GETTLER-RYAN INC.

TRANSMITTAL

August 22, 2001
G-R #: 180068

R0455

TO: Mr. David B. De Witt
Tosco Marketing Company
2000 Crow Canyon Place, Suite 400
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 (Former Unocal)
Service Station #1871
96 MacArthur boulevard
Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	August 8, 2001	Groundwater Monitoring and Sampling Report Second Semi-Annual - Event of July 16, 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 ***September 5, 2001***, this report will be distributed to the following:

cc: Alameda County Health Care Services, 1131 Harbor Bay Parkway, Alameda, California 94502

Enclosure

trans/1871-DBD

GETTLER-RYAN INC.

August 8, 2001
G-R Job #180068

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

RE: Second Semi-Annual Event of July 16, 2001
Groundwater Monitoring & Sampling Report
Tosco (Former Unocal) Service Station #1871
96 MacArthur Boulevard
Oakland, California

Dear Mr. De Witt:

This report documents the most recent groundwater monitoring and sampling event 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, 2 and 3. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

Sincerely,

Anamarie Norcau
-FOR-

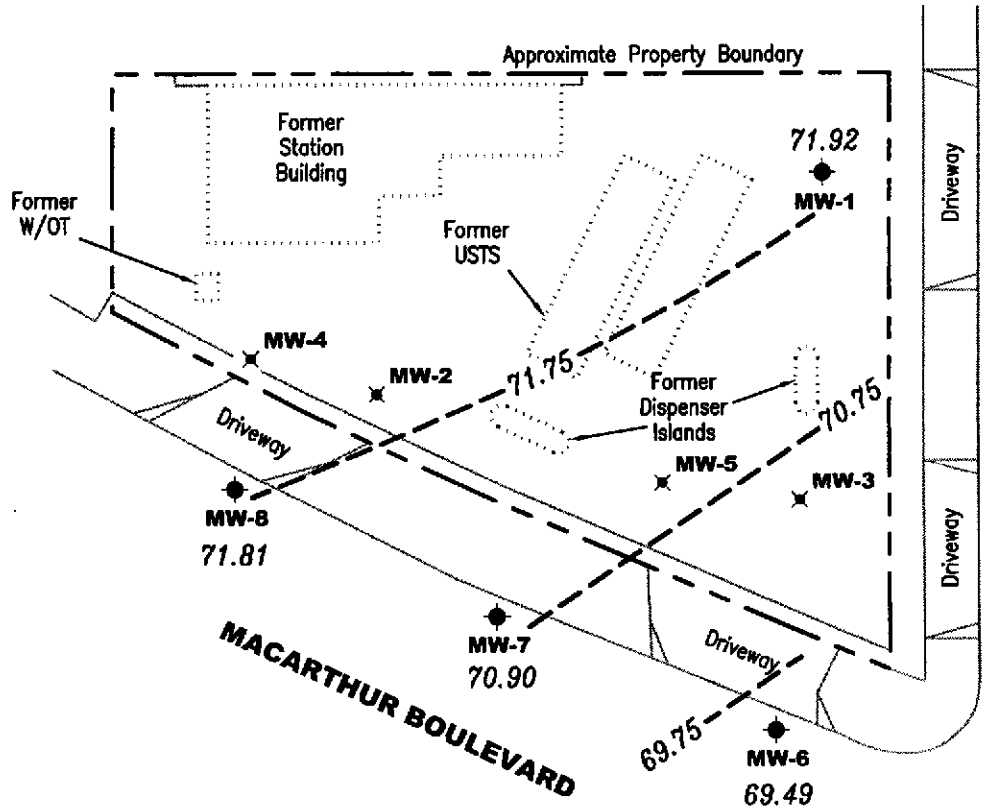
Deanna L. Harding
Project Coordinator

Stephen J. Carter
Senior Geologist, R.G. No. 5577

REGISTERED GEOLOGIST
STEPHEN J. CARTER
No. 5577
STATE OF CALIFORNIA

Figure 1: Potentiometric Map
Figure 2: Concentration Map
Table 1: Groundwater Monitoring Data and Analytical Results
Table 2: Groundwater Analytical Results
Table 3: Groundwater Analytical Results - Oxygenate Compounds
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports

1871.qml



EXPLANATION

- ✦ Groundwater monitoring well
- ✕ Destroyed 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 0.04 Ft./Ft.

N

0 30

Scale in Feet

Source: Figure modified from drawing provided by MPDS Services, Inc.

