GETTLER-RYAN INC.

00 MAR -8 PM 1:33

TRANSMITTAL

February 23, 2000
G-R #:180181

TO: Mr. David B. De Witt
Tosco Marketing Company
2000 Crow Canyon Place, Suite 4000
San Ramon, California 94583

CC: Mr. David Vossler
Gettler-Ryan Inc.
Novato, California

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, California 94568

RE: Tosco (Unocal) SS #4186
1771 First Street
Livermore, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	February 22, 2000	Groundwater Monitoring and Sampling Report First Quarter 2000 - Event of January 24, 2000

COMMENTS:

This report is being sent to you for your review/comment, prior to being distributed on your behalf. If no comments are received by ***March 6, 2000***, this report will be distributed to the following:

Enclosure

Ref. of Most Valuable to GW Contam:
- wells located above an aquifer which is a source of water supply for community, and located w/in 1000 feet radius of drinking water well

cc: Ms. Eva Chu
Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, CA 94502

~~Completed to date~~ → Need:
- distance to receptors (drinking water wells)
- candidate for interim remedial action (MTBE > 10,000 ppb) unless they can demonstrate mass release is small & migration to wells not likely
- need to identify source of contam (pipe, tank, UST, etc)

agency/4186.dbd.qmt

GETTLER-RYAN INC.

00 MAR -8 PM 1:33

February 22, 2000
G-R Job #180181

Mr. David B. De Witt
Tosco Marketing Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

RE: First Quarter 2000 Groundwater Monitoring & Sampling Report
Tosco (Unocal) Service Station #4186
1771 First Street
Livermore, California

Dear Mr. De Witt:

This report documents the quarterly groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On January 24, 2000, field personnel monitored and sampled three wells (U-1, U-2 and U-3) at the above referenced site.

Static groundwater levels were measured and all wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in the wells. Static water level data and groundwater elevations are summarized in Table 1. A Potentiometric Map is included as Figure 1.

Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Groundwater Sampling (attached). The field data sheets are also attached. The samples were analyzed by Sequoia Analytical. Analytical results are summarized in Table 1 and a Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

