	0.10	8.8
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	165 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group	Client Proj. ID: 311-127.5A/5367, San Leandro	Sampled: 03/06/97
2025 Gateway Place, Suite 440	Sample Descript: MW-2	Received: 03/07/97
San Jose, CA 95110	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 03/08/97
Attention: Jessica Nelligan	Lab Number: 9703297-05	Reported: 03/11/97

QC Batch Number: GC030897BTEX02A
Instrument ID: GCHP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**10**	**70**
Benzene	**0.10**	**0.27**
Toluene	**0.10**	**2.9**
Ethyl Benzene	**0.10**	**1.8**
Xylenes (Total)	**0.10**	**8.8**
Chromatogram Pattern:		**Gas**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	165 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110 Attention: Jessica Nelligan	Client Proj. ID: 311-127.5A/5367, San Leandro Lab Proj. ID: 9703297	Received: 03/07/97 Reported: 03/11/97

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 10 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

TPHGBA Note: High surrogate recovery was confirmed for the set.

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110 Attention: Jessica Nelligan	Client Proj. ID: 311-127.5A/5367, San Leandro Lab Proj. ID: 9703297	Received: 03/07/97 Reported: 03/11/97

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 10 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

TPHGBA Note: High surrogate recovery was confirmed for the set.

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

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

WORKORDER: 9703297
DATE OF LOG-IN: 03/07/97

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s): Present / (Absent) Intact / Broken*
2. Custody Seal #: Put In Remarks Section
3. Chain-of-Custody: (Present) / Absent*
4. Traffic Reports or Packing List: Present / (Absent)
5. Airbill: Airbill / Sticker Present / (Absent)
6. Airbill #:
7. Sample Tags: (Present) / Absent
   Sample Tags #s: (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: 03-07-97
12. Time Rec. at Lab: 12:33
13. Temp Rec. at Lab: —

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC.)
01	A	Inf L	Tedlar	air	03-06-97	
02		Mid				
03		Effl				
04		MW-1				
05		1 2				
06		1 3				

Field 03-07-97

*if Circled, contact Project Manager and attach record of resolution.

Revision 9/10/96

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

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

WORKORDER: 9703297
DATE OF LOG-IN: 03/07/97

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s): Present / (Absent) Intact / Broken*
2. Custody Seal #: Put in Remarks Section
3. Chain-of-Custody: (Present) / Absent*
4. Traffic Reports or Packing List: Present / (Absent)
5. Airbill: Airbill / Sticker Present / (Absent)
6. Airbill #: ←
7. Sample Tags: (Present) / Absent
   Sample Tags #s: (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: 03-07-97
12. Time Rec. at Lab: 12:33
13. Temp Rec. at Lab: —

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC.)
01	A	Infl	Tedlar	air	03-06-97	
02		Mid				
03		Effl				
04		MW-1				
05		↓ 2				
06	↓	↓ 3	↓	↓	↓	

Relinq 03-07-97

*If Circled, contact Project Manager and attach record of resolution.

Revision 9/10/96

Sequoia Analytical

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

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

Attention: Jessica Nelligan

Client Proj. ID: 311-127.5A/ 5367/ San Leandro
Sample Descript: INFL
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9703466-01

Sampled: 03/06/97
Received: 03/07/97

Analyzed: 03/13/97
Reported: 03/16/97

QC Batch Number: GC031397BTEX02A
Instrument ID: GCHP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	5000	36000
Benzene	50	91
Toluene	50	1300
Ethyl Benzene	50	1600
Xylenes (Total)	50	7800
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	89

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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

Attention: Jessica Nelligan

Client Proj. ID: 311-127.5A/ 5367/ San Leandro
Sample Descript: INFL
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9703466-01

Sampled: 03/06/97
Received: 03/07/97

Analyzed: 03/13/97
Reported: 03/16/97

QC Batch Number: GC031397BTEX02A
Instrument ID: GCHP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	5000	36000
Benzene	50	91
Toluene	50	1300
Ethyl Benzene	50	1600
Xylenes (Total)	50	7800
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	89

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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

Pacific Environmental Group	Client Proj. ID: 311-127.5A/ 5367/ San Leandro	Sampled: 03/06/97
2025 Gateway Place, Suite 440	Sample Descript: EFFL	Received: 03/07/97
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 03/12/97
Attention: Jessica Nelligan	Lab Number: 9703466-03	Reported: 03/16/97

QC Batch Number: GC031297BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

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

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	96

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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

Pacific Environmental Group	Client Proj. ID: 311-127.5A/ 5367/ San Leandro	Sampled: 03/06/97
2025 Gateway Place, Suite 440	Sample Descript: EFFL	Received: 03/07/97
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 03/12/97
Attention: Jessica Nelligan	Lab Number: 9703466-03	Reported: 03/16/97

QC Batch Number: GC031297BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

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

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	96

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Jessica Nelligan

Client Project ID: 311-127.5A / 5367 / San Leandro
Matrix: LIQUID
Work Order #: 9703466 01-03
Reported: Apr 5, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC031397BTEX02A	GC031397BTEX02A	GC031397BTEX02A	GC031397BTEX02A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab
MS/MSD #:	970336507	970336507	970336507	970336507
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	3/13/97	3/13/97	3/13/97	3/13/97
Analyzed Date:	3/13/97	3/13/97	3/13/97	3/13/97
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.5	9.4	9.5	30
MS % Recovery:	95	94	95	100
Dup. Result:	9.3	9.2	9.3	29
MSD % Recov.:	93	92	93	97
RPD:	2.1	2.2	2.1	3.4
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK031397A	BLK031397A	BLK031397A	BLK031397A
Prepared Date:	3/13/97	3/13/97	3/13/97	3/13/97
Analyzed Date:	3/13/97	3/13/97	3/13/97	3/13/97
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	9.0	9.1	9.3	29
LCS % Recov.:	90	91	93	97
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

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

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

Sequoia Analytical

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

Pacific Environmental Group	Client Project ID:	311-127.5A / 5367 / San Leandro	
2025 Gateway Place, Suite 440	Matrix:	LIQUID	
San Jose, CA 95110			
Attention: Jessica Nelligan	Work Order #:	9703466 01-03	Reported: Apr 5, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC031397BTEX02A	GC031397BTEX02A	GC031397BTEX02A	GC031397BTEX02A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab
MS/MSD #:	970336507	970336507	970336507	970336507
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	3/13/97	3/13/97	3/13/97	3/13/97
Analyzed Date:	3/13/97	3/13/97	3/13/97	3/13/97
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.5	9.4	9.5	30
MS % Recovery:	95	94	95	100
Dup. Result:	9.3	9.2	9.3	29
MSD % Recov.:	93	92	93	97
RPD:	2.1	2.2	2.1	3.4
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK031397A	BLK031397A	BLK031397A	BLK031397A
Prepared Date:	3/13/97	3/13/97	3/13/97	3/13/97
Analyzed Date:	3/13/97	3/13/97	3/13/97	3/13/97
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	9.0	9.1	9.3	29
LCS % Recov.:	90	91	93	97

MS/MSD	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130
Control Limits				

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

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

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

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: PEG
REC. BY (PRINT) PH

WORKORDER: 9703466
DATE OF LOG-IN: 3/11/97

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s) — Present / (Absent) — Intact / Broken*
2. Custody Seal #: — Put in Remarks Section
3. Chain-of-Custody — (Present) / Absent*
4. Traffic Reports or Packing List: — Present / (Absent)
5. Airbill: — Airbill / Sticker — Present / (Absent)
6. Airbill #:
7. Sample Tags: — (Present) / Absent
   Sample Tags #s: — (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: 3/7/97
12. Time Rec. at Lab: 1233
13. Temp Rec. at Lab: 7°C

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC.)
1	A-C	INFL	3 VOAs	Li	3/6	
2	↓	MID-2	↓	↓	↓	
3	↓	EFFL	↓	↓	↓	

3-7-97 Rush

*if Circled, contact Project Manager and attach record of resolution.