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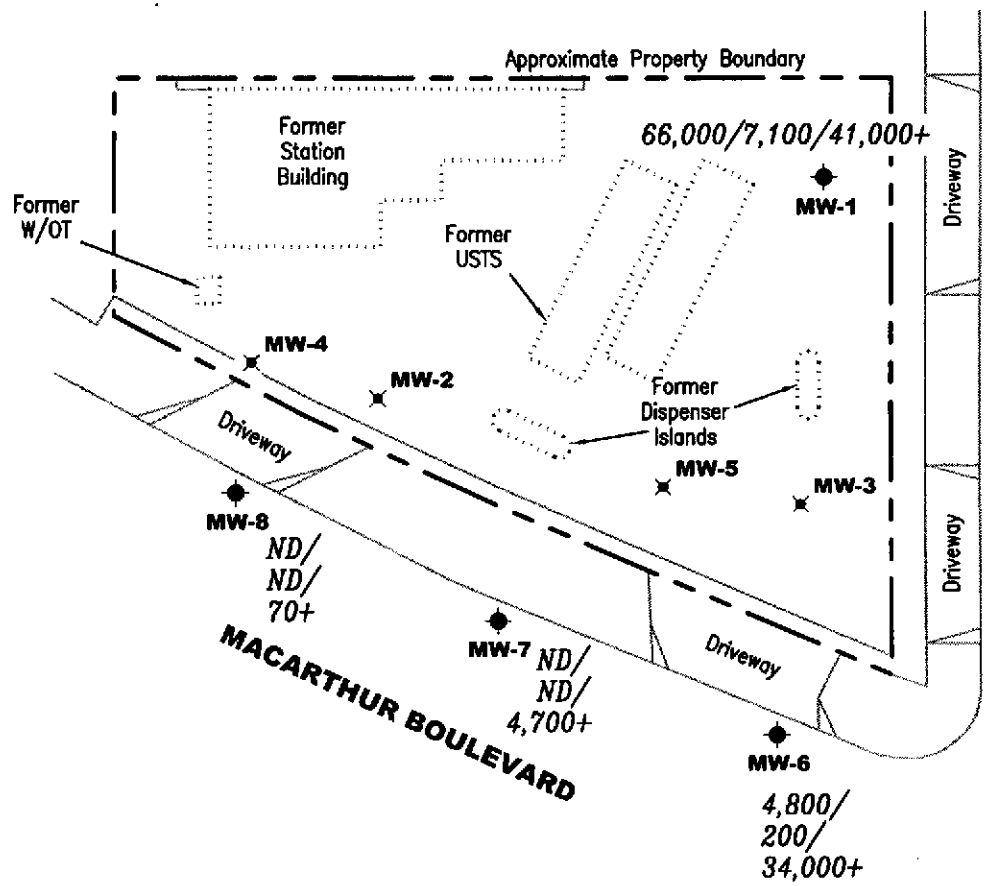
Dublin, CA 94568 (925) 551-7555

POTENTIOMETRIC MAP
Tosco (Former Unocal) Service Station #1871
96 MacArthur Boulevard
Oakland, California

FIGURE 1

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
180068		July 16, 2001	

FILE NAME: P:\Enviro\Tosco\1871\Q01-1871.DWG | Layout Tab: Pot3



EXPLANATION

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

Source: Figure modified from drawing provided by MPDS Services, Inc.

GETTLER - RYAN INC.
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CONCENTRATION MAP
Tosco (Former Unocal) Service Station #1871
96 MacArthur Boulevard
Oakland, California

FIGURE
2

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
180068		July 16, 2001	

FILE NAME: P:\ENVIRO\TOSCO\1871\Q01-1871.DWG | Layout Tab: Con3

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Former Unocal) Service Station #1871

96 MacArthur Boulevard

Oakland, 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)
MW-1	11/03/92	--	9.5-24.5	--	260,000	2,300	4,600	3,700	17,000	--
	01/25/93	--		--	120,000	2,100	4,600	4,900	22,000	--
81.18	04/29/93	13.71		67.47	100,000	850	2,000	4,300	19,000	--
	07/16/93	14.51		66.67	29,000	590	560	980	4,200	--
	10/19/93	15.20		65.98	67,000	1,400	2,600	2,900	5,000	--
	01/20/94	15.17		66.01	92,000	1,200	3,000	3,400	17,000	--
	04/13/94	14.44		66.74	51,000	1,000	2,600	3,200	15,000	--
	07/13/94	14.88		66.30	35,000	550	150	1,400	5,700	--
	10/10/94	15.55		65.63	52,000	1,000	810	3,300	12,000	--
	01/10/95	12.44		68.74	810	16	18	59	250	--
	04/17/95	12.68		68.50	48,000	880	530	2,500	11,000	--
	07/24/95	13.97		67.21	48,000	1,500	420	2,700	9,700	--
	10/23/95	14.85		66.33	47,000	780	210	2,100	11,000	270
	01/18/96	14.21		66.97	30,000	1,500	500	3,500	13,000	2,400
86.24	04/18/96	13.40		72.84	66,000	2,700	2,200	3,100	13,000	57,000
	07/24/96	14.15		72.09	5,600	2,100	ND	160	160	24,000
	10/24/96	14.85		71.39	110,000	7,500	8,000	3,300	14,000	58,000
	01/28/97	11.25		74.99	94,000	7,700	19,000	3,100	15,000	120,000
	07/29/97	14.67		71.57	ND	ND	ND	ND	ND	70,000
	01/14/98	12.27		73.97	85,000	6,100	10,000	3,000	17,000	110,000
	07/01/98	14.32		71.92	110,000	8,700	12,000	2,700	15,000	110,000
	06/18/99	13.93		72.31	49,000	6,900	6,500	380	12,000	72,000/47,000[4]
	01/21/00	15.05		71.19	63,700[5]	5,520	2,000	2,640	13,100	57,100
	07/10/00	13.97		72.27	67,800[5]	9,910	4,120	3,330	16,100	67,400/54,000[4]
	01/04/01	14.92		71.32	63,900[5]	6,270	784	2,670	12,900	--/38,100[4]
	07/16/01	**14.32**		**71.92**	**66,000[5]**	**7,100**	**330**	**2,300**	**9,800**	**36,000/41,000[4]**
MW-2	11/03/92	--	--	--	140	2.2	ND	ND	2.0	--
	01/25/93	--		--	2,100	56	1.1	90	140	--
76.61	04/29/93	9.73		66.88	1,500	290	ND	33	11	--
	07/16/93	10.17		66.44	510[1]	17	0.60	3.2	2.5	--