Sincerely,

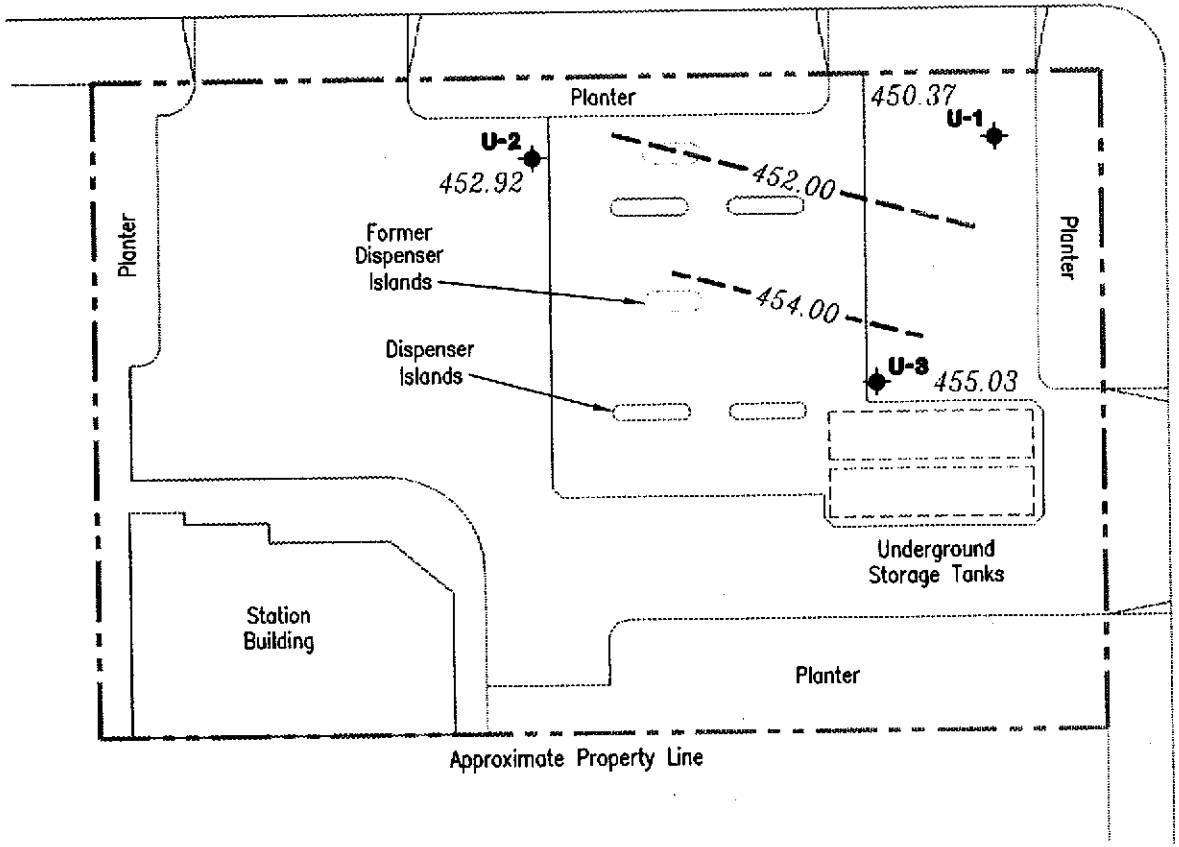
Deanna L. Harding
Project Coordinator

Douglas J. Lee
Senior Geologist, R.G. No. 6882

REGISTERED GEOLOGIST
DOUGLAS J. LEE
No. 6882
STATE OF CALIFORNIA

Figure 1: Potentiometric Map
Figure 2: Concentration Map
Table 1: Groundwater Monitoring Data and Analytical Results
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports

4186.qml



EXPLANATION

- ✦ Groundwater monitoring well
- 99.99 Groundwater elevation in feet referenced to Mean Sea Level (MSL)
- 99.99 Groundwater elevation contour, dashed where inferred.

Approximate groundwater flow direction at a gradient of 0.11 Ft./Ft.

N

0 30

Scale in Feet

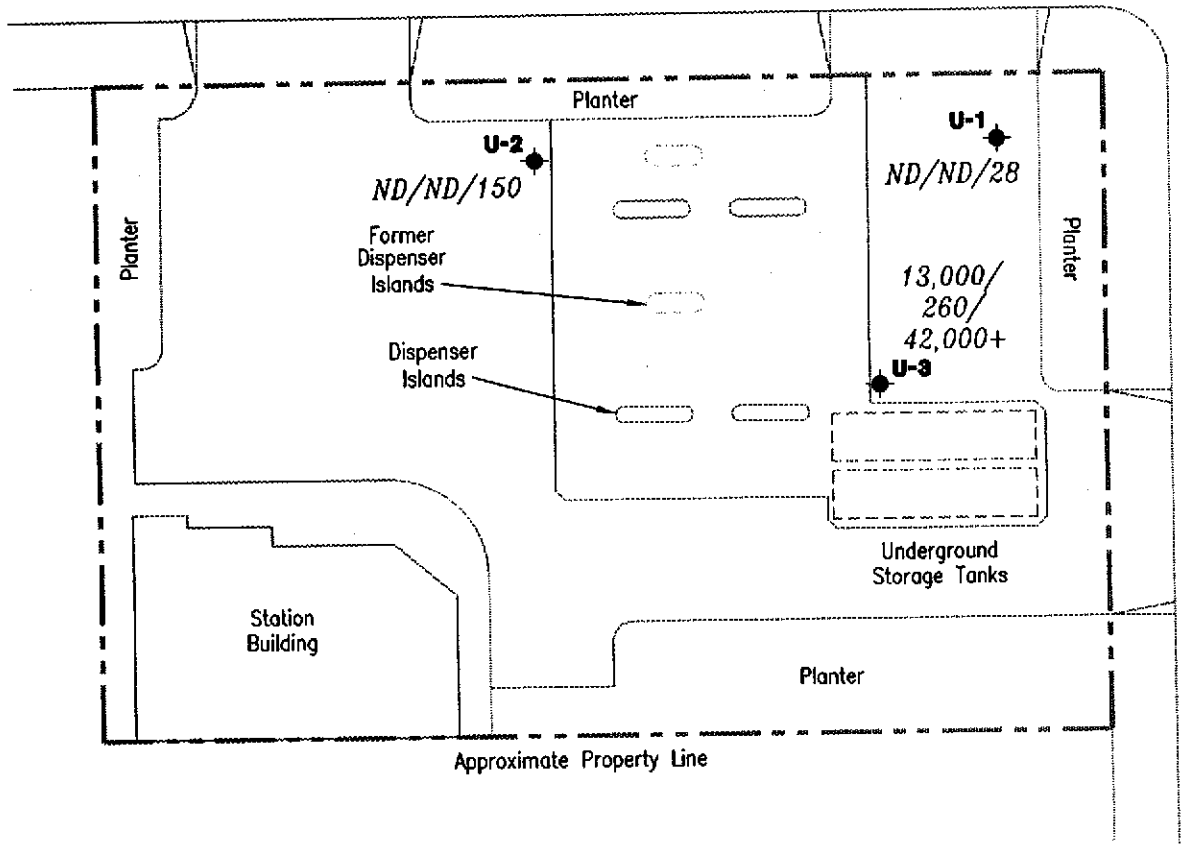
Source: Virgil Chavez Land Surveying dated August, 1998

