



# GETTLER-RYAN INC.

## TRANSMITTAL

March 1, 2001

G-R #: 180068

*DA*

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) SS #1871  
96 MacArthur Blvd.  
Oakland, California

*5/10/20*

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	February 21, 2001	Groundwater Monitoring and Sampling Report First Semi-Annual - Event of January 4, 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 **March 13, 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.

February 21, 2001  
G-R Job #180068

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

**RE: First Semi-Annual Event of January 4, 2001**  
Groundwater Monitoring & Sampling Report  
Tosco (Former Unocal) Service Station #1871  
96 MacArthur Boulevard  
Oakland, California

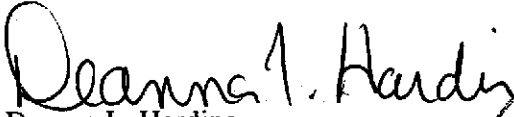
Dear Mr. De Witt:

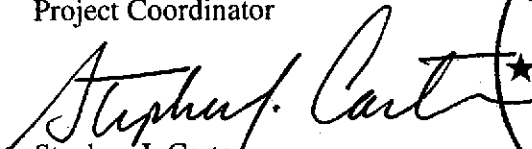
This report documents the most recent groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R) at the referenced site. All field work was conducted in accordance with G-R Standard Operating Procedure - Groundwater Sampling (attached).

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,

  
Deanna L. Harding  
Project Coordinator

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

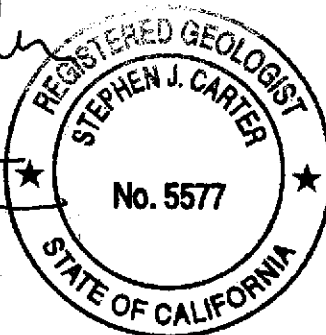
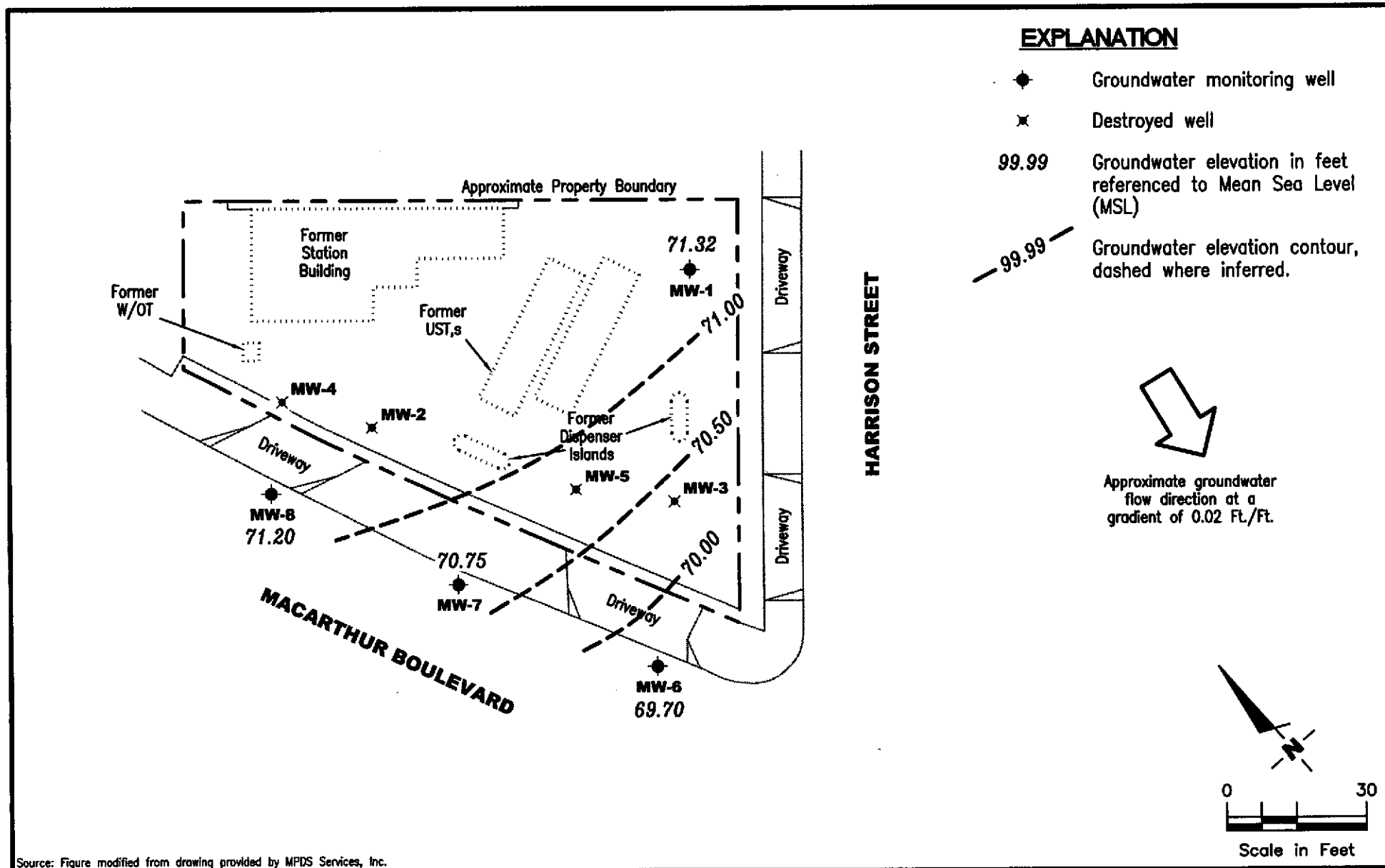


