

PACIFIC
ENVIRONMENTAL
GROUP INC.

Log
8/14/96

May 10, 1996
Project 310-058.5A

Ms. Susan Keach
Oro Loma Sanitary District
2600 Grant Avenue
San Lorenzo, California 94580

Re: Wastewater Discharge Permit 024 - April 1996 Sewer Report
Unocal Service Station 5760
376 Lewelling Boulevard at Usher Street
San Lorenzo, California

Dear Ms. Keach:

On behalf of Unocal Corporation, Pacific Environmental Group, Inc. (PACIFIC) is operating a groundwater extraction (GWE) and treatment system at the site referenced above. This letter transmits treatment system operational data for the period between March 11 and April 5, 1996 (Table 1). Operational parameters are summarized below.

<i>Current System Status:</i>	<i>Operational</i>
<i>Reporting Period:</i>	3/11/96 - 4/5/96
<i>Period Temperature:</i>	70.7
<i>Period pH reading:</i>	6.83
<i>Period Volume Discharged:</i>	340 gallons
<i>Total Volume Discharged:</i>	82,584 gallons
<i>Average Flow Rate::</i>	0.01 gallon per minute
<i>Analytical Reports:</i>	Attached

ENVIRONMENTAL
PROTECTION
96 MAY 13 PM 1:07

The GWE system was found down on April 5, 1996 and re-started after repairs were made to the filter housing. The certified analytical report and chain-of-custody documentation for samples taken April 5, 1996 are included as Attachment A. The samples confirm that the GWE system has been operating in compliance with all

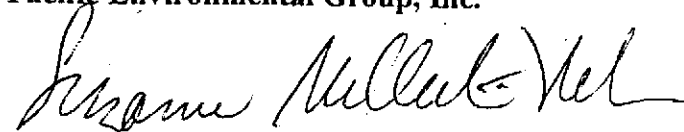
May 10, 1996

Page 2

discharge permit conditions. Monthly analyses include chemical oxygen demand, pH, and total suspended solids, as well as total purgeable petroleum hydrocarbons (TPPH) as gasoline and benzene, toluene, ethylbenzene, and xylenes (BTEX compounds). If you have any questions regarding this project or require further information, please do not hesitate to call.

Sincerely,

Pacific Environmental Group, Inc.



Suzanne McClurkin-Nelson
Staff Scientist

Attachments: Table 1 - Treatment System Metered Volume
Table 2 - Groundwater Treatment System Analytical Data
Attachment A - Certified Analytical Report and Chain-of-Custody
Documentation

cc: Ms. Tina Berry, Unocal Corporation
Mr. Richard Hiatt, Regional Water Quality Control Board - S.F. Bay Region
Ms. Amy Leech, Alameda County Health Care Services

**Table 1
Treatment System Metered Volume**

Unocal Service Station 5760
376 Lewelling Boulevard at Usher Street
San Lorenzo, California

Date Sampled	Flow Meter Reading (gallons)	Flow Meter Net Volume (gallons)	Cumulative System Discharge To Date (gallons)	Average Total System Discharge (gpm)	Average Total System Discharge (gpd)
10/18/95 a	76	0	0	N/A	N/A
10/30/95	4,040	3,964	3,964	0.2	330
11/30/95	7,751	3,711	7,675	0.1	120
12/27/95	15,031	7,280	14,955	0.2	270
01/22/96	19,350	4,319	19,274	0.1	166
02/13/96	28,980	9,630	28,904	0.3	438
03/11/96 b	82,320	53,340	82,244	1.4	1,976
04/05/96	82,860	340	82,584	0.01	14

gpm = Gallons per minute
gpd = Gallons per day
N/A = Not applicable or not available

a. GWE continuous system operation began on October 18, 1995.
b. GWE system found down 3/11/96; carbon chageout performed 3/25/96.