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Former Unocal) Service Station #1871

96 MacArthur Boulevard

Oakland, 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)
MW-2	10/19/93	11.18	--	65.43	670	24	1.1	7.7	23	--
(cont)	01/20/94	11.12		65.49	820	97	ND	12	ND	--
	04/13/94	10.12		66.49	550	71	ND	5.1	1.3	--
	07/13/94	10.86		65.75	2,000	490	ND	17	13	--
	10/10/94	11.48		65.13	2,300	340	ND	25	ND	--
	01/10/95	8.71		67.90	850	3.8	ND	8.5	1.3	--
	04/17/95	8.90		67.71	1,300	4.7	ND	8.3	1.2	--
	07/24/95	9.94		66.67	960	20	ND	4.2	6.2	--
	10/23/95	10.70		65.91	ND	ND	ND	ND	ND	19
	01/18/96	10.11		66.50	900	300	86	7.6	18	4,300
81.66	04/18/96	9.27		72.39	18,000	3,600	680	890	4,100	19,000
	07/24/96	10.02		71.64	100,000	13,000	21,000	2,700	16,000	120,000
	10/24/96	10.78		70.88	800	110	17	11	20	20,000
	01/28/97	7.70		73.96	45,000	2,400	2,900	2,000	7,600	29,000
	07/29/97	10.28		71.38	ND	1.2	0.72	0.63	0.62	17,000
	01/14/98	8.63		73.03	14,000	1,000	150	790	3,300	23,000
	07/01/98	9.53		72.13	2,700	100	ND[3]	180	78	7,100
	DESTROYED									
MW-3	11/03/92	--	--	--	2,100	120	15	38	200	--
	01/25/93	--		--	2,300	80	1	55	52	-
77.48	04/29/93	11.37		66.11	4,500	1,700	ND	200	140	--
	07/16/93	12.09		65.39	4,000[1]	1,100	28	52	70	--
	10/19/93	12.69		64.79	3,800	42	ND	50	56	--
	01/20/94	12.65		64.83	4,200	11	ND	21	15	--
	04/13/94	12.02		65.46	4,200	210	ND	36	53	--
	07/13/94	12.46		65.02	1,800[2]	16	16	ND	21	--
	10/10/94	12.98		64.50	4,300	11	ND	12	ND	--
	01/10/95	10.42		67.06	310	4.6	ND	3.5	2.1	--
	04/17/95	10.42		67.06	7,800	ND	4.6	300	450	--
	07/24/95	11.76		65.72	3,200	170	ND	22	16	--

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Former Unocal) Service Station #1871

96 MacArthur Boulevard

Oakland, 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)
MW-3	10/23/95	12.50	--	64.98	3,900	55	ND	19	11	4,500
(cont)	01/18/96	11.79		65.69	2,200	270	33	26	18	5,500
82.55	04/18/96	11.30		71.25	6,000	1,800	ND	100	230	48,000
	07/24/96	12.17		70.38	ND	2,500	ND	ND	ND	71,000
	10/24/96	12.65		69.90	3,800	660	ND	15	ND	65,000
	01/28/97	9.50		73.05	4,400	250	13	87	47	54,000
	07/29/97	11.99		70.56	ND	3,500	ND	220	ND	75,000
	01/14/98	10.30		72.25	ND[3]	430	ND[3]	100	380	37,000
	07/01/98	11.70		70.85	ND[3]	430	ND[3]	ND[3]	ND[3]	45,000
	DESTROYED									--
MW-4										
82.04	04/18/96	9.83	--	72.21	ND	630	ND	ND	ND	18,000
	07/24/96	10.47		71.57	ND	ND	ND	ND	5.2	3,900
	10/24/96	11.14		70.90	ND	ND	ND	ND	ND	6,300
	01/28/97	7.94		74.10	1,200	490	ND	17	6.8	16,000
	07/29/97	10.86		71.18	50	1.5	0.61	0.73	0.78	15,000
	01/14/98	8.73		73.31	ND[3]	ND[3]	ND[3]	ND[3]	ND[3]	5,200
	07/01/98	10.51		71.53	ND	ND	ND	ND	ND	640
	DESTROYED									--
MW-5										
81.80	04/18/96	9.65	--	72.15	31,000	5,500	1,400	1,700	8,100	66,000
	07/24/96	10.80		71.00	32,000	6,400	ND	1,600	6,100	120,000
	10/24/96	11.40		70.40	17,000	6,900	ND	970	130	84,000
	01/28/97	7.76		74.04	19,000	6,100	62	82	310	160,000
	07/29/97	11.58		70.22	ND	ND	ND	ND	ND	71,000
	01/14/98	9.08		72.72	ND[3]	3,600	ND[3]	ND[3]	ND[3]	80,000
	07/01/98	11.25		70.55	6,400	2,100	21	120	330	61,000
	DESTROYED									--