Figure 1: Potentiometric Map  
Figure 2: Concentration Map  
Table 1: Groundwater Monitoring Data and Analytical Results  
Table 2: Groundwater Analytical Results  
Table 3: Groundwater Analytical Results - Oxygenate Compounds  
Attachments: Standard Operating Procedure - Groundwater Sampling  
Field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

1871.qml



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

**GETTLER - RYAN INC.**  
 6747 Sierra Ct., Suite J  
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**POTENTIOMETRIC MAP**  
 Tosco (Former Unocal) Service Station #1871  
 96 MacArthur Boulevard  
 Oakland, California

FIGURE

1

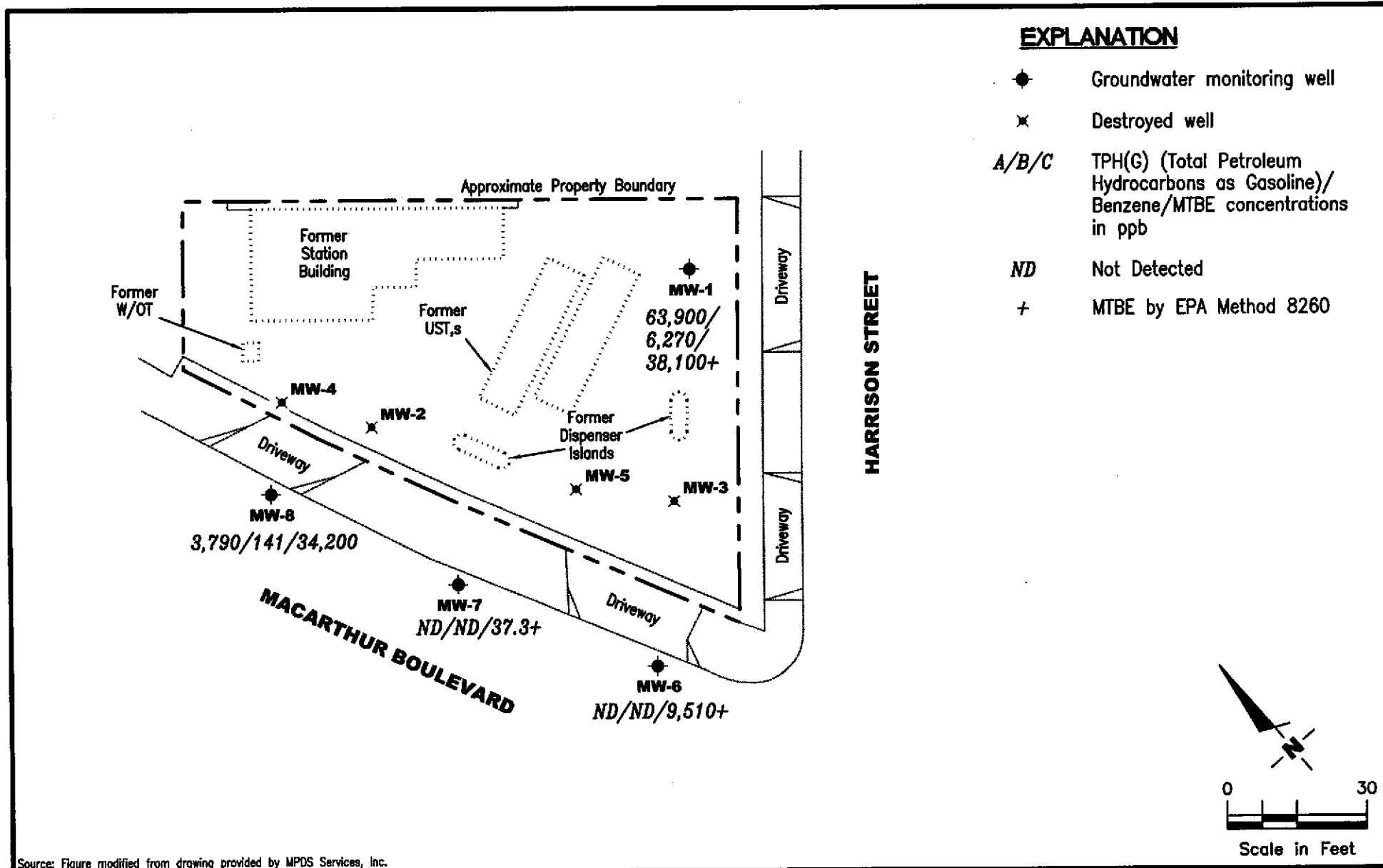
PROJECT NUMBER  
 180068

REVIEWED BY

DATE  
 January 4, 2001

REVISED DATE

FILE NAME: P:\ENVIRO\TOSCO\1871\Q01-1871.DWG | Layout Tab: Pot1



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 180068	REVIEWED BY	DATE January 4, 2001	REVISED DATE
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**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.L. (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	--
86.24	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
	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 <sup>4</sup>
	01/21/00	15.05		71.19	63,700 <sup>5</sup>	5,520	2,000	2,640	13,100	57,100
	07/10/00	13.97		72.27	67,800 <sup>5</sup>	9,910	4,120	3,330	16,100	67,400/54,000 <sup>4</sup>
	01/04/01	14.92		71.32	63,900 <sup>5</sup>	6,270	784	2,670	12,900	--/38,100 <sup>4</sup>
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 <sup>1</sup>	17	0.60	3.2	2.5	--
	10/19/93	11.18		65.43	670	24	1.1	7.7	23	--