Revision 9/10/96
RCPTLOG1.XLS

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: PEG
REC. BY (PRINT) PH

WORKORDER: 9703466
DATE OF LOG-IN: 3/11/97

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s) — Present / (Absent) — Intact / Broken*
2. Custody Seal #: — Put in Remarks Section
3. Chain-of-Custody — (Present) / Absent*
4. Traffic Reports or Packing List: — Present / (Absent)
5. Airbill: — Airbill / Sticker — Present / (Absent)
6. Airbill #: —
7. Sample Tags: — (Present) / Absent
   Sample Tags #s: — (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: 3/7/97
12. Time Rec. at Lab: 1233
13. Temp Rec. at Lab: 7°C

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC.)
1	A-C	INFL	3 VOAs	Li	3/4	
2	↓	MID-2	↓	↓	↓	
3	↓	EFFL	↓	↓	↓	

Rush 3-7-97

*if Circled, contact Project Manager and attach record of resolution.

Revision 9/10/96
PORTLOG1.XLS

UNOCAL 76

- 680 Chesapeake Drive • Redwood City, CA 94063 • (415) 364-9600
- 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600
- 404 N. Wiget Lane • Walnut Creek, CA 94598 • (510) 988-9600
- 18939 120th Ave., N.E., Suite 101 • Bothell, WA 98011 • (206) 481-9200
- East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200
- 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Consultant Company: Pacific ENV Group Inc	Project Name: 311-127.5A
Address: 2025 GATEWAY Pl. Suite 440	UNOCAL Project Manager: TINA Berry
City: SAN Jose State: CA Zip Code: 95110	AFE #: 876920042
Telephone: (408) 441-7500 FAX #: (408) 441 7539	Site #, City, State: 5367 SAN Leandro CA.
Report To: Jessica Nelligan Sampler: Don Watenpaugh	QC Data: ☒ Level D (Standard) ☐ Level C ☐ Level B ☐ Level A

Turnaround Time: ☒ ~~10~~ Work Days ☐ 5 Work Days ☐ 3 Work Days ☐ 2 Work Days ☐ 1 Work Day ☐ 2-8 Hours

CODE: ☐ Misc. ☐ Detect. ☐ Eval. ☒ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water ☒ Waste Water ☐ Other

Analyses Requested 97034466

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH's/BTEX									Comments
1.	INF1 ✓	3/6/97 11:45	H2O	~~10~~ 3	VOA	1	X									
2.	MW-2 ✓	↓ ↓	↓	↓	↓	2	↓									
3.	EFF1 ✓	↓ ↓	↓	↓	↓	3	↓									
4.																
5.																
6.																
7.																
8.																
9.																
10.																

Relinquished By: Don Watenpaugh	Date: 3/6/97	Time: 15:15	Received By: Julie Warren	Date: 3/6/97	Time: 15:15
Relinquished By: Julie Warren	Date: 3/7/97	Time: 1123	Received By:	Date: 3/7/97	Time: 11:23
Relinquished By:	Date: 3/7/97	Time:	Received By Lab:	Date: 3/7/97	Time: 1237

Were Samples Received in Good Condition? ☐ Yes ☐ No Samples on Ice? ☐ Yes ☐ No Method of Shipment _____ Page __ of __

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____

2) Was the report issued within the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client

Yellow - Laboratory

White - Laboratory

33

ATTACHMENT C

FIELD DATA SHEETS

Work Order # 5547

FIELD SERVICES / ROUTINE O&M REQUEST

Identification

Request Frequency:[Semi-Monthly]

Project #	310-127.5A
Station #	5367
Site Address:	500 Bancroft Ave @ Dowling San Leandro
County:	Alameda
Project Manager:	ADL
Requestor:	Jessica Nelligan
Client:	Unocal
Client P.O.C.:	Tina Berry
Revision Date:	January 7, 1997
Laboratory:	Sequoia

Site Remedial Technologies:

Groundwater Extration (GWE)		Soil Vapor Extraction (SVE)		Air Sparging (AS)		Bio-Augmentation (BIO)	
	X		X				

Complete attached Data Sheets as prescribed in the following table:

Scheduling Table

Data Sheet Section(s) / Part(s)	To be Completed	Budgeted Hrs	Actual Hrs	Mob-de Mob	Completed
SVE(A, B, C, D)	week 1 †	3		1x	✓
SVE(A, B, C, D, E, F)	week 3				
GWE(A, B, C, D)	monthly	1			✓
SVE(G, H, I) GWE(G,H)	quarterly †	1			✓
	semi-annually				

† = sampling to be performed

6 hr

Definition of frequencies:

semi-monthly = once every other week on weeks 1 & 3
monthly = first week of the month (day 1 or 2 preferred)
quarterly = once every quarter in months 1, 4, 7 ,10 on week 1

Field Technician Response:

Completed by: Don Wittenpaugh
Date: 1-9-97
Arrival time: 7:30
Departure time: 11:30
Sample this visit?: YES
Engineer contacted? yes J.N.

Soil Vapor Extraction & Treatment System
Unocal Service Station #5367
500 Bancroft Avenue @ Dowling
San Leandro, CA
310-127.5A

PART A: SYSTEM DATA

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

HOUR METER (hrs)	09582.1	CONTENTS OF KNOCKOUT BARREL	Empty
ELECTRIC METER (kW-hrs)	21513		

MEASUREMENT	ON ARRIVAL	ON DEPARTURE
% DILUTION VALVE OPEN	20%	20%
% RECIRCULATION VALVE OPEN	50%	50%
~~% HEAT~~ EXCHANGER BYPASS ~~VALVE OPEN~~	NA	NA
MANIFOLD AIR FLOW (before dilution) (Δ P, inches of water)	.075" H_2O	.075 " H_2O
TOTAL SYSTEM AIR FLOW (after dilution) (ΔP, inches of water)	.030" H_2O	.030 " H_2O
BLOWER VACUUM (inches of water)	44" H_2O	44" H_2O

PART B: COMMENTS

When not performing GWE activities, use this space to note GWE operating conditions.

GWE system on upon arrival?

If no, specify reason.

GWE Totalizer Reading:

PART C: SYSTEM FID READINGS

READING (ppmv)	WC/WOC/DF before adjustments	WC/WOC/DF after adjustments
INFLUENT (before dilution)	2.5/2.5/0	
INFLUENT (after dilution)	4/4/0	
PRIMARY GAC EFFLUENT	4/4/0	
SYSTEM EFFLUENT	4/4/0	
BACKGROUND	5/5/0	
FIELD INSTRUMENT USED:	FID #2	
LAST CALIBRATED:	1-97	

PART D: SAMPLING I

SAMPLE	ANALYSIS	COMPLETED
INFLUENT (semi-monthly)	TPH-g/BTEX	yes
MID (monthly)	TPH-g/BTEX	yes
EFFLUENT (semi-monthly)	TPH-g/BTEX	yes

PART E: SAMPLING II

WELLS (MW-1, MW-2, MW-3)	TPH-g/BTEX	

PART F: WELL DATA

	VALVE POSITION		FID (ppmv)			VAC/PRESSURE ("H_2O)		FLOW	
WELL	INITIAL	FINAL	DILUTION FACTOR USED	WC	WOC	@ MANIFOLD	@ WELL	Δ P ("H_2O)	PIPE SIZE
MW-1									
MW-2									
MW-3									

PART G: SVE INFLUENCE

SVE WELL	APPLIED VACUUM (inches of water)	MONITORING WELL	MEASURED VACUUM (inches of water)
MW-9		MW-10	
MW-8	0	MW-4	0
MW-5	0	MW-2	30" H_2O
		MW-3	30" H_2O
		MW-7	0

