GETTLER-RYAN INC.

TRANSMITTAL

August 9, 2001
G-R #: 180181

AUG 2 8 2001

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.
Petaluma, California

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

RE: Tosco (Unocal) Service Station #4186
[redacted]
Livermore, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	August 1, 2001	Groundwater Monitoring and Sampling Report Third Quarter - Event of July 2, 2001

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 ***August 23, 2001***, this report will be distributed to the following:

cc: Ms. Eva Chu, Alameda County Health Care Services, 1131 Harbor Bay Pkwy, Alameda CA 94502
Ms. Carol Mahoney, Zone 7 Water Zone, 5997 Parkside Drive, Pleasanton, CA 94588

Enclosure

trans/4186.dbd

GETTLER-RYAN INC.

August 1, 2001
G-R Job #180181

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

RE: Third Quarter Event of July 2, 2001
Groundwater Monitoring & Sampling Report
Tosco (Unocal) Service Station #4186
1771 First Street
Livermore, California

Dear Mr. De Witt:

This report documents the most recent groundwater monitoring and sampling events performed by Gettler-Ryan Inc. (G-R) at the referenced site. All field work was conducted in accordance with G-R Standard Operating Procedure - Groundwater Sampling (attached).

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 Tables 1 and 2. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

Sincerely,

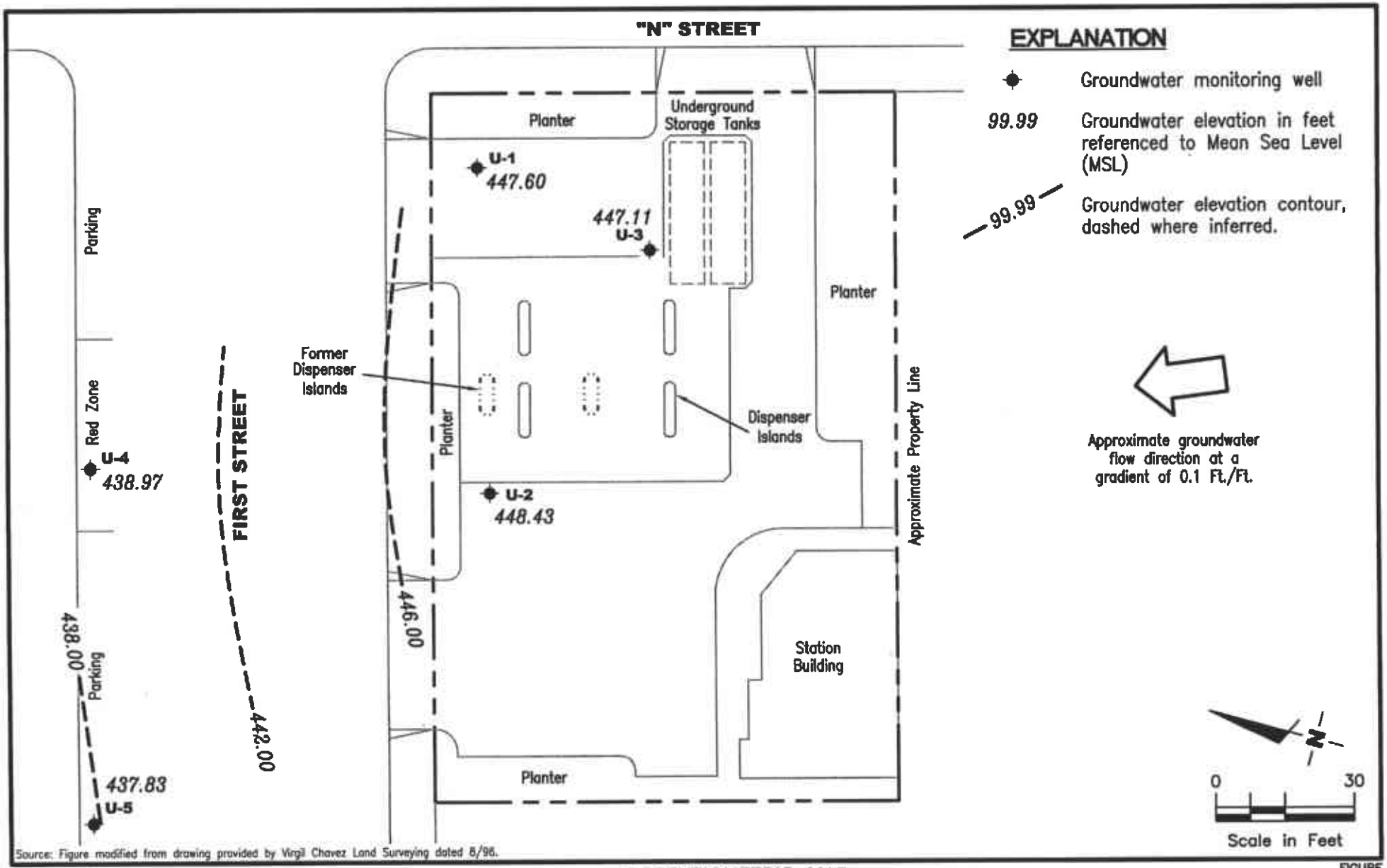
Anamarie Nercau
- FOR -

Deanna L. Harding
Project Coordinator

Hagop Kevork
P.E. No. C55734

REGISTERED PROFESSIONAL ENGINEER
HAGOP KEVORK
No. C 55734
Exp. 12/31/04
CIVIL
STATE OF CALIFORNIA

Figure 1: Potentiometric Map
Figure 2: Concentration Map
Table 1: Groundwater Monitoring Data and Analytical Results
Table 2: Groundwater Analytical Results - Oxygenate Compounds
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
4186.qml Chain of Custody Document and Laboratory Analytical Reports