Table 2
Groundwater Treatment System Analytical Data

Unocal Service Station 5760
376 Lewelling Boulevard at Usher Street
San Lorenzo, California

Date Sampled	TPPH (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	Permit Compliance Parameters		
						COD (mg/L)	TSS (mg/L)	pH (units)
Influent Samples								
10/30/95	33,000	480	1,400	900	7,100	N/A	N/A	N/A
11/30/95	15,000	190	310	210	3,700	N/A	N/A	N/A
12/27/95	1,100	16	23	<2.0	300	N/A	N/A	N/A
02/13/96 b	32,000	460	1,100	1,500	7,700	N/A	N/A	N/A
04/05/96	25,000	280	1,400	900	6,400	N/A	N/A	N/A
Effluent Samples								
10/04/95	<50	<0.50	<0.50	<0.50	<0.50	<20	<1.0	8.89 a
10/30/95	<50	<0.50	<0.50	<0.50	<0.50	NS	NS	NS
11/30/95	<50	<0.50	<0.50	<0.50	<0.50	NS	NS	NS
12/27/95	<50	<0.50	<0.50	<0.50	<0.50	NS	NS	7.05 a
02/13/96 b	<50	<0.50	<0.50	<0.50	<0.50	<20	9.0	6.83 a
04/05/96	83	<0.50	0.80	<0.50	2.0	<20	11	6.83 a
TPPH = Total purgeable petroleum hydrocarbons COD = Chemical oxygen demand TSS = Total suspended solids µg/L = Micrograms per liter mg/L = Milligrams per liter N/A = Not applicable NS = Not sampled < = Denotes any potential concentrations fell below the shown detection limit for the analysis. a. The pH reading was measured by field instruments, not by laboratory analysis. b. GWE system was found down 1/17/96 and two pumps were pulled for repair and replaced 2/13/96.								

ATTACHMENT A

**CERTIFIED ANALYTICAL REPORT
AND CHAIN-OF-CUSTODY DOCUMENTATION**



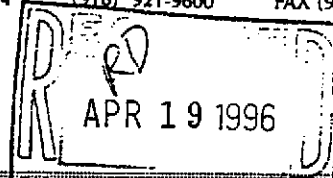
**Sequoia
Analytical**

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

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

(415) 364-9600
(510) 988-9600
(916) 921-9600

FAX (415) 364-9233
FAX (510) 988-9673
FAX (916) 921-0100



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

Client Proj. ID: 310-058.5A/5760, San Lorenzo

Lab Proj. ID: 9604603

Sample: 04/05/96
Received: 04/05/96
Analyzed: see below

Attention: Steve Clark

Reported: 04/17/96

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9604603-02				
Sample Desc : LIQUID, Effl				
Chemical Oxygen Demand	mg/L	04/10/96	20	N.D.
Total Suspended Solids	mg/L	04/09/96	1.0	11

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

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu
Project Manager



Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 310-058.5A/5760, San Lorenzo Sample Descript: Infl Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9604603-01	Sampled: 04/05/96 Received: 04/05/96 Analyzed: 04/16/96 Reported: 04/17/96
--	---	---

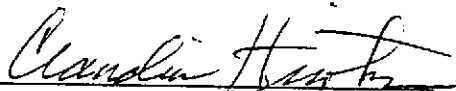
QC Batch Number: GC041696BTEX22A
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas		
Benzene	2500	25000
Toluene	25	280
Ethyl Benzene	25	1400
Xylenes (Total)	25	900
Chromatogram Pattern:	25	6400
		Gas
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	135 Q

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

SEQUOIA ANALYTICAL - ELAP #1210


 Claudia Hirotsu
 Project Manager





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

Client Proj. ID: 310-058.5A/5760, San Lorenzo
Sample Descript: Effl
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9604603-02

Sampled: 04/05/96
Received: 04/05/96
Analyzed: 04/12/96
Reported: 04/17/96

Attention: Steve Clark

GC Batch Number: GC041296BTEX01A
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	83
Benzene	0.50	N.D.
Toluene	0.50	0.80
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	2.0
Chromatogram Pattern:		Gas
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	79