Gettler - Ryan Inc.
6747 Sierra Ct., Suite J (925) 551-7555
Dublin, CA 94568

POTENTIOMETRIC MAP
Tosco (Unocal) Service Station No. 4186
1771 First Street
Livermore, California

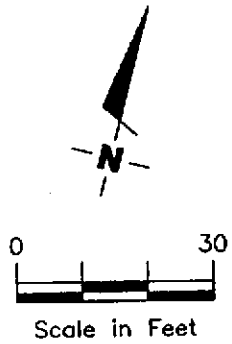
FIGURE 1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
180181		January 24, 2000	



EXPLANATION

✦	Groundwater monitoring well
A/B/C	TPH(G) (Total Petroleum Hydrocarbons as Gasoline)/Benzene/MTBE concentrations in ppb
ND	Not Detected
+	MTBE by EPA Method 8260



Source: Virgil Chavez Land Surveying dated August, 1998

FIGURE **2**

Gettler - Ryan Inc.
6747 Sierra Ct., Suite J (925) 551-7555
Dublin, CA 94568

CONCENTRATION MAP
Tosco (Unocal) Service Station No. 4186
1771 First Street
Livermore, California

JOB NUMBER 180181 | REVIEWED BY | DATE January 24, 2000 | REVISED DATE

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #4186

1771 First Street

Livermore, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-1									
478.27	07/13/98	23.28	454.99	ND	ND	ND	ND	ND	ND
	10/07/98	26.43	451.84	ND	ND	ND	ND	ND	ND
	01/15/99	30.42	447.85	ND	ND	ND	ND	1.1	7.3
	04/14/99	24.21	454.06	ND	ND	ND	ND	ND	160
	07/19/99	27.10	451.17	ND	ND	ND	ND	ND	92
	10/12/99	29.40	448.87	ND	ND	ND	ND	ND	37
	01/24/00	**27.90**	**450.37**	**ND**	**ND**	**ND**	**ND**	**ND**	**28**
U-2									
477.44	07/13/98	23.52	453.92	1,200	130	12	62	180	1,100
	10/07/98	25.31	452.13	ND	ND	ND	ND	ND	160
	01/15/99	30.22	447.22	ND	ND	ND	ND	ND	280
	04/14/99	24.50	452.94	ND	ND	ND	ND	ND	460
	07/19/99	28.54	448.90	ND	ND	ND	ND	ND	220
	10/12/99	30.48	446.96	ND	ND	ND	ND	ND	160
	01/24/00	**24.52**	**452.92**	**ND**	**ND**	**ND**	**ND**	**ND**	**150**
U-3									
478.46	07/13/98	23.82	454.64	70,000	3,100	5,500	2,700	16,000	7,500
	10/07/98	25.64	452.82	54,000	5,000	1,100	3,100	14,000	6,100
	01/15/99	30.92	447.54	41,000[1]	3,100	ND[2]	1,800	3,800	15,000
	04/14/99	24.48	453.98	33,000	86	290	2,200	7,800	39,000
	07/19/99	28.46	450.00	48,000	3,900	2,500	3,600	14,000	12,000/16,000[3]
	10/12/99	30.39	448.07	35,000[4]	4,200	ND[2]	2,300	1,800	22,000/8,300[5]
	01/24/00	**23.43**	**455.03**	**13,000[4]**	**260**	**ND[2]**	**770**	**3,200**	**53,000/42,000[3]**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #4186

1771 First Street

Livermore, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
Trip Blank									
TB-LB	07/13/98	--	--	ND	ND	ND	ND	ND	ND
	10/07/98	--	--	ND	ND	ND	ND	ND	ND
	01/15/99	--	--	ND	ND	ND	ND	ND	ND
	04/14/99	--	--	ND	ND	ND	ND	ND	ND
	07/19/99	--	--	ND	ND	ND	ND	ND	ND
	10/12/99	--	--	ND	ND	ND	ND	ND	ND
	01/24/00	**--**	**--**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #4186

1771 First Street

Livermore, California

EXPLANATIONS:

TOC = Top of Casing elevation
DTW = Depth to Water
(ft.) = Feet
GWE = Groundwater Elevation
msl = Relative to mean sea level
TPH(G) = Total Petroleum Hydrocarbons as Gasoline

B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl tertiary butyl ether

ppb = Parts per billion
ND = Not Detected
-- = Not Measured/Not Analyzed

* TOC elevations are relative to Mean Sea Level (msl) in feet. The benchmark used was a City of Livermore survey monument at First & "Q" Streets.

1 Laboratory report indicates gasoline and unidentified hydrocarbons C6-C12.

2 Detection limit raised. Refer to analytical reports.

3 MTBE by EPA Method 8260.

4 Laboratory report indicates gasoline C6-C12.

5 MTBE by EPA Method 8260 analyzed past EPA recommended holding time.

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using a MMC flexi-dip interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, static water level measurements are collected with the interface probe and are also recorded in the field notes.

After water levels are collected and prior to sampling, temperature, pH and electrical conductivity are measured. If purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. The measurements are taken a minimum of three times during the purging. Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Tosco Marketing Company, the purge water and decontamination water generated during sampling activities is transported to Tosco - San Francisco Area Refinery, located in Rodeo, California.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/ Facility: UNOCAL SS# 4186 (TOSCO) Job#: 180181

Address: 1771 FIRST STREET Date: 1-24-00

City: LIVERMORE Sampler: STEVE BALIAN

Well ID: U-1 Well Condition: O.K

Well Diameter: 2" in. Hydrocarbon Thickness: Ø (feet) Amount Bailed (product/water): Ø (Gallons)

Total Depth: 34.20 ft.

Depth to Water: 27.90 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

6.30 X VF 0.17 = 1.07 X 3 (case volume) = Estimated Purge Volume: 3.21 (gal.)

Purge Equipment: (Disposable Bailer) Bailer, Stack, ~~Sub~~, Grundfos, Other: _____

Sampling Equipment: (Disposable Bailer) Bailer, Pressure Bailer, Grab Sample, Other: _____

Starting Time: 14:33 Weather Conditions: RAIN

Sampling Time: 14:55 Water Color: NOT CLEAR Odor: —

Purging Flow Rate: 1 gpm. Sediment Description: _____

Did well de-water? No If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
14:35	1.5	7.35	661	65.6			
14:38	2.5	7.32	659	68.0			
14:41	3.5	7.29	646	68.8			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
U-1	3-40A's	Y	HCl	SEQUOIA	TPH(G)/btex/mtbe

COMMENTS: _____

9/97-fieldat.frm

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility UNOCAL SS #4186 (TOSCO) Job#: 180181

Address: 1771 FIRST STREET Date: 1-24-00

City: LIVERMORE, CA Sampler: STEVE BALIAN

Well ID U-2 Well Condition: O.K

Well Diameter 2" in. Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)

Total Depth 33.20 ft.