**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	01/20/94	11.12	--	65.49	820	97	ND	12	ND	--
(cont)	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 <sup>3</sup>	180	78	7,100
	06/18/99	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 <sup>1</sup>	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 <sup>2</sup>	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.L. (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 <sup>3</sup>	430	ND <sup>3</sup>	100	380	37,000
	07/01/98	11.70		70.85	ND <sup>3</sup>	430	ND <sup>3</sup>	ND <sup>3</sup>	ND <sup>3</sup>	45,000
	06/18/99	DESTROYED		--	--	--	--	--	--	--
<b>MW-4</b>										
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 <sup>3</sup>	ND <sup>3</sup>	ND <sup>3</sup>	ND <sup>3</sup>	ND <sup>3</sup>	5,200
	07/01/98	10.51		71.53	ND	ND	ND	ND	ND	640
	06/18/99	DESTROYED		--	--	--	--	--	--	--
<b>MW-5</b>										
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 <sup>3</sup>	3,600	ND <sup>3</sup>	ND <sup>3</sup>	ND <sup>3</sup>	80,000
	07/01/98	11.25		70.55	6,400	2,100	21	120	330	61,000
	06/18/99	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)
<b>MW-6</b>										
78.91	06/18/99	9.30	5.0-25.0	69.61	2,100	21	29	ND <sup>3</sup>	47	97,000/71,000 <sup>4</sup>
	01/21/00	9.37		69.54	1,880 <sup>5</sup>	143	31.2	106	196	41,200/48,800 <sup>4</sup>
	07/10/00	8.94		69.97	5,710 <sup>5</sup>	869	209	301	1,430	22,200/19,500 <sup>4</sup>
	01/04/01	9.21		69.70	ND	ND	ND	ND	ND	--/9,510 <sup>4</sup>
<b>MW-7</b>										
79.92	06/18/99	8.70	5.0-25.0	71.22	ND	ND	ND	ND	ND	16,000/13,000 <sup>4</sup>
	01/21/00	9.30		70.62	ND <sup>3</sup>	ND <sup>3</sup>	ND <sup>3</sup>	ND <sup>3</sup>	ND <sup>3</sup>	12,300/18,200 <sup>4</sup>
	07/10/00	8.72		71.20	ND <sup>3</sup>	ND <sup>3</sup>	ND <sup>3</sup>	ND <sup>3</sup>	ND <sup>3</sup>	16,900/13,800 <sup>4</sup>
	01/04/01	9.17		70.75	ND	ND	ND	ND	0.719	--/37.3 <sup>4</sup>
<b>MW-8</b>										
80.96	06/18/99	9.10	5.0-25.0	71.86	ND	ND	ND	ND	ND	290/160 <sup>4</sup>
	01/21/00	10.00		70.96	ND	ND	ND	ND	1.09	224/221 <sup>4</sup>
	07/10/00	7.94		73.02	ND	ND	ND	ND	ND	234/223 <sup>4</sup>
	01/04/01	9.76		71.20	3,790 <sup>5</sup>	141	8.92	128	375	--/34,200 <sup>4</sup>
<b>Trip Blank</b>										
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
	07/10/00	--	--	--	ND	ND	ND	ND	ND	ND
	01/04/01	--	--	--	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