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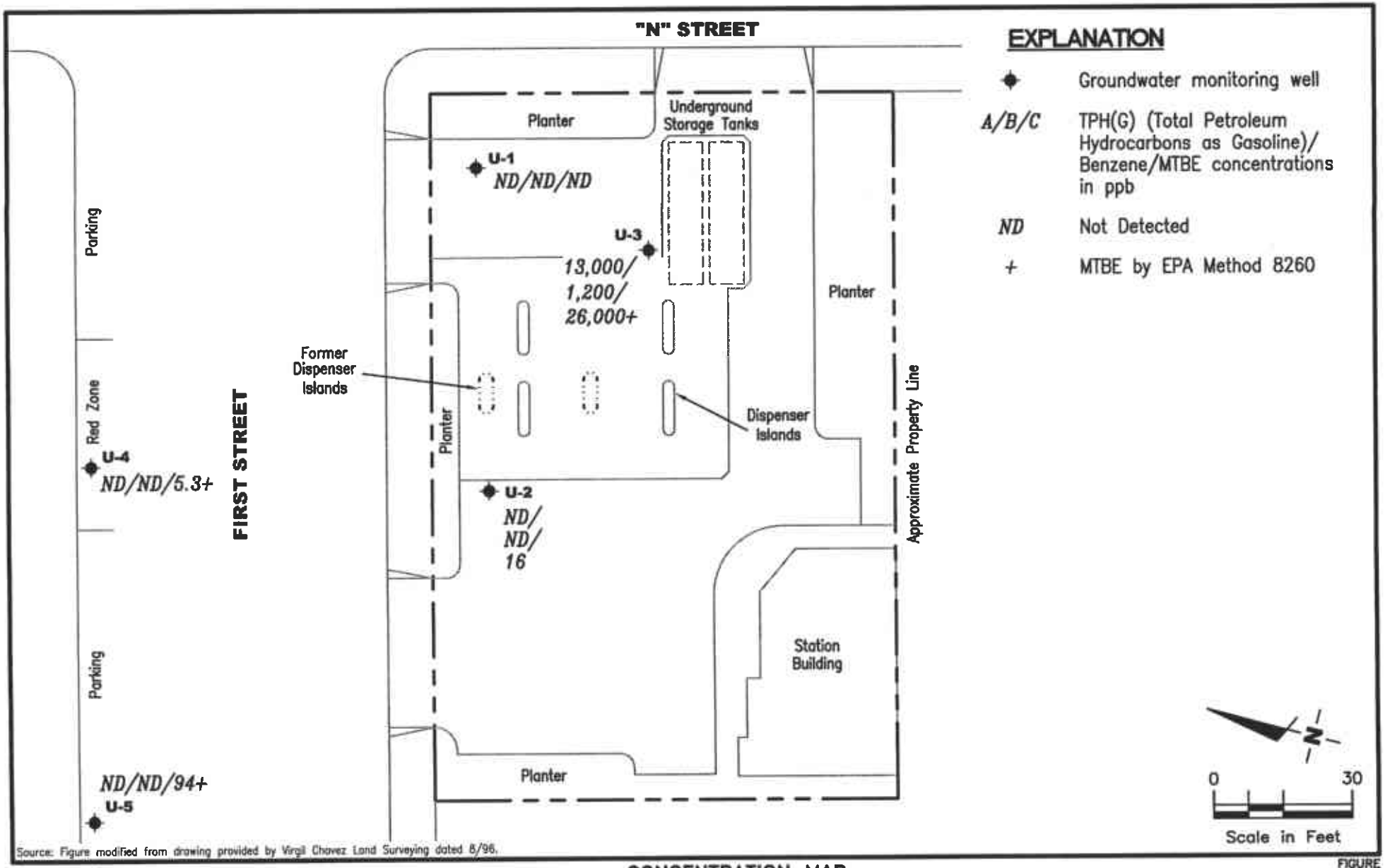
6747 Sierra Ct., Suite J
Dublin, CA 94568
(925) 551-7555

POTENTIOMETRIC MAP
Tosco (Unocal) Service Station #4186
1771 First Street
Livermore, California

FIGURE
1

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
180181		July 2, 2001	

FILE NAME: P:\ENVIRO\TOSCO\4186\001-4186.DWG | Layout Tab: Pot3



Source: Figure modified from drawing provided by Virgil Chavez Land Surveying dated 8/96.