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

EQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu
Project Manager





Sequoia
Analytical

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

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

(415) 364-9600
(510) 988-9600
(916) 921-9600

FAX (415) 364-9233
FAX (510) 988-9673
FAX (916) 921-0100

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

Client Proj. ID: 310-058.5A/5760, San Lorenzo

Received: 04/05/96

Lab Proj. ID: 9604603

Reported: 04/17/96

LABORATORY NARRATIVE

Q - High surrogate recovery is due to co-elution.

MTBE was not detected above 40ppb in either of these samples.

SEQUOIA ANALYTICAL

Claudia Hirotsu
Project Manager



Sequoia Analytical

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

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

(415) 364-9600
(510) 988-9600
(916) 921-9600

FAX (415) 364-9233
FAX (510) 988-9673
FAX (916) 921-0100

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

Client Project ID: 310-058.5A / 5760, San Lorenzo
Matrix: LIQUID

Work Order #: 9604603 02

Reported: Apr 18, 1996

QUALITY CONTROL DATA REPORT

Analyte: Chemical Oxygen Demand
QC Batch#: IN041096410400A
Analy. Method: EPA 410.4
Prep. Method: N.A.

Analyst: D. Lawrence
MS/MSD #: 960460301
Sample Conc.: N.D.
Prepared Date: 4/10/96
Analyzed Date: 4/10/96
Instrument I.D.#: MANUAL
Conc. Spiked: 100 mg/L

Result: 110
MS % Recovery: 110

Dup. Result: 110
MSD % Recov.: 110

RPD: 0.0
RPD Limit: 0-30

LCS #: LCS041096
Prepared Date: 4/10/96
Analyzed Date: 4/10/96
Instrument I.D.#: MANUAL
Conc. Spiked: 100 mg/L
LCS Result: 100
LCS % Recov.: 100

MS/MSD
LCS 70-130
Control Limits

Please Note:

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

SEQUOIA ANALYTICAL
Claudia Hirotsu
Claudia Hirotsu
Project Manager

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



Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110 Attention: Steve Clark	Client Project ID: 310-058.5A / 5760, San Lorenzo Matrix: LIQUID Work Order #: 9604603 02	Reported: Apr 18, 1996
--	---	------------------------

QUALITY CONTROL DATA REPORT

Analyte: Total Suspended Solids
QC Batch: IN040996160200A
Analy. Method: EPA 160.2
Prep Method: N.A.

Analyst: S. Lee

Duplicate Sample #: 960457101

Prepared Date: 4/9/96
Analyzed Date: 4/9/96
Instrument I.D.#: MANUAL

Sample Concentration: 21

Dup. Sample Concentration: 24

RPD: 13
RPD Limit: 0-30

SEQUOIA ANALYTICAL

Claudia Hirotsu
Project Manager

** RPD=Relative % Difference





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

Client Project ID: 310-058.5A / 5760, San Lorenzo
Matrix: LIQUID

Work Order #: 9604603 01

Reported: Apr 18, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC041696BTEX22A	GC041696BTEX22A	GC041696BTEX22A	GC041696BTEX22A
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 #:	960469901	960469901	960469901	960469901
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	4/16/96	4/16/96	4/16/96	4/16/96
Analyzed Date:	4/16/96	4/16/96	4/16/96	4/16/96
Instrument I.D.#:	GCHP22	GCHP22	GCHP22	GCHP22
Conc. Spiked:	1.0 µg/L	1.0 µg/L	1.0 µg/L	3.0 µg/L
Result:	1.1	1.1	1.1	3.0
MS % Recovery:	110	110	110	100
Dup. Result:	1.0	1.0	1.0	3.0
MSD % Recov.:	100	100	100	100
RPD:	9.5	9.5	9.5	0.0
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:	BLK041696	BLK041696	BLK041696	BLK041696
Prepared Date:	4/16/96	4/16/96	4/16/96	4/16/96
Analyzed Date:	4/16/96	4/16/96	4/16/96	4/16/96
Instrument I.D.#:	GCHP22	GCHP22	GCHP22	GCHP22
Conc. Spiked:	1.0 µg/L	1.0 µg/L	1.0 µg/L	3.0 µg/L
LCS Result:	9.5	9.4	9.6	29
LCS % Recov.:	95	94	96	97