PART H: SYSTEM MAINTENANCE I CHECK LIST

DRIVE BELTS	OK	BLOWER OIL	OK
INLINE FILTER	OK	LEAKS	NONE
RATTLES	None	EXCESSIVE NOISE	OK
INDICATOR LIGHTS	OK		

PART I: SYSTEM MAINTENANCE II

CHANGE BLOWER OIL	Changed in Dec.	CHANGE DRIVE BELTS	NO/Belt OK
GREASE LINKAGE AND BEARINGS	yes	TEST ALARM SWITCHES	yes

Groundwater Extraction & Treatment System
Unocal Service Station 5367
500 Bancroft @ Dowling
San Leandro, CA
310-127.5A

System Description:

Groundwater Pumps

Well	Type	Size	Control	Set Depth (TOB)
MW-2	electric	2.5 hp, 110/220V,1Φ,60 Hz		
MW-3	electric	2.5 hp, 110/220V,1Φ,60 Hz		

Carbon Vessels: 2 Cetco 1,000 lbs vessels
Filter: Rosedale 8-30
Transfer Pump: 1.5 hp, 110/220V,1Φ,60 Hz
oil/water separator: N/A

PART A: SYSTEM DATA

System on upon arrival? ~~YES~~ NO (if no, specify reason in comments)

MEASUREMENT	ON ARRIVAL	ON DEPARTURE
TOTALIZER (gallons)	0269636/~~0276~~	
FILTER INLET PRESSURE (psig)	10psi	(ideal range < 30 psig)
CARBON #1 INLET PRESSURE (psig)	~~10psi~~ 6psi	
CARBON #2 INLET PRESSURE (psig)	3psi	(ideal range 12 psig)
DISCHARGE PRESSURE (psig)	No gause ?	(ideal range 0 psig)
TRANSFER PUMP FLOWRATE (gpm)	?	(ideal range 10 gpm)
% RESTRICTION VALVE OPEN	open 100%	(ideal range 100 % open)

PART B: COMMENTS

Re calibrated pump pavers and restarted system
Changed H2O EFF1. Totalizer @ 0270121
Installed new totalizer @ 0000010
@ 0000300 on departure

PART C: WELL DATA

WELL	DTW (TOB)	TOTALIZER (gallons)	FLOWRATE (gpm)	COMMENTS/ ADJUSTMENTS
MW-2	No water	0266135	5 ~~5~~ gpm	restrictor valve closed ≈ 50%
MW-3	level indicator (Needs repair)	0073015	4 ~~3~~ gpm	1

PART D: SAMPLING & READINGS I

SAMPLE	ANALYSIS	COMPLETED
Influent	TPH-gasoline/BTEX compounds	yes
MID 2	TPH-gasoline/BTEX compounds	yes
Effluent	TPH-gasoline/BTEX compounds	yes

PART G: SYSTEM MAINTENANCE I

NUMBER OF SPARE FILTERS ON SITE?	7	CHANGE FILTERS? (if necessary)	NO
DRAIN COMPRESSOR	NA		

PART H: SYSTEM MAINTENANCE II

CLEAN TOTALIZERS	Checked mw-3	TEST ALARM SWITCHES	yes
BACKFLUSH CARBON VESSELS	NO	CALIBRATE LEL	?
~~CHANGE~~ COMPRESSOR OIL	NA		

I was able to open the monitoring wells and they are all accessible for DO & Testing; mw-8 has ORE's in it though.

UNOCAL 76

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Consultant Company: Pacific Env. Group, Inc	Project Name: 310-127.5A
Address: 2025 GATEWAY PL #440	UNOCAL Project Manager: TINA Berry
City: SAN Jose State: CA Zip Code: 95110	AFE #:
Telephone: (408) 441 7500 FAX #: (408) 441 7559	Site #, City, State: 5367 SAN Leandro
Report To: Jessica Nelligan Sampler: Don Wakeman	QC Data: ☑ Level D (Standard) ☐ Level C ☐ Level B ☐ Level A

Turnaround Time: ☑ 10 Work Days ☐ 5 Work Days ☐ 3 Work Days ☐ 2 Work Days ☐ 1 Work Day ☐ 2-8 Hours

CODE: ☐ Misc. ☐ Detect. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water
☐ Waste Water
☒ Other Air

Analyses Requested: TPPH-5/BTEX

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	Comments
1.	INF1	1/9/97 8:30	AIR	1	BAG		
2.	MID	↓	1	1	1		
3.	EFF1		1	1	1		
4.							
5.							
6.							
7.							
8.							
9.							
10.							

Relinquished By: Don Wakeman	Date: 1/9/97	Time: 12:00	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab:	Date:	Time:

Were Samples Received in Good Condition? ☐ Yes ☐ No Samples on Ice? ☐ Yes ☐ No Method of Shipment _____ Page __ of __

To be completed upon receipt of report:
1) Were the analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued within the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client
Yellow - Laboratory
White - Laboratory

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Consultant Company: Pacific Env. Group, Inc.	Project Name: 310-127.54
Address: 2025 Gateway Pl. #440	UNOCAL Project Manager: Tina Berry
City: San Jose State: CA Zip Code: 95110	AFE #:
Telephone: (408) 441-7500 FAX #: (408) 441-7539	Site #, City, State: 5367 San Leandro
Report To: Jessica Nelligan Sampler: Don Watterson	QC Data: ☒ Level D (Standard) ☐ Level C ☐ Level B ☐ Level A

Turnaround Time: ☒ 10 Work Days ☐ 5 Work Days ☐ 3 Work Days ☐ 2 Work Days ☐ 1 Work Day ☐ 2-8 Hours

CODE: ☐ Misc. ☐ Detect. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water ☒ Waste Water ☐ Other

Analyses Requested: TPH-5 / BTEX

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH-5 / BTEX	Comments
1.	InFl	1/9/97 9:00	H_2O	3	VOA		X	
2.	Mid-2	"	"	"	"		X	
3.	EFFl	"	"	"	"		X	
4.								
5.								
6.								
7.								
8.								
9.								
10.								

Relinquished By: Don Watterson	Date: 1/9/97	Time: 12:00	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab:	Date:	Time:

Were Samples Received in Good Condition? ☐ Yes ☐ No Samples on Ice? ☐ Yes ☐ No Method of Shipment_____ Page __ of __

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____

2) Was the report issued within the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client

Yellow - Laboratory

White - Laboratory

FIELD SERVICES / O&M REQUEST

Work Order # 6479

SITE INFORMATION FORM

Identification

Project # 310-127.5A

Station # 5367

Site Address: 500 Bancroft Ave @ Dowling

County: Alameda

Project Manager: ADL

Requestor: Jessica

Client: Unocal

Project Type

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

Client P.O.C.: Tina Berry

Date of Request 1/7/97

Ideal field date(s): 1/8/97

Check Appropriate Category

Budget Hrs. _____

Actual Hrs. 1h

Mob de Mob _____

Field Tasks: For General Description

circle one:

Priority: 1. (emergency, must be done within 24 hrs); (2.) (next visit); 3. (when available)

- Calibrate well pump controller
- Replace totalizer

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

☐ Samples taken ☐ Samples not required ☐ Soil Vapor ☐ Groundwater

☐ Weekly ☐ Semi-Monthly ☐ Monthly ☐ Quarterly ☐ Semi-Annual

PACIFIC ENVIRONMENTAL GROUP, INC.