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**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).

<sup>1</sup> Laboratory report indicates the presence of discrete peaks not indicative of gasoline.

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

<sup>3</sup> Detection limit raised. Refer to analytical reports.

<sup>4</sup> MTBE by EPA Method 8260.

<sup>5</sup> 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 <sup>1</sup>	ND	ND	--
	07/24/96	ND	ND	ND	ND
	10/24/96	ND	ND	ND	ND <sup>2</sup>
	01/28/97	210 <sup>3</sup>	ND	ND	ND <sup>4</sup>
	07/29/97	ND	ND	ND	ND
	01/14/98	ND	ND	ND	ND
	07/01/98	ND	ND	ND	ND
	06/18/99	DESTROYED	--	--	--
MW-6	06/18/99	--	--	ND	--
MW-7	06/18/99	--	--	ND	--
MW-8	06/18/99	--	--	ND	ND <sup>5</sup>

**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

<sup>1</sup> Laboratory report indicates the hydrocarbons detected did not appear to contain diesel.

<sup>2</sup> Bis (2-ethylhexyl) phthalate was detected at a concentration of 14 ppb.

<sup>3</sup> Laboratory report indicates the hydrocarbons detected appeared to be a diesel and non-diesel mixture.

<sup>4</sup> Naphthalene was detected at a concentration of 17 ppb.

<sup>5</sup> 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 <sup>1</sup>	ND <sup>1</sup>	47,000	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
	07/10/00	--	--	54,000	--	--	--	--	--
	01/04/01	--	--	38,100	--	--	--	--	--
MW-6	06/18/99	ND <sup>1</sup>	ND <sup>1</sup>	71,000	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
	01/21/00	--	--	48,800	--	--	--	--	--
	07/10/00	--	--	19,500	--	--	--	--	--
	01/04/01	--	--	9,510	--	--	--	--	--
MW-7	06/18/99	ND <sup>1</sup>	ND <sup>1</sup>	13,000	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
	01/21/00	--	--	18,200	--	--	--	--	--
	07/10/00	--	--	13,800	--	--	--	--	--
	01/04/01	--	--	37.3	--	--	--	--	--
MW-8	06/18/99	ND <sup>1</sup>	ND <sup>1</sup>	160	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
	01/21/00	--	--	221	--	--	--	--	--
	07/10/00	--	--	223	--	--	--	--	--
	01/04/01	--	--	34,200	--	--	--	--	--

**Table 3**  
**Groundwater Analytical Results - Oxygenate Compounds**  
Tosco (Former Unocal) Service Station #1871  
96 MacArthur Boulevard  
Oakland, California

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**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

**ANALYTICAL METHOD:**

EPA Method 8260 for Oxygenate Compounds

<sup>1</sup> Detection limit raised. Refer to analytical reports.