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

Please Note:

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

SEQUOIA ANALYTICAL

Claudia Hirotsu
Project Manager

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

9604603.PPP <3>



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

Client Project ID: 310-058.5A / 5760, San Lorenzo
Matrix: LIQUID

Work Order #: 9604603 02

Reported: Apr 18, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC041296BTEX01A	GC041296BTEX01A	GC041296BTEX01A	GC041296BTEX01A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa
MS/MSD #:	960449508	960449508	960449508	960449508
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	4/12/96	4/12/96	4/12/96	4/12/96
Analyzed Date:	4/12/96	4/12/96	4/12/96	4/12/96
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.1	9.1	9.1	27
MS % Recovery:	91	91	91	90
Dup. Result:	9.8	9.9	9.9	30
MSD % Recov.:	98	99	99	100
RPD:	7.4	8.4	8.4	11
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:	BLK041296	BLK041296	BLK041296	BLK041296
Prepared Date:	4/12/96	4/12/96	4/12/96	4/12/96
Analyzed Date:	4/12/96	4/12/96	4/12/96	4/12/96
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	10	10	10	31
LCS % Recov.:	100	100	100	103

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

Please Note:

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

SEQUOIA ANALYTICAL

Claudia Hirotsu
Project Manager

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



Company Name: PACIFIC ENVIRONMENTAL GROUP Project Name: 310-0585A
 Address: 2025 GATEWAY PL SE 440 UNOCAL Project Manager: A YEMANE
 City: SAN JOSE State: CA Zip Code: 95110 Release #: _____
 Telephone: 408 441-7500 FAX #: 441-7539 Site #: 5460
 Report To: STEVE CLARK Sampler: JOHN MADDOX QC Data: Level D (Standard) Level C Level B Level A

Turnaround 10 Work Days 5 Work Days 3 Work Days
 Time: 2 Work Days 1 Work Day 2-8 Hours
 CODE: Misc. Detect. Eval. Remed. Demol. Closure

Drinking Water
 Waste Water
 Other

Analyses Requested: 19604603

1a,b,c
 2(a,b,c)
 (d)
 (e)

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	Comments
1. <u>INPL</u>	<u>4/5/96/1650</u>	<u>W</u>	<u>3</u>	<u>VOA He1</u>		
2. <u>MID</u>	<u>1640</u>					
3. <u>6PPL</u>	<u>1645</u>					<u>JMK</u>
4. <u>↓</u>	<u>↓</u>	<u>↓</u>	<u>1</u>	<u>SOANLH2SO4</u>		
5. <u>↓</u>	<u>↓</u>	<u>↓</u>	<u>1</u>	<u>SOANLNP</u>		
6.						
7.						
8.						
9.						
10.						

Relinquished By: <u>[Signature]</u>	Date: <u>4/5/96</u>	Time: <u>1756</u>	Received By: _____	Date: _____	Time: _____
Relinquished By: _____	Date: _____	Time: _____	Received By: _____	Date: _____	Time: _____
Relinquished By: _____	Date: _____	Time: _____	Received By Lab: <u>[Signature]</u>	Date: <u>4/5/96</u>	Time: <u>1756</u>

Were Samples Received in Good Condition? Yes No
 Samples on Ice? Yes No
 Method of Shipment _____
 Page 1 of 1

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] Signature: [Signature] Date: 4-22-96

Pink - Client
 Yellow - Laboratory
 White - Laboratory