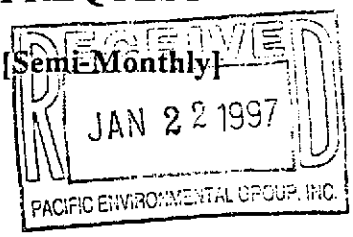
Completed by: Don Wakayama Date: 1-9-97

Checked by: _____

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

Work Order # 5547

FIELD SERVICES / ROUTINE O&M REQUEST



Identification

Request Frequency: [Semi-Monthly]

Project #	310-127.5A
Station #	5367
Site Address:	500 Bancroft Ave @ Dowling San Leandro
County:	Alameda
Project Manager:	ADL
Requestor:	Jessica Nelligan
Client:	Unocal
Client P.O.C.:	Tina Berry
Revision Date:	January 7, 1997
Laboratory:	Sequoia

Site Remedial Technologies:

Groundwater Extration (GWE)		Soil Vapor Extraction (SVE)		Air Sparging (AS)		Bio-Augmentation (BIO)	
	X		X				

Complete attached Data Sheets as prescribed in the following table:

Scheduling Table

Data Sheet Section(s) / Part(s)	To be Completed	Budgeted Hrs	Actual Hrs	Mob-de Mob	Completed
SVE(A, B, C, D)	week 1 †				
SVE(A, B, C, D, E, F)	week 3		2	1.5	6mw
GWE(A, B, C, D)	monthly				
SVE(G, H, I) GWE(G,H)	quarterly †		3		
	semi-annually				

† = sampling to be performed

Definition of frequencies:

semi-monthly = once every other week on weeks 1 & 3
monthly = first week of the month (day 1 or 2 preferred)
quarterly = once every quarter in months 1, 4, 7 ,10 on week 1

Field Technician Response:

Completed by: Don Wetenpaugh
Date: 1/22/97
Arrival time: 10:30
Departure time: 12:30
Sample this visit?: yes (SVE)
Engineer contacted? yes

Soil Vapor Extraction & Treatment System
Unocal Service Station #5367
500 Bancroft Avenue @ Dowling
San Leandro, CA
310-127.5A

PART A: SYSTEM DATA

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

HOUR METER (hrs)	09744.6	CONTENTS OF KNOCKOUT BARREL	Empty
ELECTRIC METER (kW-hrs)	22412		

MEASUREMENT	ON ARRIVAL	ON DEPARTURE
% DILUTION VALVE OPEN	20%	20%
% RECIRCULATION VALVE OPEN	50%	50%
% HEAT EXCHANGER BYPASS VALVE OPEN	NA	NA
MANIFOLD AIR FLOW (before dilution) (Δ P, inches of water)	<.05	<.05
TOTAL SYSTEM AIR FLOW (after dilution) (ΔP, inches of water)	Minimal <.05	<.05
BLOWER VACUUM (inches of water)	42" H_2O	42" H_2O

PART B: COMMENTS Restart system – NO known reason for system to be down

Vacuum before dilution valve - 30" H_2O

When not performing GWE activities, use this space to note GWE operating conditions.

GWE system on upon arrival? Yes

If no, specify reason.

GWE Totalizer Reading: 0080620

MW-2 0348980
MW-3 0074940

PART C: SYSTEM FID READINGS

READING (ppmv)	WC/WOC/DF before adjustments	WC/WOC/DF after adjustments
INFLUENT (before dilution)	4.5/4.5/0	
INFLUENT (after dilution)	4.5/4.5/0	
PRIMARY GAC EFFLUENT	4/4/0	
SYSTEM EFFLUENT	4/4/0	
BACKGROUND	3.5/3.5/0	
FIELD INSTRUMENT USED:		
LAST CALIBRATED:		

PART D: SAMPLING I

SAMPLE	ANALYSIS	COMPLETED
INFLUENT (semi-monthly)	TPH-g/BTEX	yes
MID (monthly)	TPH-g/BTEX	yes
EFFLUENT (semi-monthly)	TPH-g/BTEX	yes

PART E: SAMPLING II

WELLS (MW-1, MW-2, MW-3)	TPH-g/BTEX	yes

PART F: WELL DATA

WELL	VALVE POSITION % open		FID (ppmv)			VAC/PRESSURE ("H_2O)		FLOW	
	INITIAL	FINAL	DILUTION FACTOR USED	WC	WOC	@ MANIFOLD	@ WELL	Δ P ("H_2O)	PIPE SIZE
MW-1	100%	100%	0	3	4.5	30" H_2O	30" H_2O	NA	NA
MW-2	100%	100%	0	7	7	30" H_2O	30" H_2O		
MW-3	100%	100%	0	4	4.5	30" H_2O	30" H_2O		

UNOCAL 76

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Consultant Company: Pacific Env. Group Inc	Project Name: 310-127.5A
Address: 2025 Gateway Pl #440	UNOCAL Project Manager: Tina Berry
City: San Jose State: CA Zip Code: 95110	AFE #:
Telephone: (408) 441-7500 FAX #: (408) 441-7539	Site #, City, State: 5367 San Leandro
Report To: Jessica Sampler: Don Watenpaugh	QC Data: ☒ Level D (Standard) ☐ Level C ☐ Level B ☐ Level A

Turnaround Time: ☒ 10 Work Days ☐ 5 Work Days ☐ 3 Work Days ☐ 2 Work Days ☐ 1 Work Day ☐ 2-8 Hours

CODE: ☐ Misc. ☐ Detect. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water
☐ Waste Water
☒ Other Air

Analyses Requested

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH-g/BTEX	Comments
1.	INF1	1/22/97 11:00	Air	1	Bag		X	
2.	M10							
3.	EFF1							
4.	MW-1							
5.	MW-2							
6.	MW-3							
7.								
8.								
9.								
10.								

Relinquished By: Don Watenpaugh	Date: 1/22/97	Time: 18:30	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab:	Date:	Time:

Were Samples Received in Good Condition? ☐ Yes ☐ No Samples on Ice? ☐ Yes ☐ No Method of Shipment_____ Page __ of __

To be completed upon receipt of report:
1) Were the analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued within the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____

Approved by: Signature: Company: Date:

Pink - Client
Yellow - Laboratory
White - Laboratory

Work Order # 5367

FIELD SERVICES / ROUTINE O&M REQUEST

Identification

Request Frequency:[Semi-Monthly]

Project #	311-127.5A
Station #	5367
Site Address:	500 Bancroft Ave @ Dowling San Leandro
County:	Alameda
Project Manager:	ADL
Requestor:	Jessica Nelligan
Client:	76 Products
Client P.O.C.:	Tina Berry
Revision Date:	January 30, 1997
Laboratory:	Sequoia

Site Remedial Technologies:

Groundwater Extration (GWE)		Soil Vapor Extraction (SVE)		Air Sparging (AS)		Bio-Augmentation (BIO)	
	X		X				

Complete attached Data Sheets as prescribed in the following table:

Scheduling Table

Data Sheet Section(s) / Part(s)	To be Completed	Budgeted Hrs	Actual Hrs	Mob-de Mob	Completed
SVE(A, B, C, D)	week 1 †		1.5	1	(4)
SVE(A, B, C, D, E, F)	week 3				
GWE(A, B, C, D)	monthly		1.5		
~~SVE(G, H, I) GWE(G,H)~~	~~quarterly †~~				
	semi-annually				

† = sampling to be performed

Definition of frequencies:

semi-monthly = once every other week on weeks 1 & 3, when pulse mode is ON
monthly = first week of the month (day 1 or 2 preferred)
quarterly = once every quarter in months ~~1~~, 4, 7 ,10 on week 1

Field Technician Response:

Completed by: Don Betancourt Date: 2/6/97
Arrival time: 10:00 Departure time: 1:00
Sample this visit?: Engineer contacted?

Soil Vapor Extraction & Treatment System
76 Products Service Station #5367
500 Bancroft Avenue @ Dowling
San Leandro, CA
310-127.5A

PART A: SYSTEM DATA

Pulsed Mode: Turn **ON** / **OFF** Monthly (at week 1)

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

HOUR METER (hrs)	10092.2	CONTENTS OF KNOCKOUT BARREL	Empty
ELECTRIC METER (kW-hrs)	24151		

MEASUREMENT	ON ARRIVAL	ON DEPARTURE
% DILUTION VALVE OPEN	20%	System off
% RECIRCULATION VALVE OPEN	≈ 40%	↓
MANIFOLD AIR FLOW (before dilution) (Δ P, inches of water)	≈.05" H_2O	↓
TOTAL SYSTEM AIR FLOW (after dilution) (ΔP, inches of water)	.05" H_2O	↓
BLOWER VACUUM (inches of water)	28" H_2O	↓

PART B: COMMENTS System off on arrival
Started system & ran ≈ 30 minutes to Sample
Turned system off (SVE) after screening & sampling

When not performing GWE activities, use this space to note GWE operating conditions.