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Former Unocal) Service Station #1871
96 MacArthur Boulevard
Oakland, 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)
MW-6										
78.91	06/18/99	9.30	5.0-25.0	69.61	2,100	21	29	ND[3]	47	97,000/71,000[4]
	01/21/00	9.37		69.54	1,880[5]	143	31.2	106	196	41,200/48,800[4]
	07/10/00	8.94		69.97	5,710[5]	869	209	301	1,430	22,200/19,500[4]
	01/04/01	9.21		69.70	ND	ND	ND	ND	ND	--/9,510[4]
	07/16/01	**9.42**		**69.49**	**4,800[5]**	**200**	**21**	**150**	**440**	**29,000/34,000[4]**
MW-7										
79.92	06/18/99	8.70	5.0-25.0	71.22	ND	ND	ND	ND	ND	16,000/13,000[4]
	01/21/00	9.30		70.62	ND[3]	ND[3]	ND[3]	ND[3]	ND[3]	12,300/18,200[4]
	07/10/00	8.72		71.20	ND[3]	ND[3]	ND[3]	ND[3]	ND[3]	16,900/13,800[4]
	01/04/01	9.17		70.75	ND	ND	ND	ND	0.719	--/37.3[4]
	07/16/01	**9.02**		**70.90**	**ND**	**ND**	**ND**	**ND**	**ND**	**7,200/4,700[4]**
MW-8										
80.96	06/18/99	9.10	5.0-25.0	71.86	ND	ND	ND	ND	ND	290/160[4]
	01/21/00	10.00		70.96	ND	ND	ND	ND	1.09	224/221[4]
	07/10/00	7.94		73.02	ND	ND	ND	ND	ND	234/223[4]
	01/04/01	9.76		71.20	3,790[5]	141	8.92	128	375	--/34,200[4]
	07/16/01	**9.15**		**71.81**	**ND**	**ND**	**ND**	**ND**	**ND**	**66/70[4]**
Trip Blank										
TB-LB	01/14/98	--	--	--	ND	ND	ND	ND	ND	ND
	07/01/98	--		--	ND	ND	ND	ND	ND	ND
	06/18/99	--		--	ND	ND	ND	ND	ND	ND
	01/21/00	--		--	ND	ND	ND	ND	ND	14.6

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Former Unocal) Service Station #1871

96 MacArthur Boulevard

Oakland, 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	07/10/00	--		--	ND	ND	ND	ND	ND	ND
(cont)	01/04/01	--		--	ND	ND	ND	ND	ND	ND
	07/16/01	--		--	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Former Unocal) Service Station #1871

96 MacArthur Boulevard

Oakland, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to January 14, 1998, were compiled from reports prepared by MPDS Services, Inc.

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 were re-surveyed by Kier & Wright in May, 1996, per City of Oakland Benchmark No. 2310, a cut square in concrete curb at mid point of return at the northeast corner of El Dorado and Fairmont Street. (Elevation = 77.53 feet msl).

1 Laboratory report indicates the presence of discrete peaks not indicative of gasoline.

2 Laboratory report indicates the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.

3 Detection limit raised. Refer to analytical reports.

4 MTBE by EPA Method 8260.

5 Laboratory report indicates gasoline C6-C12.

Table 2

Groundwater Analytical Results

Tosco (Former Unocal) Service Station #1871
96 MacArthur Boulevard
Oakland, California

WELL ID	DATE	TPH-D (ppb)	TOG (ppb)	HVOC (ppb)	SVOC (ppb)
MW-1	06/18/99	--	--	ND	--
MW-4	04/18/96	110[1]	ND	ND	--
	07/24/96	ND	ND	ND	ND
	10/24/96	ND	ND	ND	ND[2]
	01/28/97	210[3]	ND	ND	ND[4]
	07/29/97	ND	ND	ND	ND
	01/14/98	ND	ND	ND	ND
	07/01/98	ND	ND	ND	ND
	DESTROYED				
MW-6	06/18/99	--	--	ND	--
MW-7	06/18/99	--	--	ND	--
MW-8	06/18/99	--	--	ND	ND[5]

EXPLANATIONS:

Groundwater analytical results prior to January 14, 1998, were compiled from reports prepared by MPDS Services, Inc.

TPH-D = Total Petroleum Hydrocarbons as Diesel
TOG = Total Oil and Grease
HVOC = Halogenated Volatile Organic Compounds by EPA Method 8010
SVOC = Semi-Volatile Organic Compounds by EPA Method 8270
(ppb) = Parts per billion
-- = Not Analyzed
ND = Not Detected

1 Laboratory report indicates the hydrocarbons detected did not appear to contain diesel.
2 Bis (2-ethylhexyl) phthalate was detected at a concentration of 14 ppb.
3 Laboratory report indicates the hydrocarbons detected appeared to be a diesel and non-diesel mixture.
4 Naphthalene was detected at a concentration of 17 ppb.
5 All SVOCs were ND except for Bis(2-ethylhexy)phthalate at 11 ppb.

All EPA Method 8010 and 8270 constituents were ND, unless noted.