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Dublin, CA 94568
(925) 551-7555

CONCENTRATION MAP
Tosco (Unocal) Service Station #4186
1771 First Street
Livermore, California

FIGURE
2

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
180181		July 2, 2001	

FILE NAME: P:\ENVIRO\TOSCO\4186\Q01-4186.DWG | Layout Tab: Con3

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #4186

1771 First Street

Livermore, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-1										
478.27	07/13/98	23.28	14.0-34.0	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
	04/10/00	26.16		452.11	ND	ND	0.930	ND	ND	ND
	07/17/00	28.04		450.23	ND	ND	ND	ND	ND	160
	10/02/00	28.41		449.86	ND	ND	ND	ND	ND	120
	01/08/01	28.68		449.59	ND	ND	ND	ND	ND	103
	04/03/01	25.74		452.53	ND	ND	ND	ND	ND	55.1
	07/02/01	**30.67**		**447.60**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
U-2										
477.44	07/13/98	23.52	13.0-33.0	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
	04/10/00	23.68		453.76	ND	ND	ND	ND	ND	177
	07/17/00	28.35		449.09	ND	ND	ND	ND	ND	62.7
	10/02/00	28.72		448.72	ND	ND	ND	ND	ND	52
	01/08/01	29.11		448.33	ND	ND	ND	ND	ND	57.3
	04/03/01	25.95		451.49	ND	ND	ND	ND	ND	30.2
	07/02/01	**29.01**		**448.43**	**ND**	**ND**	**ND**	**ND**	**ND**	**16**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #4186

1771 First Street

Livermore, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-3										
478.46	07/13/98	23.82	14.0-34.0	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]
	04/10/00	23.31		455.15	35,200[4]	1,070	241	2,820	8,850	35,600/40,900[3]
	07/17/00	27.53		450.93	29,000[4]	3,570	525	3,180	5,660	22,500/21,000[3]
	10/02/00	28.19		450.27	11,000[4]	2,100	31	2,000	780	25,000/28,000[3,6]
	01/08/01	29.85		448.61	33,600[4]	3,060	427	3,040	4,190	24,700/30,900[3]
	04/03/01	24.98		453.48	5,390[4]	660	10.8	304	356	15,200/19,300[5]
	07/02/01	**31.35**		**447.11**	**13,000[4]**	**1,200**	**58**	**1,300**	**930**	**25,000/26,000[3]**
U-4										
476.93	04/03/01[7]	31.63	35.0-45.0	445.30	ND	ND	ND	ND	ND	37.8/38.2[3]
	07/02/01	**37.96**		**438.97**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND/5.3[3]**
U-5										
476.51	04/03/01[7]	31.75	37.0-47.0	444.76	ND	ND	0.728	ND	0.993	54.8/55.4[3]
	07/02/01	**38.68**		**437.83**	**ND**	**ND**	**ND**	**ND**	**ND**	**88/94[3]**
TRIP BLANK										
	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

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #4186

1771 First Street

Livermore, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
TB-LB	10/12/99	--	--	--	ND	ND	ND	ND	ND	ND
(cont)	01/24/00	--		--	ND	ND	ND	ND	ND	ND
	04/10/00	--		--	ND	ND	ND	ND	ND	ND
	07/17/00	--		--	ND	ND	ND	ND	ND	ND
	10/02/00	--		--	ND	ND	ND	ND	ND	ND
	01/08/01	--		--	ND	ND	ND	ND	ND	ND
	04/03/01	--		--	ND	ND	ND	ND	ND	ND
	07/02/01	**--**		**--**	**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
DTW = Depth to Water
(ft.) = Feet
S. I. = Screen Interval
(ft. bgs) = Feet Below Ground Surface
GWE = Groundwater Elevation
(msl) = 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 msl in feet. The benchmark used was a City of Livermore survey monument at First & "Q" Streets, (Benchmark Elevation = 469.246 feet, msl).

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.

6 Laboratory report indicates the sample was analyzed within holding time. Re-analysis for confirmation or dilution was performed past the recommend holding time.

7 Well development performed.

Table 2

Groundwater Analytical Results - Oxygenate Compounds

Tosco (Unocal) Service Station #4186
1771 First Street
Livermore, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	EDB (ppb)	1,2-DCA (ppb)
U-1	10/02/00	--	ND	--	--	--	--	--	--
U-2	10/02/00	--	ND	--	--	--	--	--	--
U-3	07/19/99	--	--	16,000	--	--	--	--	--
	10/12/99	--	--	8,300	--	--	--	--	--
	01/24/00	--	--	42,000	--	--	--	--	--
	04/10/00	--	--	40,900	--	--	--	--	--
	07/17/00	--	--	21,000	--	--	--	--	--
	10/02/00	--	63,000	28,000	--	--	--	--	--
	01/08/01	ND[1]	49,300	30,900	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]
	04/03/01[2]	ND[1]	22,200	19,300	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]
	07/02/01	**ND[1]**	**27,000**	**26,000**	**ND[1]**	**ND[1]**	**ND[1]**	**ND[1]**	**ND[1]**
U-4	04/03/01	ND	ND	38.2	ND	ND	ND	ND	ND
	07/02/01	**ND**	**ND**	**5.3**	**ND**	**ND**	**ND**	**ND**	**ND**
U-5	04/03/01	ND	ND	55.4	ND	ND	ND	ND	ND
	07/02/01	**ND**	**ND**	**94**	**ND**	**ND**	**ND**	**ND**	**ND**