GWE system on upon arrival?

If no, specify reason.

GWE Totalizer Reading:

PART C: SYSTEM FID READINGS

READING (ppmv)	WC/WOC/DF before adjustments	WC/WOC/DF after adjustments
INFLUENT (before dilution)	3.5/3.5/0	System off
INFLUENT (after dilution)	3.5/3.5/0	
PRIMARY GAC EFFLUENT	3.5/3.5/0	
SYSTEM EFFLUENT	3.5/3.5/0	
BACKGROUND	3.5/3.5/0	
FIELD INSTRUMENT USED:	~~HNU~~ FID#2	
LAST CALIBRATED:	1/99	

PART D: SAMPLING I

SAMPLE	ANALYSIS	COMPLETED
INFLUENT (semi-monthly)	TPH-g/BTEX	yes
MID (monthly)	TPH-g/BTEX	yes
EFFLUENT (semi-monthly)	TPH-g/BTEX	yes

PART E: SAMPLING II

~~WELLS~~ (MW-1, MW-2, MW-3)	TPH-g/BTEX	

PART F: WELL DATA

WELL	VALVE POSITION		FID (ppmv)			VAC/PRESSURE ("H_2O)		FLOW	
	INITIAL	FINAL	DILUTION FACTOR USED	WC	WOC	@ MANIFOLD	@ WELL	Δ P ("H_2O)	PIPE SIZE
MW-1									
MW-2									
MW-3									

Groundwater Extraction & Treatment System
Unocal Service Station 5367
500 Bancroft @ Dowling
San Leandro, CA
310-127.5A

System Description:

Groundwater Pumps

Well	Type	Size	Control	Set Depth (TOB)
MW-2	electric	2.5 hp, 110/220V,1Φ,60 Hz		
MW-3	electric	2.5 hp, 110/220V,1Φ,60 Hz		

Carbon Vessels: 2 Cetco 1,000 lbs vessels
Filter: Rosedale 8-30
Transfer Pump: 1.5 hp, 110/220V,1Φ,60 Hz
oil/water separator: N/A

PART A: SYSTEM DATA

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

MEASUREMENT	ON ARRIVAL	ON DEPARTURE
TOTALIZER (gallons)	0121773	0122000
FILTER INLET PRESSURE (psig)	>60 psi	(ideal range < 30 psig) 10
CARBON #1 INLET PRESSURE (psig)	0	6.5 psi
CARBON #2 INLET PRESSURE (psig)	0	(ideal range 12 psig) 2 psi
DISCHARGE PRESSURE (psig)	0	(ideal range 0 psig) 0
TRANSFER PUMP FLOWRATE (gpm)	0	(ideal range 10 gpm) ≈7 GPM
% RESTRICTION VALVE OPEN	100%	(ideal range 100 % open) 100%

PART B: COMMENTS High filter pressure - Changed bag filter System on now.
Pumps have been stopping then restarting after about 30 minutes.
1st time I measure Effluent GPM it was ≈10 GPM - then right after I measured the gpm of the wells & rechecked it and it was ≈7GPM

PART C: WELL DATA

WELL	DTW (TOB)	TOTALIZER (gallons)	FLOWRATE (gpm)	COMMENTS/ ADJUSTMENTS
MW-2	21.3'	0406550	≈4 gpm	NONE
MW-3	21.4'	0075236	≈3.5 gpm	NONE
		~~0406550~~		

PART D: SAMPLING & READINGS I

SAMPLE	ANALYSIS	COMPLETED
Influent	TPH-gasoline/BTEX compounds	yes
MID 2	TPH-gasoline/BTEX compounds	yes
Effluent	TPH-gasoline/BTEX compounds	yes

PART G: SYSTEM MAINTENANCE I

NUMBER OF SPARE FILTERS ON SITE?	10	CHANGE FILTERS? (if necessary)	yes
DRAIN COMPRESSOR	NA		

PART H: SYSTEM MAINTENANCE II

CLEAN TOTALIZERS		TEST ALARM SWITCHES	
BACKFLUSH CARBON VESSELS		CALIBRATE LEL	
CHANGE COMPRESSOR OIL			

FIELD SERVICES / O&M REQUEST

Work Order # 6505

SITE INFORMATION FORM

Identification

Project # 311-127.5A

Station # 5367

Site Address: 500 Bancroft Ave San Leandro

County: Alameda

Project Manager: Joe M

Requestor: Jessica

Client: 76 Products

Project Type

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

Client P.O.C.: Tina Berry

Date of Request 1/25/07

Ideal field date(s): next visit

Check Appropriate Category

Budget Hrs. _____

Actual Hrs. .5

Mob de Mob _____

Field Tasks: For General Description

circle one:
Priority: 1. (emergency, must be done within 24 hrs); (2. (next visit); 3. (when available)

Please post permit on-site.

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

Posted permit on site - on system electrical panel

☐ Samples taken ☑ Samples not required ☐ Soil Vapor ☐ Groundwater

☐ Weekly ☐ Semi-Monthly ☐ Monthly ☐ Quarterly ☐ Semi-Annual

Completed by: Don Waterman Date: 2/6/07

PACIFIC ENVIRONMENTAL GROUP, INC.

Checked by: _____

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☐ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Consultant Company: Pacific Env. Group Inc	Project Name: 310-127.5A
Address: 2025 GATEWAY Pl, Suite 440	UNOCAL Project Manager: TINA Berry
City: SAN Jose State: CA Zip Code: 95710	AFE #:
Telephone: (408) 441-7500 FAX #: (408) 441-7539	Site #, City, State: 5367 San Leandro, CA
Report To: Jessica Nelligan Sampler: Don Watenpaugh	QC Data: ☒ Level D (Standard) ☐ Level C ☐ Level B ☐ Level A

Turnaround Time: ☒ 10 Work Days ☐ 5 Work Days ☐ 3 Work Days ☐ 2 Work Days ☐ 1 Work Day ☐ 2-8 Hours

CODE: ☐ Misc. ☐ Detect. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water
☒ Waste Water
☐ Other

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH-5/BTEX								Comments
1. INFL	2/6/97 11:00	H_2O	3	VOA		X								
2. MID-2	↓ ↓	↓	↓	↓		↓								
3. EFFL	↓ ↓	↓	↓	↓		↓								
4.														
5.														
6.														
7.														
8.														
9.														
10.														

Relinquished By: Don Watenpaugh	Date: 2-6-97	Time: 14:00	Received By:	Date: Time:
Relinquished By:	Date:	Time:	Received By:	Date: Time:
Relinquished By:	Date:	Time:	Received By Lab:	Date: Time:

Were Samples Received in Good Condition? ☐ Yes ☐ No Samples on Ice? ☐ Yes ☐ No Method of Shipment _____ Page __ of __

To be completed upon receipt of report:
1) Were the analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued within the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client
Yellow - Laboratory
White - Laboratory

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Consultant Company: Pacific Env. Group, Inc.	Project Name: 310-127.5A
Address: 2025 Gateway Pl Suite 440	UNOCAL Project Manager: Tina Berry
City: San Jose State: CA Zip Code: 95110	AFE #:
Telephone: (408) 441-7500 FAX #: (408) 441-7539	Site #, City, State: 5367 San Leandro
Report To: Jessica Nelligan Sampler: Don Wetenpaugh	QC Data: ☒ Level D (Standard) ☐ Level C ☐ Level B ☐ Level A

Turnaround Time: ☒ 10 Work Days ☐ 5 Work Days ☐ 3 Work Days ☐ 2 Work Days ☐ 1 Work Day ☐ 2-8 Hours

CODE: ☐ Misc. ☐ Detect. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water ☐ Waste Water ☒ Other AIR

Analyses Requested: TPH-G / BTEX

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH-G / BTEX	Comments
1.	INF1	2/6/97 11:30	AIR	1	BAG		X	
2.	MID	↓ ↓	↓	↓	↓		↓	
3.	EFF1	↓ ↓	↓	↓	↓		↓	
4.								
5.								
6.								
7.								
8.								
9.								
10.								