Table 3

Groundwater Analytical Results - Oxygenate Compounds

Tosco (Former Unocal) Service Station #1871

96 MacArthur Boulevard

Oakland, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	EDB (ppb)	1,2-DCA (ppb)
MW-1	06/18/99	ND[1]	ND[1]	47,000	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]
	07/10/00	--	--	54,000	--	--	--	--	--
	01/04/01	--	--	38,100	--	--	--	--	--
	07/16/01	**ND[1]**	**ND[1]**	**41,000**	**ND[1]**	**ND[1]**	**ND[1]**	**ND[1]**	**ND[1]**
MW-6	06/18/99	ND[1]	ND[1]	71,000	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]
	01/21/00	--	--	48,800	--	--	--	--	--
	07/10/00	--	--	19,500	--	--	--	--	--
	01/04/01	--	--	9,510	--	--	--	--	--
	07/16/01	**ND[1]**	**ND[1]**	**34,000**	**ND[1]**	**ND[1]**	**ND[1]**	**ND[1]**	**ND[1]**
MW-7	06/18/99	ND[1]	ND[1]	13,000	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]
	01/21/00	--	--	18,200	--	--	--	--	--
	07/10/00	--	--	13,800	--	--	--	--	--
	01/04/01	--	--	37.3	--	--	--	--	--
	07/16/01	**ND[1]**	**ND[1]**	**4,700**	**ND[1]**	**ND[1]**	**ND[1]**	**ND[1]**	**ND[1]**
MW-8	06/18/99	ND[1]	ND[1]	160	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]
	01/21/00	--	--	221	--	--	--	--	--
	07/10/00	--	--	223	--	--	--	--	--
	01/04/01	--	--	34,200	--	--	--	--	--
	07/16/01	**ND**	**ND**	**70**	**ND**	**ND**	**ND**	**ND**	**ND**

Table 3

Groungwater Analytical Results - Oxygenate Compounds

Tosco (Former Unocal) Service Station #1871
96 MacArthur Boulevard
Oakland, 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
-- = Not Analyzed
ND = Not Detected

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

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 # 1871 Job#: 180068

Address: 96 MacArthur Blvd. Date: 7-16-01

City: Oakland Sampler: Joe

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

Well Diameter 4 in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)

Total Depth 24.06 ft.

Depth to Water 14.32 ft.

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

9.74 X VF 0.66 = 6.43 X 3 (case volume) = Estimated Purge Volume: 20 (gal.)

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

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

Starting Time: 9:50 Weather Conditions: clear

Sampling Time: 10:15 AM (1015) Water Color: Clear Odor: yes

Purging Flow Rate: 1.5 gpm. Sediment Description: _____

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity (mS) µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
9:58	6.5	6.86	1.63	70.7			
10:02	13	6.78	1.68	70.9			
10:06	20	6.79	1.67	71.0			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-1	3 VOA	Y	HCL	Seq.	TPHG, BTEX, MTBE
	2 VOA	"	"	"	(6) Oxy's 1,2 DCA EDB by 826

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 1871 Job#: 180068

Address: 96 MacArthur Blvd. Date: 7-16-01

City: Oakland Sampler: Joe

Well ID MW-6 Well Condition: O.K.

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

Total Depth 24.70 ft.

Depth to Water 9.42 ft.

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

15.28 X VF 0.17 = 2.60 X 3 (case volume) = Estimated Purge Volume: 8 (gal.)

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

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

Starting Time: 8:45 Weather Conditions: clear

Sampling Time: 9:07 A.M (0907) Water Color: clear Odor: mild

Purging Flow Rate: 1 gpm. Sediment Description: _____

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity (mmhos/cm)	Temperature (F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
8:52	2.5	7.26	3.20	71.2			
8:54	5.5	7.20	3.24	71.8			
8:56	8	7.17	3.19	72.0			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-6	3 VOA	Y	HCL	Seq.	TPHG, BTEX, MTBE
	2 VOA	"	"	"	(6) 8260 Oxys 1,2 DCA/EDB

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 1871 Job#: 180068

Address: 96 MacArthur Blvd. Date: 7-16-01

City: Oakland Sampler: Joe

Well ID mw-7 Well Condition: O.K.

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

Total Depth 24.52 ft.

Depth to Water 9.02 ft.

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

1550 X VF 0.17 = 2.64 X 3 (case volume) = Estimated Purge Volume: 8 (gal.)

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

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

Starting Time: 8:07 Weather Conditions: clear

Sampling Time: 8:35 A.m (0835) Water Color: Clear Odor: none

Purging Flow Rate: 1 gpm. Sediment Description:

Did well de-water? If yes; Time: Volume: (gal.)

Time	Volume (gal.)	pH	Conductivity (µmhos/cm)	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
8:20	2.5	7.59	5.82	72.5			
8:22	5	7.42	5.80	72.6			
8:24	8	7.48	6.90	72.8			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-7	3 VOA	Y	HCL	Seq.	TPHG, BTEX, MTBE
	2 VOA	"	"	"	(6) Oxy's 1,2 DCA EDB by 8260

COMMENTS:

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 1871 Job#: 180068

Address: 96 MacArthur Blvd. Date: 7-16-01

City: Oakland Sampler: Joe

Well ID mw-8 Well Condition: O.K.

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

Total Depth 24.80 ft.

Depth to Water 9.15 ft.