Table 2

Groundwater Analytical Results - Oxygenate Compounds

Tosco (Unocal) Service Station #4186

1771 First Street

Livermore, California

EXPLANATIONS:

TBA = Tertiary butyl alcohol

MTBE = Methyl tertiary butyl ether

DIPE = Di-isopropyl ether

ETBE = Ethyl tertiary butyl ether

TAME = Tertiary amyl methyl ether

EDB = 1,2-Dibromoethane

1,2-DCA = 1,2-Dichloroethane

(ppb) = Parts per billion

ND = Not Detected

-- = Not Analyzed

[1] Detection limit raised. Refer to analytical reports.

[2] Laboratory report indicates this sample was analyzed outside of the EPA recommended holding time.

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

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 an 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 # Tosco # 4186 Job#: 180181

Address: 1771 First st. Date: 7/2/01

City: Livermore, Ca. Sampler: Vartkes

Well ID U-1 Well Condition: OK

Well Diameter 2 in. Hydrocarbon Thickness: ____ in. Amount Bailed (product/water): ____ (gal.)

Total Depth 34.05 ft.

Depth to Water 30.67 ft.

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

3.38 x VF 0.17 = 0.57 x 3 (case volume) = Estimated Purge Volume: 2.0 (gal.)

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

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

Starting Time: 1305 Weather Conditions: Clear

Sampling Time: 1322 Water Color: Brn. Odor: NO

Purging Flow Rate: ____ gpm. Sediment Description: Silt

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)
1308	0.5	7.67	803	70.3			
1311	1	7.50	790	69.7			
1315	2	7.48	783	69.5			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
U-1	3 x VOA VIAL	Y	HCL	SEQUOIA	TPHG/BTEX/MTBE

COMMENTS: ____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/ Facility # Tosco # 4186 Job#: 180181

Address: 1771 First st. Date: 7/2/01

City: Livermore, Ca. Sampler: Vartkes

Well ID U-2 Well Condition: OK

Well Diameter 2 in. Hydrocarbon Thickness: ____ in. Amount Bailed (product/water): ____ (gal.)

Total Depth 33.20 ft.

Depth to Water 29.01 ft.

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

4.19 x VF 0.17 = 0.71 X 3 (case volume) = Estimated Purge Volume: 2.5 (gal.)

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

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

Starting Time: 1335 Weather Conditions: clear

Sampling Time: 1350 Water Color: brn. Odor: NO

Purging Flow Rate: ____ gpm. Sediment Description: SLT

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)
1339	1	7.70	778	70.2			
1343	2	7.55	770	69.6			
1346	2.5	7.51	763	69.4			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
U-2	3 x VOA VIAL	Y	HCL	SEQUOIA	TPHG/BTEX/MTBE

COMMENTS: ____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/ Facility # Tosco # 4186 Job#: 180181

Address: 1771 First st. Date: 7/2/01

City: Livermore, Ca. Sampler: Vartkes

Well ID U-3 Well Condition: OK

Well Diameter 2 in. Hydrocarbon Thickness: ____ in. Amount Bailed (product/water): ____ (gal.)

Total Depth 33.40 ft.

Depth to Water 31.35 ft.

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

2.05 x VF 0.17 = 0.34 x 3 (case volume) = Estimated Purge Volume: 1.5 (gal.)

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

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

Starting Time: 1400

Sampling Time: 1415

Purging Flow Rate: ____ gpm.

Did well de-water? NO

Weather Conditions: clear

Water Color: grayish Odor: Y

Sediment Description: SS/L

If yes; Time: ____ Volume: ____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
1403	0.5	7.70	728	70.5			
1406	1	7.50	715	70.0			
1409	1.6	7.53	709	69.7			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
U-3	5 x VOA VIAL	Y	HCL	SEQUOIA	TPHG/BTEX/MTBE

COMMENTS:

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # Tosco # 4186 Job#: 180181

Address: 1771 First st. Date: 7/2/01

City: Livermore, Ca. Sampler: Vartkes

Well ID U-4 Well Condition: OK

Well Diameter 2 in. Hydrocarbon Thickness: ____ in. Amount Bailed (product/water): ____ (gal.)

Total Depth 45.30 ft.

Depth to Water 37.96 ft.

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

7.34 x VF 0.17 = 1.24 X 3 (case volume) = Estimated Purge Volume: 4.0 (gal.)