Relinquished By: Don Wetenpaugh	Date: 2-6-97	Time: 14:00	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab:	Date:	Time:

Were Samples Received in Good Condition? ☐ Yes ☐ No Samples on Ice? ☐ Yes ☐ No Method of Shipment _____ Page __ of __

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____

2) Was the report issued within the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client

Yellow - Laboratory

White - Laboratory

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FIELD SERVICES / O&M REQUEST

Work Order # 6502

SITE INFORMATION FORM

Identification

Project # 311-127.5A

Station # 5367

Site Address: 500 Bancroft Ave San Leandro

County: Alameda

Project Manager: ADL

Requestor: Jessica

Client: 76 Products

Project Type

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

Client P.O.C.: Tina Berry

Date of Request 1/30/97

Ideal field date(s): next visit

Check Appropriate Category

Budget Hrs. _____

Actual Hrs. 3

Mob de Mob 1

Field Tasks: For General Description

circle one:
Priority: 1. (emergency, must be done within 24 hrs); (2. (next visit)); 3. (when available)

- Turn off SVE — Pulsing monthly. Turn ON/OFF on 1st week
- Keep GWE operating at all times
- ** See updated data sheet (1/30/97)
- Continue semi-monthly sampling of SVE when ~~5~~ pulse mode is on.

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

System off on arrival turned on to Screen wells & Sample
Turned system off for pulsing GWE ON

☑ Samples taken ☐ Samples not required ☐ Soil Vapor ☐ Groundwater

☐ Weekly ☒ Semi-Monthly ☐ Monthly ☐ Quarterly ☐ Semi-Annual

Completed by: D. Watrous Date: 2/6/97

PACIFIC ENVIRONMENTAL GROUP, INC.

Checked by: _____

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

Work Order # 5367

FIELD SERVICES / ROUTINE O&M REQUEST

Request Frequency:[Semi-Monthly]

Identification

Project #	311-127.5A
Station #	5367
Site Address:	500 Bancroft Ave @ Dowling San Leandro
County:	Alameda
Project Manager:	ADL
Requestor:	Jessica Nelligan
Client:	76 Products
Client P.O.C.:	Tina Berry
Revision Date:	January 30, 1997
Laboratory:	Sequoia

Site Remedial Technologies:

Groundwater Extration (GWE)		Soil Vapor Extraction (SVE)		Air Sparging (AS)		Bio-Augmentation (BIO)	
	X		X				

Complete attached Data Sheets as prescribed in the following table:

Scheduling Table

Data Sheet Section(s) / Part(s)	To be Completed	Budgeted Hrs	Actual Hrs	Mob-de Mob	Completed
~~SVE(A, B, C, D)~~	~~week 1~~ †				
~~SVE(A, B, C, D, E, F)~~	~~week 3~~				
GWE(A, B, C, D)	monthly		.5	1	
SVE(G, H, I) GWE(G,H)	quarterly †				
	semi-annually				

† = sampling to be performed Check groundwater system only

Definition of frequencies:

semi-monthly = once every other week on weeks 1 & 3, when pulse mode is ON
monthly = first week of the month (day 1 or 2 preferred)
quarterly = once every quarter in months 1, 4, 7 ,10 on week 1

Field Technician Response:

Completed by: Don Watenpaugh
Arrival time: 11:00
Sample this visit?: NO

Date: 2/19/97
Departure time: 11:30
Engineer contacted?

Soil Vapor Extraction & Treatment System
76 Products Service Station #5367
500 Bancroft Avenue @ Dowling
San Leandro, CA
310-127.5A

PART A: SYSTEM DATA

Pulsed Mode: Turn **ON / OFF** Monthly (at week 1)

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

HOUR METER (hrs)	10093.3	CONTENTS OF KNOCKOUT BARREL	N/A
ELECTRIC METER (kW-hrs)	24162		✓

MEASUREMENT	ON ARRIVAL	ON DEPARTURE
% DILUTION VALVE OPEN		
% RECIRCULATION VALVE OPEN		
MANIFOLD AIR FLOW (before dilution) (Δ P, inches of water)		
TOTAL SYSTEM AIR FLOW (after dilution) (ΔP, inches of water)		
BLOWER VACUUM (inches of water)	↓	↓

PART B: COMMENTS Check GWE system only
Changed Bag Filter Inlet PSI 8 psi
Outlet pressure 8 psi

When not performing GWE activities, use this space to note GWE operating conditions.

GWE system on upon arrival? yes

If no, specify reason.

GWE Totalizer Reading: 0122270

Flow = 6 GPM

Work Order # 5367

FIELD SERVICES / ROUTINE O&M REQUEST

Identification

Request Frequency:[Semi-Monthly]

Project #	311-127.5A
Station #	5367
Site Address:	500 Bancroft Ave @ Dowling San Leandro
County:	Alameda
Project Manager:	ADL
Requestor:	Jessica Nelligan
Client:	76 Products
Client P.O.C.:	Tina Berry
Revision Date:	January 30, 1997
Laboratory:	Sequoia

Site Remedial Technologies:

Groundwater Extration (GWE)		Soil Vapor Extraction (SVE)		Air Sparging (AS)		Bio-Augmentation (BIO)	
	X		X				

Complete attached Data Sheets as prescribed in the following table:

Scheduling Table

Data Sheet Section(s) / Part(s)	To be Completed	Budgeted Hrs	Actual Hrs	Mob-de Mob	Completed
SVE(A, B, C, D)	week 1 †				
SVE(A, B, C, D, E, F)	week 3		3	1	(4)
GWE(A, B, C, D)	monthly				
SVE(G, H, I) GWE(G,H)	quarterly †				
	semi-annually				

† = sampling to be performed

Definition of frequencies:

semi-monthly = once every other week on weeks 1 & 3, when pulse mode is ON
monthly = first week of the month (day 1 or 2 preferred)
quarterly = once every quarter in months 1, 4, 7 ,10 on week 1

Field Technician Response:

Completed by: Don Hempy Date: 3/6/97
Arrival time: 11:00 Departure time: 2:00
Sample this visit?: Yes Engineer contacted? Yes

Soil Vapor Extraction & Treatment System
76 Products Service Station #5367
500 Bancroft Avenue @ Dowling
San Leandro, CA
310-127.5A

PART A: SYSTEM DATA

Pulsed Mode: (Turn **ON** / **OFF** Monthly (at week 1)

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

HOUR METER (hrs)	10093.7	CONTENTS OF KNOCKOUT BARREL	Empty
ELECTRIC METER (kW-hrs)	24487		

MEASUREMENT	ON ARRIVAL	ON DEPARTURE
% DILUTION VALVE OPEN	25%	
% RECIRCULATION VALVE OPEN	50%	
MANIFOLD AIR FLOW (before dilution) (Δ P, inches of water)	.10" H_2O	
TOTAL SYSTEM AIR FLOW (after dilution) (ΔP, inches of water)	.60" H_2O	
BLOWER VACUUM (inches of water)	60" H_2O	

PART B: COMMENTS Turned system on for pulse mode

When not performing GWE activities, use this space to note GWE operating conditions.

GWE system on upon arrival?

If no, specify reason.