## 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: 1-4-01  
 City: Oakland Sampler: See

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 ±  
 Depth to Water 14.92 ±

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.50	

9.14 x VF 0.66 = 6.03 x 3 (case volume) = Estimated Purge Volume: 18 (gal.)

Purge Equipment: Disposable Bailer Bailer Stack Suction Grundfos Other: \_\_\_\_\_  
 Sampling Equipment: Disposable Bailer Bailer Pressure Bailer Grab Sample Other: \_\_\_\_\_

Starting Time: 11:45 Weather Conditions: clear  
 Sampling Time: 12:10 P.M. Water Color: clear Odor: yes  
 Purging Flow Rate: 2 gpm Sediment Description: none  
 Did well de-water? \_\_\_\_\_ if yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ mhos/cm	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>11:53</u>	<u>6</u>	<u>7.14</u>	<u>3.61</u>	<u>69.4</u>			
<u>11:56</u>	<u>12</u>	<u>7.18</u>	<u>3.62</u>	<u>70.2</u>			
<u>11:59</u>	<u>18</u>	<u>7.14</u>	<u>3.67</u>	<u>70.5</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-1</u>	<u>3VCA</u>	<u>Y</u>	<u>HCL</u>	<u>Sequoia</u>	<u>TPH, BTEX, MTBE-L</u> 8260

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/Facility # 1871 Job#: 180068  
 Address: 96 MacArthur Blvd. Date: 1-4-01  
 City: Oakland Sampler: Joe

Well ID MW-6 Well Condition: o.k.  
 Well Diameter 2 in Hydrocarbon Amount Bailed  
 Thickness: 0 in (product/water): 0 (gal.)  
 Total Depth 24.70 +  
 Depth to Water 9.21 +

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.50	

15.49 x VF 0.17 = 2.63 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: 10:20 Weather Conditions: clear  
 Sampling Time: 10:41 A.M. Water Color: clear Odor: mild  
 Purging Flow Rate: 1 gpm Sediment Description: none  
 Did well de-water? \_\_\_\_\_ If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ hos/cm	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>10:30</u>	<u>3</u>	<u>7.62</u>	<u>5.13</u>	<u>71.1</u>			
<u>10:32</u>	<u>5.5</u>	<u>7.41</u>	<u>5.10</u>	<u>69.6</u>			
<u>10:34</u>	<u>8</u>	<u>7.37</u>	<u>4.97</u>	<u>69.2</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-6</u>	<u>3YCA</u>	<u>Y</u>	<u>HCL</u>	<u>Sequoia</u>	<u>TPMG, BTEX, MTBE - by 8260</u>

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/Facility # 1871 Job#: 180068  
 Address: 96 MacArthur Blvd. Date: 1-4-01  
 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. Volume Factor (VF) 2" = 0.17 3" = 0.38 4" = 0.66  
 Depth to Water 9.17 ft. 6" = 1.50 12" = 5.50

15.35 x VF 0.17 = 2.61 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: 11:00 Weather Conditions: clear  
 Sampling Time: 11:30 A.M. Water Color: clear Odor: none  
 Purging Flow Rate: 1 gpm Sediment Description: none  
 Did well de-water? \_\_\_\_\_ If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ hos/cm	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>11:10</u>	<u>2.5</u>	<u>7.46</u>	<u>695</u>	<u>69.0</u>			
<u>11:12</u>	<u>5</u>	<u>7.56</u>	<u>640</u>	<u>70.0</u>			
<u>11:14</u>	<u>8</u>	<u>7.52</u>	<u>678</u>	<u>69.5</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-7</u>	<u>3V=1</u>	<u>Y</u>	<u>HCL</u>	<u>Sequoia</u>	<u>TPH, BTEX, MTBE-L, 8260</u>