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

15.65 X VF 0.17 = 2.66 X 3 (case volume) = Estimated Purge Volume: 8 (gal.)

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

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

Starting Time: 9:15 Weather Conditions: clear

Sampling Time: 9:36 A.m (0936) Water Color: clear Odor: mild

Purging Flow Rate: 1 gpm Sediment Description: _____

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity (mmhos/cm)	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
9:20	3	7.31	5.05	71.2			
9:26	5.5	7.29	4.86	71.5			
9:28	8	7.33	4.82	71.6			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-8	3 VOA	Y	HCL	Seq.	TPHG, BTEX, MTBE
	2 VOA	"	"	"	(6) Oxy's 1,2 DCA (EPA 8260

COMMENTS: _____

Chain-of-Custody Record

TOSCO

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

Facility Number: UNOCAL SS# 1871
Facility Address: 96 MACARTHUR BLVD., OAKLAND, CA
Consultant Project Number: 180068
Consultant Name: Gettler-Ryan Inc. (G-R Inc.)
Address: 6747 Sierra Court, Suite J, Dublin, CA 94568
Project Contact (Name): Deanna L. Harding
(Phone) 925-551-7555 (Fax Number) 925-551-7888

Contact (Name): Mr. David De Witt
(Phone): 277-2384
Laboratory Name: Sequoia Analytical
Laboratory Release Number:
Samples Collected by (Name): JOE AJEMIAN
Collection Date: 7-16-01
Signature:

DO NOT BILL TB-LB ANALYSIS

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water 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 (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)	(6) Oxys 1,2DCA EDB by 8260					Remarks
107134																					
TB-LB	01	1 VOA	W	G	—	HCL	Y	✓								✓					
MW-1	02	3 VOA	"	"	1015	"	"	✓								✓					
MW-6	03	"	"	"	0907	"	"	✓								✓					
MW-7	04	"	"	"	0835	"	"	✓								✓					
MW-8	05	"	"	"	0936	"	"	✓													

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	G-R Inc.	7-16-01 1800			7/16/01
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 31 , 2001

Deanna Harding
Gettler-Ryan/Geostrategies(1)
6747 Sierra Court, Suite J
Dublin, CA 94568
RE: Tosco(1) / L107134

Enclosed are the results of analyses for samples received by the laboratory on 07/16/01. 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#1871, Oakland, CA Project Manager: Deanna Harding	Reported: 07/31/01 15:17

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	L107134-01	Water	07/16/01 00:00	07/16/01 18:00
MW-1	L107134-02	Water	07/16/01 10:15	07/16/01 18:00
MW-6	L107134-03	Water	07/16/01 09:07	07/16/01 18:00
MW-7	L107134-04	Water	07/16/01 08:35	07/16/01 18:00
MW-8	L107134-05	Water	07/16/01 09:36	07/16/01 18:00

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#1871, Oakland, CA Project Manager: Deanna Harding	**Reported:** 07/31/01 15:17

Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TB-LB (L107134-01) Water Sampled: 07/16/01 00:00 Received: 07/16/01 18:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1070121	07/26/01	07/26/01	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		*99.1 %*		*70-130*	"	"	"	"	
MW-1 (L107134-02) Water Sampled: 07/16/01 10:15 Received: 07/16/01 18:00									
Purgeable Hydrocarbons as Gasoline	**66000**	20000	ug/l	400	1070134	07/30/01	07/30/01	DHS LUFT	P-01
Benzene	**7100**	200	"	"	"	"	"	"	
Toluene	**330**	200	"	"	"	"	"	"	
Ethylbenzene	**2300**	200	"	"	"	"	"	"	
Xylenes (total)	**9800**	200	"	"	"	"	"	"	
Methyl tert-butyl ether	**36000**	2000	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*100 %*		*70-130*	"	"	"	"	
MW-6 (L107134-03) Water Sampled: 07/16/01 09:07 Received: 07/16/01 18:00									
Purgeable Hydrocarbons as Gasoline	**4800**	500	ug/l	10	1070121	07/26/01	07/27/01	DHS LUFT	P-01
Benzene	**200**	5.0	"	"	"	"	"	"	
Toluene	**21**	5.0	"	"	"	"	"	"	
Ethylbenzene	**150**	5.0	"	"	"	"	"	"	
Xylenes (total)	**440**	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	**29000**	2500	"	500	"	"	07/30/01	"	M-04
Surrogate: a,a,a-Trifluorotoluene		*99.7 %*		*70-130*	"	"	*07/27/01*	"	

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#1871, Oakland, CA Project Manager: Deanna Harding	Reported: 07/31/01 15:17

Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-7 (L107134-04) Water Sampled: 07/16/01 08:35 Received: 07/16/01 18:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1070121	07/26/01	07/27/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**7200**	250	"	50	"	"	07/30/01	"	M-04
Surrogate: a,a,a-Trifluorotoluene		*94.3 %*		*70-130*	"	"	*07/27/01*	"	
MW-8 (L107134-05) Water Sampled: 07/16/01 09:36 Received: 07/16/01 18:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1070120	07/26/01	07/27/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**66**	5.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*103 %*		*70-130*	"	"	"	"	

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#1871, Oakland, CA Project Manager: Deanna Harding	Reported: 07/31/01 15:17