GWE Totalizer Reading:

PART C: SYSTEM FID READINGS

READING (ppmv)	WC/WOC/DF before adjustments	WC/WOC/DF after adjustments
INFLUENT (before dilution)	50/50/10	None
INFLUENT (after dilution)	4.5/5/0	↓
PRIMARY GAC EFFLUENT	4.5/4.5/0	↓
SYSTEM EFFLUENT	4.5/4.5/0	↓
BACKGROUND	4.5/4.5/0	↓
FIELD INSTRUMENT USED: FID #2		
LAST CALIBRATED: 2/97		

PART D: SAMPLING I

SAMPLE	ANALYSIS	COMPLETED
INFLUENT (semi-monthly)	TPH-g/BTEX	yes
MID (monthly)	TPH-g/BTEX	yes
EFFLUENT (semi-monthly)	TPH-g/BTEX	yes

PART E: SAMPLING II

WELLS (MW-1, MW-2, MW-3)	TPH-g/BTEX	yes

PART F: WELL DATA

	VALVE POSITION		FID (ppmv)			VAC/PRESSURE ("H_2O)		FLOW	
WELL	INITIAL	FINAL	DILUTION FACTOR USED	WC	WOC	@ MANIFOLD	@ WELL	Δ P ("H_2O)	PIPE SIZE
MW-1	100%	100%	10	16	60	40"H_2O	40"H_2O	NA	4"
MW-2	↓	↓	10	60	70	↓	↓	↓	↓
MW-3	↓	↓	10	70	70	↓	↓	↓	↓

Groundwater Extraction & Treatment System
Unocal Service Station 5367
500 Bancroft @ Dowling
San Leandro, CA
310-127.5A

System Description:

Groundwater Pumps

Well	Type	Size	Control	Set Depth (TOB)
MW-2	electric	2.5 hp, 110/220V,1Φ,60 Hz		
MW-3	electric	2.5 hp, 110/220V,1Φ,60 Hz		

Carbon Vessels: 2 Cetco 1,000 lbs vessels
Filter: Rosedale 8-30
Transfer Pump: 1.5 hp, 110/220V,1Φ,60 Hz
oil/water separator: N/A

PART A: SYSTEM DATA

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

MEASUREMENT	ON ARRIVAL	ON DEPARTURE
TOTALIZER (gallons)	0313130	0314460
FILTER INLET PRESSURE (psig)	12 (IN) / 10 (out)	(ideal range < 30 psig) 12 (IN) / 10 (out)
CARBON #1 INLET PRESSURE (psig)	6	6
CARBON #2 INLET PRESSURE (psig)	2	(ideal range 12 psig) 2
DISCHARGE PRESSURE (psig)	0	(ideal range 0 psig)
TRANSFER PUMP FLOWRATE (gpm)	8 GPM	(ideal range 10 gpm) 10 GPM
% RESTRICTION VALVE OPEN	100%	(ideal range 100 % open) 100%

PART B: COMMENTS Pump #2 MW-3 was running only on arrival (8 GPM) Pump #1 (MW-2) came back on while monitoring system (5 GPM) System effluent went up to 13 GPM - Closed restriction valve on MW-3 to adjust flow to ≈ 5 gpm

PART C: WELL DATA

WELL	DTW (TOB)	TOTALIZER (gallons)	FLOWRATE (gpm)	COMMENTS/ ADJUSTMENTS
MW-2	26.70'	0406720	≈5 gpm	Open 25%
MW-3	27.0'	0264430	≈5 gpm	restricted valve open 50%
	~~26.70~~	~~0406720~~	4 ~~gpm~~	~~OPEN 50%~~
Total Flow			≈ 10 GPM	

PART D: SAMPLING & READINGS I

SAMPLE	ANALYSIS	COMPLETED
Influent	TPH-gasoline/BTEX compounds	yes
MID 2	TPH-gasoline/BTEX compounds	↓
Effluent	TPH-gasoline/BTEX compounds	↓

PART G: SYSTEM MAINTENANCE I

NUMBER OF SPARE FILTERS ON SITE?	10	CHANGE FILTERS? (if necessary)	NO
DRAIN COMPRESSOR	NO		

PART H: SYSTEM MAINTENANCE II

CLEAN TOTALIZERS		TEST ALARM SWITCHES	
BACKFLUSH CARBON VESSELS		CALIBRATE LEL	
CHANGE COMPRESSOR OIL			

UNOCAL 76

660 Chesapeake Drive • Redwood City, CA 94063 • (415) 364-9600
819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600
404 N. Wiget Lane • Walnut Creek, CA 94598 • (510) 988-9600
18939 120th Ave., N.E., Suite 101 • Bothell, WA 98011 • (206) 481-9200
East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200
15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Consultant Company: Pacific Env. Group Inc.	Project Name: 311-127.5A
Address: 2025 GATEWAY PL Suite 440	UNOCAL Project Manager: TINA Berry
City: SAN JOSE State: CA Zip Code: 95110	AFE #:
Telephone: (408) 441 7500 FAX #(408) 441 7539	Site #, City, State: 5367 SAN Leandro, CA
Report To: Jessica Nelligan Sampler: DON WATTENBAUGH	QC Data: ☒ Level D (Standard) ☐ Level C ☐ Level B ☐ Level A

Turnaround Time: ☐ 10 Work Days ☐ 5 Work Days ☒ 3 Work Days ☐ 2 Work Days ☐ 1 Work Day ☐ 2-8 Hours

CODE: ☐ Misc. ☐ Detect. ☐ Eval. ☒ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water ☐ Waste Water ☒ Other AIR

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPPHs-BTEX	Comments
1. INF1	3-6-97 13:00	AIR	1	BAG		X	3 day Turn around time
2. MID							
3. EFF1							
4. MW-1	12:00						
5. MW-2							
6. MW-3							
7.							
8.							
9.							
10.							

Relinquished By: Don Wattenbaugh	Date: 3/6/97	Time: 13:10	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab:	Date:	Time:

Were Samples Received in Good Condition? ☐ Yes ☐ No Samples on Ice? ☐ Yes ☐ No Method of Shipment_____ Page __ of __

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____

2) Was the report issued within the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date _____

Pink - Client

Yellow - Laboratory

White - Laboratory

UNOCAL 76

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☐ East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200
☐ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Consultant Company: Pacific ENV Group Inc	Project Name: 311-127.5A
Address: 2025 GATEWAY Pl. Suite 440	UNOCAL Project Manager: TINA Berry
City: SAN Jose State: CA Zip Code: 95110	AFE #:
Telephone: (408) 441-7500 FAX #: (408) 441 7539	Site #, City, State: 5367 SAN Leandro CA.
Report To: Jessica Nelligan Sampler: Don Watenpaugh	QC Data: ☑ Level D (Standard) ☐ Level C ☐ Level B ☐ Level A

Turnaround Time: ☑ ~~10~~ Work Days ☐ 5 Work Days ☐ 3 Work Days ☐ 2 Work Days ☐ 1 Work Day ☐ 2-8 Hours

CODE: ☐ Misc. ☐ Detect. ☐ Eval. ☑ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water ☑ Waste Water ☐ Other

Analyses Requested

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH's/BTEX									Comments
1.	INF1	3/6/97 11:45	H2O	3	VOA		X									
2.	MID-2	↓ ↓	↓	↓	↓		↓									
3.	EFF1	↓ ↓	↓	↓	↓		↓									
4.																
5.																
6.																
7.																
8.																
9.																
10.																

Pink - Client

Yellow - Laboratory

White - Laboratory

Relinquished By: Don Watenpaugh	Date: 3/6/97	Time: 15:15	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab:	Date:	Time:

Were Samples Received in Good Condition? ☐ Yes ☐ No Samples on Ice? ☐ Yes ☐ No Method of Shipment _____ Page __ of __

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____

2) Was report issued within the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____

Approved by. _____ Signature: _____ Company: _____ Date. _____

FIELD SERVICES REQUEST

SITE INFORMATION FORM

Identification

Project # 311-127.5A
Station ID 5367
Site Address: 500 Bancroft Ave
San Leandro
Lab: Sequoia
County3rd :
Project Manager: Andrew Lehane
Requester: Jessica Nelligan
Client: 76 Products
Client P.O.C: Tina Berry
Date of Request: March 11, 1997

Project Type

- ☒ Operation & Maintenance
- ☐ Sampling
- ☐ 1st time visit
- ☐ Quarterly
  - ☐ 1st ☐ 2nd ☐ ☐ 4th
- ☐ Monthly
- ☐ Semi-Monthly
- ☐ Weekly
- ☒ One time event
- ☐ Other:

Ideal field date: March 13

Site Check Appropriate Category

- ☒ In Budget Visit
- ☐ Out of Budget Site Visit

Budget Hours: 2
Actual Hours: 3 2
Mob de Mob: 1

Site Safety Concerns

STANDARD

Field Tasks General Description

1. Take final system readings.
2. Shut down GWE and SVE systems.
3. Secure area.

Comments, remarks from field staff

Took Final readings from systems. Sprayed WD-40 into blower before shutting off.
* Pulled pumps from MW-2 and MW-3 put in treatment compound.