Depth to Water 24.52 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

8.68 X VF 0.17 1.48 X 3 (case volume) = Estimated Purge Volume: 4.43 (gal.)

Purge Equipment: (Disposable Bailer) Bailer Stack ~~Suction~~ Grundfos Other: _____

Sampling Equipment: (Disposable Bailer) Bailer Pressure Bailer Grab Sample Other: _____

Starting Time: 15:04 Weather Conditions: RAIN

Sampling Time: 15:30 Water Color: NOT CLEAR Odor: _____

Purging Flow Rate: * gpm. Sediment Description: _____

Did well de-water? No If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
15:07	1.5	7.04	582	67.5			
15:10	3	6.99	575	67.9			
15:14	4.5	6.98		68.3			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
U-2	3-VOA's	Y	HCl	SEQUOIA	TPH(G)/btex/mtbe

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/ Facility: UNOCAL SS# 4186 (Tosco) Job#: 180181

Address: 1771 FIRST STREET Date: 1-24-00

City: LIVERMORE, CA Sampler: STEVE BALIAN

Well ID: U-3 Well Condition: O.K

Well Diameter: 2" in. Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)

Total Depth: 33.40 ft.

Depth to Water: 23.43 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

9.97 X VF 0.17 = 1.69 X 3 (case volume) = Estimated Purge Volume: 5.08 (gal.)

Purge Equipment: (Disposable Bailer) Bailer, Stack, ~~Suction~~, Grundfos, Other: _____

Sampling Equipment: (Disposable Bailer) Bailer, Pressure Bailer, Grab Sample, Other: _____

Starting Time: 15:38 Weather Conditions: RAIN

Sampling Time: 16:05 Water Color: NOT CLEAR Odor: YES

Purging Flow Rate: 1 gpm. Sediment Description: _____

Did well de-water? No If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
15:42	2	6.98	533	67.0			
15:45	4	6.97	524	68.6			
15:49	5.5	6.95	520	68.9			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
U-3	3-VOA's	Y	HCl	SEQUOIA	TPH(G)/btex/mtbe

COMMENTS: _____

TOSCO

Tosco Marketing Company
2000 Crow Canyon Pl., Ste. 400
San Ramon, California 94583

Facility Number
Facility Address 1771 FIRST STREET, LIVERMORE, CA
Consultant Project Number 180181.85
Consultant Name Gettler-Ryan Inc. (G-R Inc.)
Address 6747 Sierra Court, Suite J, Dublin, CA 94568
Project Contact (Name) Deanna L. Harding
(Phone) 510-551-7555 (Fax Number) 510-551-7888

Contact (Name)
(Phone) (925) 277-2321
Laboratory Name Sequoia Analytical
Laboratory Release Number WO1537
Samples Collected by (Name) STEVE RALIAN
Collection Date 1-24-00
Signature STEVE RALIAN

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed: TPH Gas + BTEX w/MTBE (8015) (8020)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)						DO NOT BII TB-LB ANALY Remarks
TB-LB	01A	1	W	G		HCl	Y	X													* confir
U-1	02A-C	3	"	"	14:55	"	Y	X													MTBE by
U-2	03	3	"	"	15:30	"	Y	X													8260 on
U-3	04	3	"	"	16:05	"	Y	X													only.