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

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

Starting Time: 1140 Weather Conditions: clear

Sampling Time: 1205 Water Color: grn. Odor: no

Purging Flow Rate: ____ gpm. Sediment Description: silt

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)
1145	1	7.73	795	69.8			
1152	2.5	7.60	806	68.8			
1158	4	7.58	812	68.7			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
U-4	5 x VOA VIAL	Y	HCL	SEQUOIA	TPHG/BTEX/MTBE + 6044SH,LDCA+EDB(8260)

COMMENTS: ____

9/97-folder.frm

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/ Facility # Tosco # 4186 Job#: 180181

Address: 1771 First st. Date: 7/2/01

City: Livermore, Ca. Sampler: Vartkes

Well ID U-5 Well Condition: OK

Well Diameter 2 in. Hydrocarbon Thickness: ____ in. Amount Bailed (product/water): ____ (gal.)

Total Depth 47.20 ft.

Depth to Water 38.68 ft.

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

8.52 x VF 0.17 = 1.44 X 3 (case volume) = Estimated Purge Volume: 4.5 (gal.)

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

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

Starting Time: 1223 Weather Conditions: clear

Sampling Time: 1250 Water Color: brn. Odor: no

Purging Flow Rate: ____ gpm. Sediment Description: silt (little)

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)
1229	1.5	7.70	761	68.5			
1235	3	7.57	780	68.9			
1242	4.5	7.55	788	69.4			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
U-5	5 x VOA VIAL	Y	HCl	SEQUOIA	TPHG/BTEX/MTBE

COMMENTS: ____

3/97-fieldst.doc

TOSCO

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

Facility Number: UNOCAL SS# 4186
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): MR. DAVID DE WITT
(Phone): (925) 277-2384
Laboratory Name: Sequoia Analytical
Laboratory Release Number:
Samples Collected by (Name): Vasilios Tashjian
Collection Date: 7/2/01
Signature:

G0702L

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)	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 (TCAP or AA)	6 OXY'S (8260) + 1,2DCA + EDB				Remarks
TB-LB	01	1	W	G		HCl	Y	X												* RUN 6 OXY'S +
U-1	02	3	"	"	1322	"	"	X												1,2 DCA & EDB
U-2	03	3	"	"	1350	"	"	X												BY 8260 ON 8020
U-3	04	*5	"	"	1415	"	"	X								X				MTBE HIT ON U-3
U-4	05	5	"	"	1205	"	"	X								X				ONLY
U-5	06	5	"	"	1250	"	"	X												

DO NOT BILL TB-LB ANALYSIS

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	G-R Inc.	7/2/01 1905			7/2/01 1910
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time

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

Sequoia Analytical

1551 Industrial Road
San Carlos, CA 94070-4111
(650) 232-9600
FAX (650) 232-9612
www.sequoialabs.com

July 18 , 2001

Deanna Harding
Gettler-Ryan/Geostrategies(1)
6747 Sierra Court, Suite J
Dublin, CA 94568
RE: Tosco(1) / L107031

Enclosed are the results of analyses for samples received by the laboratory on 07/02/01. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Latonya K. Pelt

Latonya Pelt
Project Manager

CA ELAP Certificate Number 2360

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#4186 Project Manager: Deanna Harding	**Reported:** 07/18/01 06:13

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	L107031-01	Water	07/02/01 00:00	07/02/01 19:10
U-1	L107031-02	Water	07/02/01 13:22	07/02/01 19:10
U-2	L107031-03	Water	07/02/01 13:50	07/02/01 19:10
U-3	L107031-04	Water	07/02/01 14:15	07/02/01 19:10
U-4	L107031-05	Water	07/02/01 12:05	07/02/01 19:10
U-5	L107031-06	Water	07/02/01 12:50	07/02/01 19:10

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#4186 Project Manager: Deanna Harding	Reported: 07/18/01 06:13

Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8020

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TB-LB (L107031-01) Water Sampled: 07/02/01 00:00 Received: 07/02/01 19:10									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1070060	07/13/01	07/14/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*95.0 %*	*70-130*		"	"	"	"	
U-1 (L107031-02) Water Sampled: 07/02/01 13:22 Received: 07/02/01 19:10									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1070060	07/13/01	07/14/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*96.5 %*	*70-130*		"	"	"	"	
U-2 (L107031-03) Water Sampled: 07/02/01 13:50 Received: 07/02/01 19:10									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1070066	07/16/01	07/16/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**16**	5.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*103 %*	*70-130*		"	"	"	"	

Gettler-Ryan/Geostrategies(1)	Project: Tosco(1)	
6747 Sierra Court, Suite J	Project Number: Unocal SS#4186	Reported:
Dublin CA, 94568	Project Manager: Deanna Harding	07/18/01 06:13

Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8020

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-3 (L107031-04) Water Sampled: 07/02/01 14:15 Received: 07/02/01 19:10									
Purgeable Hydrocarbons as Gasoline	**13000**	5000	ug/l	100	1070067	07/16/01	07/16/01	DHS LUFT	P-01
Benzene	**1200**	50	"	"	"	"	"	"	
Toluene	**58**	50	"	"	"	"	"	"	
Ethylbenzene	**1300**	50	"	"	"	"	"	"	
Xylenes (total)	**930**	50	"	"	"	"	"	"	
Methyl tert-butyl ether	**25000**	500	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*88.1 %*	*70-130*		"	"	"	"	
U-4 (L107031-05) Water Sampled: 07/02/01 12:05 Received: 07/02/01 19:10									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1070067	07/16/01	07/16/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*80.8 %*	*70-130*		"	"	"	"	
U-5 (L107031-06) Water Sampled: 07/02/01 12:50 Received: 07/02/01 19:10									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1070067	07/16/01	07/16/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**88**	5.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*75.6 %*	*70-130*		"	"	"	"	

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#4186 Project Manager: Deanna Harding	Reported: 07/18/01 06:13

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-3 (L107031-04) Water Sampled: 07/02/01 14:15 Received: 07/02/01 19:10									
Ethanol	ND	170000	ug/l	166.67	1070064	07/16/01	07/16/01	EPA 8260B	
1,2-Dibromoethane	ND	330	"	"	"	"	"	"	
1,2-Dichloroethane	ND	330	"	"	"	"	"	"	
Di-isopropyl ether	ND	330	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	330	"	"	"	"	"	"	
Methyl tert-butyl ether	**26000**	330	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	330	"	"	"	"	"	"	
Tert-butyl alcohol	**27000**	17000	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*13100 %*	*76-114*		"	"	"	"	
Surrogate: Toluene-d8		*17300 %*	*88-110*		"	"	"	"	
U-4 (L107031-05) Water Sampled: 07/02/01 12:05 Received: 07/02/01 19:10									
Ethanol	ND	1000	ug/l	1	1070037	07/09/01	07/10/01	EPA 8260B	
1,2-Dibromoethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	**5.3**	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	100	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*93.0 %*	*76-114*		"	"	"	"	
Surrogate: Toluene-d8		*103 %*	*88-110*		"	"	"	"	
U-5 (L107031-06) Water Sampled: 07/02/01 12:50 Received: 07/02/01 19:10									
Ethanol	ND	1000	ug/l	1	1070037	07/09/01	07/10/01	EPA 8260B	
1,2-Dibromoethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	**94**	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	100	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*89.2 %*	*76-114*		"	"	"	"	
Surrogate: Toluene-d8		*101 %*	*88-110*		"	"	"	"	

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#4186 Project Manager: Deanna Harding	Reported: 07/18/01 06:13

Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8020 - Quality Control
Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1070060 - EPA 5030B (P/T)										
Blank (1070060-BLK1)				Prepared & Analyzed: 07/13/01						
Purgeable Hydrocarbons as Gasoline	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	5.0	"							
Surrogate: a,a,a-Trifluorotoluene	*9.45*		"	*10.0*		*94.5*	*70-130*			
LCS (1070060-BS1)				Prepared & Analyzed: 07/13/01						
Benzene	8.49	0.50	ug/l	10.0		84.9	70-130			
Toluene	8.29	0.50	"	10.0		82.9	70-130			
Ethylbenzene	8.42	0.50	"	10.0		84.2	70-130			
Xylenes (total)	25.2	0.50	"	30.0		84.0	70-130			
Surrogate: a,a,a-Trifluorotoluene	*8.11*		"	*10.0*		*81.1*	*70-130*			
LCS (1070060-BS2)				Prepared & Analyzed: 07/13/01						
Purgeable Hydrocarbons as Gasoline	255	50	ug/l	250		102	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.91*		"	*10.0*		*99.1*	*70-130*			
Matrix Spike (1070060-MS1)		Source: L107013-09		Prepared & Analyzed: 07/13/01						
Benzene	8.96	0.50	ug/l	10.0	ND	89.6	60-140			
Toluene	8.80	0.50	"	10.0	ND	88.0	60-140			
Ethylbenzene	8.78	0.50	"	10.0	ND	87.8	60-140			
Xylenes (total)	26.5	0.50	"	30.0	ND	88.3	60-140			
Surrogate: a,a,a-Trifluorotoluene	*9.85*		"	*10.0*		*98.5*	*70-130*			
Matrix Spike Dup (1070060-MSD1)		Source: L107013-09		Prepared & Analyzed: 07/13/01						
Benzene	8.78	0.50	ug/l	10.0	ND	87.8	60-140	2.03	25	
Toluene	8.51	0.50	"	10.0	ND	85.1	60-140	3.35	25	
Ethylbenzene	8.40	0.50	"	10.0	ND	84.0	60-140	4.42	25	
Xylenes (total)	25.7	0.50	"	30.0	ND	85.7	60-140	3.07	25	
Surrogate: a,a,a-Trifluorotoluene	*10.4*		"	*10.0*		*104*	*70-130*			

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#4186 Project Manager: Deanna Harding	Reported: 07/18/01 06:13

Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8020 - Quality Control
Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1070066 - EPA 5030B (P/T)										
Blank (1070066-BLK1)				Prepared & Analyzed: 07/16/01						
Purgeable Hydrocarbons as Gasoline	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	5.0	"							
Surrogate: a,a,a-Trifluorotoluene	*7.93*		"	*10.0*		*79.3*	*70-130*			
LCS (1070066-BS1)				Prepared & Analyzed: 07/16/01						
Benzene	8.52	0.50	ug/l	10.0		85.2	70-130			
Toluene	8.20	0.50	"	10.0		82.0	70-130			
Ethylbenzene	8.29	0.50	"	10.0		82.9	70-130			
Xylenes (total)	24.4	0.50	"	30.0		81.3	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.78*		"	*10.0*		*97.8*	*70-130*			
LCS (1070066-BS2)				Prepared & Analyzed: 07/16/01						
Purgeable Hydrocarbons as Gasoline	249	50	ug/l	250		99.6	70-130			
Surrogate: a,a,a-Trifluorotoluene	*8.64*		"	*10.0*		*86.4*	*70-130*			
Matrix Spike (1070066-MS1)	Source: L107115-07			Prepared & Analyzed: 07/16/01						
Purgeable Hydrocarbons as Gasoline	284	50	ug/l	250	ND	114	60-140			
Surrogate: a,a,a-Trifluorotoluene	*9.67*		"	*10.0*		*96.7*	*70-130*			
Matrix Spike Dup (1070066-MSD1)	Source: L107115-07			Prepared & Analyzed: 07/16/01						
Purgeable Hydrocarbons as Gasoline	267	50	ug/l	250	ND	107	60-140	6.17	25	
Surrogate: a,a,a-Trifluorotoluene	*9.62*		"	*10.0*		*96.2*	*70-130*			

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#4186 Project Manager: Deanna Harding	Reported: 07/18/01 06:13

Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8020 - Quality Control

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1070067 - EPA 5030B (P/T)										
Blank (1070067-BLK1)				Prepared & Analyzed: 07/16/01						
Purgeable Hydrocarbons as Gasoline	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	5.0	"							
Surrogate: a,a,a-Trifluorotoluene	*9.49*		"	*10.0*		*94.9*	*70-130*			
LCS (1070067-BS1)				Prepared & Analyzed: 07/16/01						
Benzene	8.14	0.50	ug/l	10.0		81.4	70-130			
Toluene	7.99	0.50	"	10.0		79.9	70-130			
Ethylbenzene	8.13	0.50	"	10.0		81.3	70-130			
Xylenes (total)	24.7	0.50	"	30.0		82.3	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.05*		"	*10.0*		*90.5*	*70-130*			
LCS (1070067-BS2)				Prepared & Analyzed: 07/16/01						
Purgeable Hydrocarbons as Gasoline	213	50	ug/l	250		85.2	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.35*		"	*10.0*		*93.5*	*70-130*			
Matrix Spike (1070067-MS1)		**Source: L107031-06**		Prepared & Analyzed: 07/16/01						
Purgeable Hydrocarbons as Gasoline	241	50	ug/l	250	ND	96.4	60-140			
Surrogate: a,a,a-Trifluorotoluene	*9.96*		"	*10.0*		*99.6*	*70-130*			
Matrix Spike Dup (1070067-MSD1)		**Source: L107031-06**		Prepared & Analyzed: 07/16/01						
Purgeable Hydrocarbons as Gasoline	258	50	ug/l	250	ND	103	60-140	6.81	25	
Surrogate: a,a,a-Trifluorotoluene	*9.69*		"	*10.0*		*96.9*	*70-130*			

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#4186 Project Manager: Deanna Harding	Reported: 07/18/01 06:13

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1070037 - EPA 5030B [P/T]										
Blank (1070037-BLK1)				Prepared & Analyzed: 07/09/01						
Ethanol	ND	1000	ug/l							
1,2-Dibromoethane	ND	2.0	"							
1,2-Dichloroethane	ND	2.0	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
Methyl tert-butyl ether	ND	2.0	"							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	100	"							
Surrogate: 1,2-Dichloroethane-d4	*42.0*		"	*50.0*		*84.0*	*76-114*			
Surrogate: Toluene-d8	*49.5*		"	*50.0*		*99.0*	*88-110*			
Blank (1070037-BLK2)				Prepared & Analyzed: 07/10/01						
Ethanol	ND	1000	ug/l							
1,2-Dibromoethane	ND	2.0	"							
1,2-Dichloroethane	ND	2.0	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
Methyl tert-butyl ether	ND	2.0	"							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	100	"							
Surrogate: 1,2-Dichloroethane-d4	*45.7*		"	*50.0*		*91.4*	*76-114*			
Surrogate: Toluene-d8	*54.3*		"	*50.0*		*109*	*88-110*			
Blank (1070037-BLK3)				Prepared & Analyzed: 07/13/01						
Ethanol	ND	1000	ug/l							
1,2-Dibromoethane	ND	2.0	"							
1,2-Dichloroethane	ND	2.0	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
Methyl tert-butyl ether	ND	2.0	"							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	100	"							
Surrogate: 1,2-Dichloroethane-d4	*44.7*		"	*50.0*		*89.4*	*76-114*			
Surrogate: Toluene-d8	*51.2*		"	*50.0*		*102*	*88-110*			