Completed By: Don Wolanyk Date: 3/13/97

Pacific Environmental Group, Inc.

Work Order # 5367

FIELD SERVICES / ROUTINE O&M REQUEST

Identification

Request Frequency:[Semi-Monthly]

Project #	311-127.5A
Station #	5367
Site Address:	500 Bancroft Ave @ Dowling San Leandro
County:	Alameda
Project Manager:	ADL
Requestor:	Jessica Nelligan
Client:	76 Products
Client P.O.C.:	Tina Berry
Revision Date:	January 30, 1997
Laboratory:	Sequoia

Site Remedial Technologies:

Groundwater Extration (GWE)		Soil Vapor Extraction (SVE)		Air Sparging (AS)		Bio-Augmentation (BIO)	
	X		X				

Complete attached Data Sheets as prescribed in the following table:

Scheduling Table

Data Sheet Section(s) / Part(s)	To be Completed	Budgeted Hrs	Actual Hrs	Mob-de Mob	Completed
SVE(A, B, C, D)	week 1 †				
SVE(A, B, C, D, E, F)	week 3				
GWE(A, B, C, D)	monthly				
SVE(G, H, I) GWE(G,H)	quarterly †				
	semi-annually				

† = sampling to be performed

Definition of frequencies:

semi-monthly = once every other week on weeks 1 & 3, when pulse mode is ON
monthly = first week of the month (day 1 or 2 preferred)
quarterly = once every quarter in months 1, 4, 7 ,10 on week 1

Field Technician Response:

Completed by: Don Watanabe Date: 3/13/97
Arrival time: 12:30 Departure time: 3:00
Sample this visit?: No Engineer contacted? No

Soil Vapor Extraction & Treatment System
76 Products Service Station #5367
500 Bancroft Avenue @ Dowling
San Leandro, CA
310-127.5A

PART A: SYSTEM DATA

Pulsed Mode: Turn **ON / OFF** Monthly (at week 1)

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

HOUR METER (hrs)	10263	CONTENTS OF KNOCKOUT BARREL	Empty
ELECTRIC METER (kW-hrs)	25584		

MEASUREMENT	ON ARRIVAL	ON DEPARTURE
% DILUTION VALVE OPEN	25%	closed
% RECIRCULATION VALVE OPEN	50%	closed
MANIFOLD AIR FLOW (before dilution) (Δ P, inches of water)	NA	0
TOTAL SYSTEM AIR FLOW (after dilution) (ΔP, inches of water)	.50	0
BLOWER VACUUM (inches of water)	65" H2O	0

PART B: COMMENTS Turned System off

When not performing GWE activities, use this space to note GWE operating conditions.

GWE system on upon arrival?

If no, specify reason.

GWE Totalizer Reading:

PART C: SYSTEM FID READINGS

READING (ppmv)	WC/WOC/DF before adjustments	WC/WOC/DF after adjustments
INFLUENT (before dilution)		
INFLUENT (after dilution)		
PRIMARY GAC EFFLUENT		
SYSTEM EFFLUENT		
BACKGROUND		
FIELD INSTRUMENT USED:		
LAST CALIBRATED:		

PART D: SAMPLING I

SAMPLE	ANALYSIS	COMPLETED
INFLUENT (semi-monthly)	TPH-g/BTEX	
MID (monthly)	TPH-g/BTEX	
EFFLUENT (semi-monthly)	TPH-g/BTEX	

PART E: SAMPLING II

WELLS (MW-1, MW-2, MW-3)	TPH-g/BTEX	

PART F: WELL DATA

WELL	VALVE POSITION 0/6 Open		FID (ppmv)			VAC/PRESSURE ("H_2O)		FLOW	
	INITIAL	FINAL	DILUTION FACTOR USED	WC	WOC	@ MANIFOLD	@ WELL	Δ P ("H_2O)	PIPE SIZE
MW-1	100%	OFF				40"H_2O	40"H_2O	NA	
MW-2	↓	↓				↓	↓		
MW-3	↓	↓				↓	↓		

PART G: SVE INFLUENCE

SVE WELL	APPLIED VACUUM (inches of water)	MONITORING WELL	MEASURED VACUUM (inches of water)
MW-9		MW-10	
MW-8		MW-4	
MW-3		MW-2	
		MW-3	
		MW-7	

PART H: SYSTEM MAINTENANCE I
CHECK LIST

DRIVE BELTS		BLOWER OIL	
INLINE FILTER		LEAKS	
RATTLES		EXCESSIVE NOISE	
INDICATOR LIGHTS			

PART I: SYSTEM MAINTENANCE II

CHANGE BLOWER OIL		CHANGE DRIVE BELTS	
GREASE LINKAGE AND BEARINGS		TEST ALARM SWITCHES	

Groundwater Extraction & Treatment System
Unocal Service Station 5367
500 Bancroft @ Dowling
San Leandro, CA
310-127.5A

System Description:

Groundwater Pumps

Well	Type	Size	Control	Set Depth (TOB)
MW-2	electric	2.5 hp, 110/220V,1Φ,60 Hz		
MW-3	electric	2.5 hp, 110/220V,1Φ,60 Hz		

Carbon Vessels: 2 Cetco 1,000 lbs vessels
Filter: Rosedale 8-30
Transfer Pump: 1.5 hp, 110/220V,1Φ,60 Hz
oil/water separator: N/A

PART A: SYSTEM DATA

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

MEASUREMENT	ON ARRIVAL	ON DEPARTURE
TOTALIZER (gallons)	0367040	0367040
FILTER INLET PRESSURE (psig)	12	(ideal range < 30 psig) 0
CARBON #1 INLET PRESSURE (psig)	6 psi	0
CARBON #2 INLET PRESSURE (psig)	2 psi	(ideal range 12 psig) 0
DISCHARGE PRESSURE (psig)	0	(ideal range 0 psig) 0
TRANSFER PUMP FLOWRATE (gpm)	8 psi	(ideal range 10 gpm) 0
% RESTRICTION VALVE OPEN	100%	(ideal range 100 % open) closed

PART B: COMMENTS

Turned system off, Pulled pumps in MW-2 & MW-3 put pumps & pipe in treatment compound. Put 4" J-cap on wells to seal.

PART C: WELL DATA

WELL	DTW (TOB)	TOTALIZER (gallons)	FLOWRATE (gpm)	COMMENTS/ ADJUSTMENTS
MW-2	23.7'	0407220	OFF	Closed
MW-3	23.5'	0317930	OFF	Valve

PART D: SAMPLING & READINGS I

SAMPLE	ANALYSIS	COMPLETED
Influent	TPH-gasoline/BTEX compounds	
MID 2	TPH-gasoline/BTEX compounds	
Effluent	TPH-gasoline/BTEX compounds	

PART G: SYSTEM MAINTENANCE I

NUMBER OF SPARE FILTERS ON SITE?		CHANGE FILTERS? (if necessary)	
DRAIN COMPRESSOR			

PART H: SYSTEM MAINTENANCE II

CLEAN TOTALIZERS		TEST ALARM SWITCHES	
BACKFLUSH CARBON VESSELS		CALIBRATE LEL	
CHANGE COMPRESSOR OIL			