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
STEVE RALIAN	G-R Inc.	1-24-00 17:00	Will	Seq Ac	1/26/00 14:10
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Will	Seq Ac.	1-25-00 1455			
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time
			WC Kenneth C. Jensen		1/25/00 14:45

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted

Sequoia
Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673

8 February, 2000

Deanna L. Harding
Gettler Ryan, Inc. - Dublin
6747 Sierra Court Suite J
Dublin, CA 94568

RE: Unocal

Enclosed are the results of analyses for samples received by the laboratory on 25-Jan-00 14:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Alan B. Kemp
Laboratory Director

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673

Gettler Ryan, Inc. - Dublin	Project: Unocal	
6747 Sierra Court Suite J	Project Number: Unocal # 4186	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	08-Feb-00 08:24

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	W001532-01	Water	24-Jan-00 00:00	25-Jan-00 14:45
U-1	W001532-02	Water	24-Jan-00 14:55	25-Jan-00 14:45
U-2	W001532-03	Water	24-Jan-00 15:30	25-Jan-00 14:45
U-3	W001532-04	Water	24-Jan-00 16:05	25-Jan-00 14:45

Alan B. Kemp, Laboratory Director

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673

Gettler Ryan, Inc. - Dublin	Project: Unocal	
6747 Sierra Court Suite J	Project Number: Unocal # 4186	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	08-Feb-00 08:24

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TB-LB (W001532-01) Water Sampled: 24-Jan-00 00:00 Received: 25-Jan-00 14:45									
Purgeable Hydrocarbons	ND	50	ug/l	1	0A31001	31-Jan-00	31-Jan-00	EPA 8015M/8020	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*96.3 %*	*70-130*		"	"	"	"	
U-1 (W001532-02) Water Sampled: 24-Jan-00 14:55 Received: 25-Jan-00 14:45									
Purgeable Hydrocarbons	ND	50	ug/l	1	0A31001	31-Jan-00	31-Jan-00	EPA 8015M/8020	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**28**	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*88.3 %*	*70-130*		"	"	"	"	
U-2 (W001532-03) Water Sampled: 24-Jan-00 15:30 Received: 25-Jan-00 14:45									
Purgeable Hydrocarbons	ND	50	ug/l	1	0A31001	31-Jan-00	31-Jan-00	EPA 8015M/8020	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**150**	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*93.3 %*	*70-130*		"	"	"	"	

for Alan B. Kemp, Laboratory Director

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673

Gettler Ryan, Inc. - Dublin	Project: Unocal	
6747 Sierra Court Suite J	Project Number: Unocal # 4186	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	08-Feb-00 08:24

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-3 (W001532-04) Water Sampled: 24-Jan-00 16:05 Received: 25-Jan-00 14:45									**P-01**
Purgeable Hydrocarbons	**13000**	2500	ug/l	50	0A31001	31-Jan-00	31-Jan-00	EPA 8015M/8020	
Benzene	**260**	25	"	"	"	"	"	"	
Toluene	ND	25	"	"	"	"	"	"	
Ethylbenzene	**770**	25	"	"	"	"	"	"	
Xylenes (total)	**3200**	25	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*103 %*	*70-130*		"	"	"	"	
U-3 (W001532-04RE1) Water Sampled: 24-Jan-00 16:05 Received: 25-Jan-00 14:45									**P-01**
Methyl tert-butyl ether	**53000**	2500	ug/l	1000	0A31001	31-Jan-00	01-Feb-00	EPA 8015M/8020	
Surrogate: a,a,a-Trifluorotoluene		*110 %*	*70-130*		"	"	"		

Alan B. Kemp, Laboratory Director

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673

Gettler Ryan, Inc. - Dublin	Project: Unocal	
6747 Sierra Court Suite J	Project Number: Unocal # 4186	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	08-Feb-00 08:24

MTBE Confirmation by EPA Method 8260A

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-3 (W001532-04) Water Sampled: 24-Jan-00 16:05 Received: 25-Jan-00 14:45									
Methyl tert-butyl ether	**42000**	1000	ug/l	500	0B03015	03-Feb-00	03-Feb-00	EPA 8260A	
Surrogate: Dibromofluoromethane		*98.0 %*		*50-150*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*88.0 %*		*50-150*	"	"	"	"	