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (L107134-02) Water Sampled: 07/16/01 10:15 Received: 07/16/01 18:00									
Ethanol	ND	500000	ug/l	500	1070097	07/23/01	07/23/01	EPA 8260B	
1,2-Dibromoethane	ND	1000	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1000	"	"	"	"	"	"	
Di-isopropyl ether	ND	1000	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1000	"	"	"	"	"	"	
Methyl tert-butyl ether	**41000**	1000	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	1000	"	"	"	"	"	"	
Tert-butyl alcohol	ND	50000	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*88.8 %*	*76-114*		"	"	"	"	
Surrogate: Toluene-d8		*96.2 %*	*88-110*		"	"	"	"	
MW-6 (L107134-03) Water Sampled: 07/16/01 09:07 Received: 07/16/01 18:00									
Ethanol	ND	330000	ug/l	333.33	1070097	07/23/01	07/23/01	EPA 8260B	
1,2-Dibromoethane	ND	670	"	"	"	"	"	"	
1,2-Dichloroethane	ND	670	"	"	"	"	"	"	
Di-isopropyl ether	ND	670	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	670	"	"	"	"	"	"	
Methyl tert-butyl ether	**34000**	670	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	670	"	"	"	"	"	"	
Tert-butyl alcohol	ND	33000	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*90.0 %*	*76-114*		"	"	"	"	
Surrogate: Toluene-d8		*94.2 %*	*88-110*		"	"	"	"	
MW-7 (L107134-04) Water Sampled: 07/16/01 08:35 Received: 07/16/01 18:00									
Ethanol	ND	50000	ug/l	50	1070097	07/23/01	07/23/01	EPA 8260B	
1,2-Dibromoethane	ND	100	"	"	"	"	"	"	
1,2-Dichloroethane	ND	100	"	"	"	"	"	"	
Di-isopropyl ether	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	100	"	"	"	"	"	"	
Methyl tert-butyl ether	**4700**	100	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	100	"	"	"	"	"	"	
Tert-butyl alcohol	ND	5000	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*87.6 %*	*76-114*		"	"	"	"	
Surrogate: Toluene-d8		*100 %*	*88-110*		"	"	"	"	

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#1871, Oakland, CA Project Manager: Deanna Harding	Reported: 07/31/01 15:17

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-8 (L107134-05) Water Sampled: 07/16/01 09:36 Received: 07/16/01 18:00									
Ethanol	ND	1000	ug/l	1	1070097	07/20/01	07/21/01	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	**70**	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	100	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*87.2 %*	*76-114*		"	"	"	"	
Surrogate: Toluene-d8		*95.6 %*	*88-110*		"	"	"	"	

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#1871, Oakland, CA Project Manager: Deanna Harding	Reported: 07/31/01 15:17

Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B - Quality Control

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1070120 - EPA 5030B (P/T)										
Blank (1070120-BLK1)				Prepared & Analyzed: 07/26/01						
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	*9.68*		"	*10.0*		*96.8*	*70-130*			
LCS (1070120-BS1)				Prepared & Analyzed: 07/26/01						
Benzene	7.92	0.50	ug/l	10.0		79.2	70-130			
Toluene	7.60	0.50	"	10.0		76.0	70-130			
Ethylbenzene	7.64	0.50	"	10.0		76.4	70-130			
Xylenes (total)	22.7	0.50	"	30.0		75.7	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.31*		"	*10.0*		*93.1*	*70-130*			
LCS (1070120-BS2)				Prepared & Analyzed: 07/26/01						
Purgeable Hydrocarbons as Gasoline	265	50	ug/l	250		106	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.73*		"	*10.0*		*97.3*	*70-130*			
Matrix Spike (1070120-MS1)		Source: L107118-03		Prepared & Analyzed: 07/26/01						
Purgeable Hydrocarbons as Gasoline	281	50	ug/l	250	ND	112	60-140			
Surrogate: a,a,a-Trifluorotoluene	*10.2*		"	*10.0*		*102*	*70-130*			
Matrix Spike Dup (1070120-MSD1)		Source: L107118-03		Prepared & Analyzed: 07/26/01						
Purgeable Hydrocarbons as Gasoline	256	50	ug/l	250	ND	102	60-140	9.31	25	
Surrogate: a,a,a-Trifluorotoluene	*10.1*		"	*10.0*		*101*	*70-130*			

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#1871, Oakland, CA Project Manager: Deanna Harding	Reported: 07/31/01 15:17

Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B - Quality Control

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1070121 - EPA 5030B (P/T)										
Blank (1070121-BLK1)				Prepared & Analyzed: 07/26/01						
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	*10.2*		"	*10.0*		*102*	*70-130*			
LCS (1070121-BS1)				Prepared & Analyzed: 07/26/01						
Benzene	7.24	0.50	ug/l	10.0		72.4	70-130			
Toluene	7.12	0.50	"	10.0		71.2	70-130			
Ethylbenzene	7.19	0.50	"	10.0		71.9	70-130			
Xylenes (total)	22.0	0.50	"	30.0		73.3	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.09*		"	*10.0*		*90.9*	*70-130*			
LCS (1070121-BS2)				Prepared & Analyzed: 07/26/01						
Purgeable Hydrocarbons as Gasoline	231	50	ug/l	250		92.4	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.84*		"	*10.0*		*98.4*	*70-130*			
Matrix Spike (1070121-MS1)		**Source: L107118-06**		Prepared & Analyzed: 07/26/01						
Purgeable Hydrocarbons as Gasoline	220	50	ug/l	250	ND	88.0	60-140			
Surrogate: a,a,a-Trifluorotoluene	*10.1*		"	*10.0*		*101*	*70-130*			
Matrix Spike Dup (1070121-MSD1)		**Source: L107118-06**		Prepared & Analyzed: 07/26/01						
Purgeable Hydrocarbons as Gasoline	241	50	ug/l	250	ND	96.4	60-140	9.11	25	
Surrogate: a,a,a-Trifluorotoluene	*10.3*		"	*10.0*		*103*	*70-130*			