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#4186 Project Manager: Deanna Harding	Reported: 07/18/01 06:13

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1070037 - EPA 5030B [P/T]										
LCS (1070037-BS1)				Prepared & Analyzed: 07/09/01						
Methyl tert-butyl ether	58.1	2.0	ug/l	50.0		116	70-130			
Surrogate: 1,2-Dichloroethane-d4	*42.3*		"	*50.0*		*84.6*	*76-114*			
Surrogate: Toluene-d8	*46.7*		"	*50.0*		*93.4*	*88-110*			
LCS (1070037-BS2)				Prepared & Analyzed: 07/10/01						
Methyl tert-butyl ether	48.5	2.0	ug/l	50.0		97.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	*46.7*		"	*50.0*		*93.4*	*76-114*			
Surrogate: Toluene-d8	*50.8*		"	*50.0*		*102*	*88-110*			
LCS (1070037-BS3)				Prepared & Analyzed: 07/13/01						
Methyl tert-butyl ether	47.4	2.0	ug/l	50.0		94.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	*45.9*		"	*50.0*		*91.8*	*76-114*			
Surrogate: Toluene-d8	*52.2*		"	*50.0*		*104*	*88-110*			
Matrix Spike (1070037-MS1)	Source: L107053-01			Prepared: 07/09/01 Analyzed: 07/10/01						
Methyl tert-butyl ether	48.9	2.0	ug/l	50.0	ND	97.8	60-140			
Surrogate: 1,2-Dichloroethane-d4	*47.0*		"	*50.0*		*94.0*	*76-114*			
Surrogate: Toluene-d8	*51.7*		"	*50.0*		*103*	*88-110*			
Matrix Spike Dup (1070037-MSD1)	Source: L107053-01			Prepared: 07/09/01 Analyzed: 07/10/01						
Methyl tert-butyl ether	46.0	2.0	ug/l	50.0	ND	92.0	60-140	6.11	25	
Surrogate: 1,2-Dichloroethane-d4	*46.4*		"	*50.0*		*92.8*	*76-114*			
Surrogate: Toluene-d8	*50.8*		"	*50.0*		*102*	*88-110*			
Batch 1070064 - EPA 5030B [P/T]										
Blank (1070064-BLK1)				Prepared & Analyzed: 07/13/01						
Ethanol	ND	1000	ug/l							
1,2-Dibromoethane	ND	2.0	"							
1,2-Dichloroethane	ND	2.0	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
Methyl tert-butyl ether	ND	2.0	"							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	100	"							
Surrogate: 1,2-Dichloroethane-d4	*44.7*		"	*50.0*		*89.4*	*76-114*			
Surrogate: Toluene-d8	*51.2*		"	*50.0*		*102*	*88-110*			

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#4186 Project Manager: Deanna Harding	Reported: 07/18/01 06:13

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1070064 - EPA 5030B [P/T]										
Blank (1070064-BLK2)				Prepared & Analyzed: 07/16/01						
Ethanol	ND	1000	ug/l							
1,2-Dibromoethane	ND	2.0	"							
1,2-Dichloroethane	ND	2.0	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
Methyl tert-butyl ether	ND	2.0	"							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	100	"							
Surrogate: 1,2-Dichloroethane-d4	*41.7*		"	*50.0*		*83.4*	*76-114*			
Surrogate: Toluene-d8	*49.0*		"	*50.0*		*98.0*	*88-110*			
LCS (1070064-BS1)				Prepared & Analyzed: 07/13/01						
Methyl tert-butyl ether	47.4	2.0	ug/l	50.0		94.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	*45.9*		"	*50.0*		*91.8*	*76-114*			
Surrogate: Toluene-d8	*52.2*		"	*50.0*		*104*	*88-110*			
LCS (1070064-BS2)				Prepared & Analyzed: 07/16/01						
Methyl tert-butyl ether	48.6	2.0	ug/l	50.0		97.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	*39.7*		"	*50.0*		*79.4*	*76-114*			
Surrogate: Toluene-d8	*49.6*		"	*50.0*		*99.2*	*88-110*			
Matrix Spike (1070064-MS1)		Source: L107074-03		Prepared & Analyzed: 07/13/01						
Methyl tert-butyl ether	39.0	2.0	ug/l	50.0	ND	78.0	60-140			
Surrogate: 1,2-Dichloroethane-d4	*42.8*		"	*50.0*		*85.6*	*76-114*			
Surrogate: Toluene-d8	*51.1*		"	*50.0*		*102*	*88-110*			
Matrix Spike Dup (1070064-MSD1)		Source: L107074-03		Prepared & Analyzed: 07/13/01						
Methyl tert-butyl ether	46.6	2.0	ug/l	50.0	ND	93.2	60-140	17.8	25	
Surrogate: 1,2-Dichloroethane-d4	*42.1*		"	*50.0*		*84.2*	*76-114*			
Surrogate: Toluene-d8	*51.2*		"	*50.0*		*102*	*88-110*			

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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