Alan B. Kemp, Laboratory Director

Sequoia Analytical

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Gettler Ryan, Inc. - Dublin	Project: Unocal	
6747 Sierra Court Suite J	Project Number: Unocal # 4186	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	08-Feb-00 08:24

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0A31001: Prepared 31-Jan-00 Using EPA 5030B [P/T]										
Blank (0A31001-BLK1)										
Purgeable Hydrocarbons	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	*27.6*		"	*30.0*		*92.0*	*70-130*			
LCS (0A31001-BS1)										
Benzene	18.4	0.50	ug/l	20.0		92.0	70-130			
Toluene	18.9	0.50	"	20.0		94.5	70-130			
Ethylbenzene	20.6	0.50	"	20.0		103	70-130			
Xylenes (total)	61.5	0.50	"	60.0		103	70-130			
Surrogate: a,a,a-Trifluorotoluene	*27.9*		"	*30.0*		*93.0*	*70-130*			
Matrix Spike (0A31001-MS1)					**Source: W001532-02**					
Benzene	18.4	0.50	ug/l	20.0	ND	92.0	70-130			
Toluene	19.0	0.50	"	20.0	ND	95.0	70-130			
Ethylbenzene	17.0	0.50	"	20.0	ND	85.0	70-130			
Xylenes (total)	59.8	0.50	"	60.0	ND	99.7	70-130			
Surrogate: a,a,a-Trifluorotoluene	*27.6*		"	*30.0*		*92.0*	*70-130*			
Matrix Spike Dup (0A31001-MSD1)					**Source: W001532-02**					
Benzene	18.0	0.50	ug/l	20.0	ND	90.0	70-130	2.20	20	
Toluene	18.5	0.50	"	20.0	ND	92.5	70-130	2.67	20	
Ethylbenzene	17.1	0.50	"	20.0	ND	85.5	70-130	0.587	20	
Xylenes (total)	58.6	0.50	"	60.0	ND	97.7	70-130	2.03	20	
Surrogate: a,a,a-Trifluorotoluene	*27.0*		"	*30.0*		*90.0*	*70-130*			

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Gettler Ryan, Inc. - Dublin	Project: Unocal	
6747 Sierra Court Suite J	Project Number: Unocal # 4186	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	08-Feb-00 08:24

MTBE Confirmation by EPA Method 8260A - Quality Control

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0B03015: Prepared 03-Feb-00 Using EPA 5030B [P/T]										
Blank (0B03015-BLK1)										
Methyl tert-butyl ether	ND	2.0	ug/l							
Surrogate: Dibromofluoromethane	*49.0*		"	*50.0*		*98.0*	*50-150*			
Surrogate: 1,2-Dichloroethane-d4	*44.0*		"	*50.0*		*88.0*	*50-150*			
LCS (0B03015-BS1)										
Methyl tert-butyl ether	38.1	2.0	ug/l	50.0		76.2	70-130			
Surrogate: Dibromofluoromethane	*48.0*		"	*50.0*		*96.0*	*50-150*			
Surrogate: 1,2-Dichloroethane-d4	*42.0*		"	*50.0*		*84.0*	*50-150*			
LCS Dup (0B03015-BSD1)										
Methyl tert-butyl ether	35.8	2.0	ug/l	50.0		71.6	70-130	6.22	25	
Surrogate: Dibromofluoromethane	*47.0*		"	*50.0*		*94.0*	*50-150*			
Surrogate: 1,2-Dichloroethane-d4	*44.0*		"	*50.0*		*88.0*	*50-150*			

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Gettler Ryan, Inc. - Dublin	Project: Unocal	
6747 Sierra Court Suite J	Project Number: Unocal # 4186	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	08-Feb-00 08:24

Notes and Definitions

P-01	Chromatogram Pattern: Gasoline C6-C12
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Alan B. Kemp, Laboratory Director