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#1871, Oakland, CA Project Manager: Deanna Harding	Reported: 07/31/01 15:17

Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B - Quality Control

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1070134 - EPA 5030B (P/T)										
Blank (1070134-BLK1)				Prepared & Analyzed: 07/30/01						
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	*8.63*		"	*10.0*		*86.3*	*70-130*			
LCS (1070134-BS1)				Prepared & Analyzed: 07/30/01						
Benzene	8.57	0.50	ug/l	10.0		85.7	70-130			
Toluene	8.14	0.50	"	10.0		81.4	70-130			
Ethylbenzene	8.05	0.50	"	10.0		80.5	70-130			
Xylenes (total)	24.2	0.50	"	30.0		80.7	70-130			
Surrogate: a,a,a-Trifluorotoluene	*8.39*		"	*10.0*		*83.9*	*70-130*			
LCS (1070134-BS2)				Prepared & Analyzed: 07/30/01						
Purgeable Hydrocarbons as Gasoline	266	50	ug/l	250		106	70-130			
Surrogate: a,a,a-Trifluorotoluene	*10.8*		"	*10.0*		*108*	*70-130*			
Matrix Spike (1070134-MS1)		**Source: L107142-01**		Prepared & Analyzed: 07/30/01						
Benzene	7.53	0.50	ug/l	10.0	ND	75.3	60-140			
Toluene	7.29	0.50	"	10.0	ND	72.9	60-140			
Ethylbenzene	7.29	0.50	"	10.0	ND	72.9	60-140			
Xylenes (total)	22.4	0.50	"	30.0	ND	74.7	60-140			
Surrogate: a,a,a-Trifluorotoluene	*9.22*		"	*10.0*		*92.2*	*70-130*			
Matrix Spike Dup (1070134-MSD1)		**Source: L107142-01**		Prepared: 07/30/01 Analyzed: 07/31/01						
Benzene	8.11	0.50	ug/l	10.0	ND	81.1	60-140	7.42	25	
Toluene	7.82	0.50	"	10.0	ND	78.2	60-140	7.02	25	
Ethylbenzene	7.85	0.50	"	10.0	ND	78.5	60-140	7.40	25	
Xylenes (total)	24.2	0.50	"	30.0	ND	80.7	60-140	7.73	25	
Surrogate: a,a,a-Trifluorotoluene	*9.03*		"	*10.0*		*90.3*	*70-130*			

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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 1070097 - EPA 5030B [P/T]										
Blank (1070097-BLK1)				Prepared & Analyzed: 07/20/01						
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	*46.1*		"	*50.0*		*92.2*	*76-114*			
Surrogate: Toluene-d8	*51.0*		"	*50.0*		*102*	*88-110*			
Blank (1070097-BLK2)				Prepared & Analyzed: 07/23/01						
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	*42.4*		"	*50.0*		*84.8*	*76-114*			
Surrogate: Toluene-d8	*48.0*		"	*50.0*		*96.0*	*88-110*			
LCS (1070097-BS1)				Prepared & Analyzed: 07/20/01						
Methyl tert-butyl ether	49.1	2.0	ug/l	50.0		98.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	*46.4*		"	*50.0*		*92.8*	*76-114*			
Surrogate: Toluene-d8	*47.8*		"	*50.0*		*95.6*	*88-110*			

Gettler-Ryan/Geostrategies(1)	Project: Tosco(1)	
6747 Sierra Court, Suite J	Project Number: Unocal SS#1871, Oakland, CA	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	07/31/01 15:17

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 1070097 - EPA 5030B [P/T]										
LCS (1070097-BS2)				Prepared & Analyzed: 07/23/01						
Methyl tert-butyl ether	45.7	2.0	ug/l	50.0		91.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	*44.7*		"	*50.0*		*89.4*	*76-114*			
Surrogate: Toluene-d8	*46.4*		"	*50.0*		*92.8*	*88-110*			
Matrix Spike (1070097-MS1)		**Source: L107150-10**		Prepared & Analyzed: 07/20/01						
Methyl tert-butyl ether	51.5	2.0	ug/l	50.0	ND	103	60-140			
Surrogate: 1,2-Dichloroethane-d4	*48.1*		"	*50.0*		*96.2*	*76-114*			
Surrogate: Toluene-d8	*49.4*		"	*50.0*		*98.8*	*88-110*			
Matrix Spike Dup (1070097-MSD1)		**Source: L107150-10**		Prepared & Analyzed: 07/20/01						
Methyl tert-butyl ether	50.0	2.0	ug/l	50.0	ND	100	60-140	2.96	25	
Surrogate: 1,2-Dichloroethane-d4	*46.7*		"	*50.0*		*93.4*	*76-114*			
Surrogate: Toluene-d8	*49.1*		"	*50.0*		*98.2*	*88-110*			

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#1871, Oakland, CA Project Manager: Deanna Harding	Reported: 07/31/01 15:17

Notes and Definitions

M-04	MTBE was reported from second analysis.
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