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/  
Facility # 1871  
Address: 96 MacArthur Blvd.  
City: Oakland

Job#: 180068  
Date: 1-4-01  
Sampler: Joe

Well ID MW-8 Well Condition: o.k

Well Diameter 2 in  
Total Depth 24.81  
Depth to Water 9.76

Hydrocarbon Thickness:	<u>0</u> in.	Amount Bailed (product/water):	<u>0</u> (gal.)
Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.50	

15.05 x VF 0.17 = 2.56 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: 9:40  
Sampling Time: 10:10 A.M.  
Purging Flow Rate: 1 gpm  
Did well de-water? \_\_\_\_\_

Weather Conditions: clear  
Water Color: clear Odor: None  
Sediment Description: none  
If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ mhos/cm	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>9:50</u>	<u>3</u>	<u>8.00</u>	<u>5.55</u>	<u>71.6</u>			
<u>9:52</u>	<u>5</u>	<u>7.50</u>	<u>5.51</u>	<u>72.0</u>			
<u>9:54</u>	<u>8</u>	<u>7.41</u>	<u>5.48</u>	<u>71.5</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-8</u>	<u>3VSA</u>	<u>Y</u>	<u>HCL</u>	<u>Sequoia</u>	<u>TPH, BTEX, MTBE</u> by 8260

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# Chain-of-Custody-Record



Tosco Marketing Company  
8000 Crow Canyon Pl., Ste. 400  
San Ramon, California 94583

Facility Number VNDCA SS# 1871  
 Facility Address 96 MacArthur Blvd  
 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) 510-551-7555 (Fax Number) 510-551-7888

Contact (Name) MR. DAVID DEWITT  
 (Phone) (925) 277-2384  
 Laboratory Name Sequoia Analytical  
 Laboratory Release Number \_\_\_\_\_  
 Samples Collected by (Name) JOE ASEMIAN  
 Collection Date 1-4-01  
 Signature [Signature]

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)	Analytes To Be Performed														
								TPH Gas + BTEX w/MTBE (8016)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Hydrocarbons (9010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (ICAP or AA)							
TB-LB	01	10A	W	G	-	ACC	Y	✓														
mw-1	02	20A			12:10			✓														
mw-6	03	"			10:41			✓														
mw-7	04	"			11:30			✓														
mw-8	05	"			10:10			✓														

**DO NOT BILL TB-LB ANALYSIS**

L101023

Remarks

ALL WELLS!  
 MTBE by  
 8260

Relinquished By (Signature) <u>[Signature]</u>	Organization G-R Inc.	Date/Time 1-4-01	Received By (Signature) <u>[Signature]</u>	Organization	Date/Time 1/4/01
Relinquished By (Signature) <u>[Signature]</u>	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

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January 16, 2001

Deanna Harding  
Settler-Ryan/Geostrategies(1)  
1747 Sierra Court, Suite J  
Dublin, CA 94568  
RE: Tosco(1) / L101023

Enclosed are the results of analyses for samples received by the laboratory on 01/04/01. 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#1871/96 MACARTHUR B  
Project Manager: Deanna Harding

Reported:  
01/16/01 06:58

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	L101023-01	Water	01/04/01 00:00	01/04/01 16:15
MW-1	L101023-02	Water	01/04/01 12:10	01/04/01 16:15
MW-6	L101023-03	Water	01/04/01 10:41	01/04/01 16:15
MW-7	L101023-04	Water	01/04/01 11:30	01/04/01 16:15
MW-8	L101023-05	Water	01/04/01 10:10	01/04/01 16:15



Gettler-Ryan/Geostrategies(1)  
6747 Sierra Court, Suite J  
Dublin CA, 94568

Project: Tosco(1)  
Project Number: UNOCAL SS#1871/96 MACARTHUR B  
Project Manager: Deanna Harding

Reported:  
01/16/01 06:58

## Total Purgeable Hydrocarbons (C6-C12) and BTEX by DHS LUFT Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>FB-LB (L101023-01) Water</b> Sampled: 01/04/01 00:00 Received: 01/04/01 16:15									
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l	1	1010032	01/09/01	01/09/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		83.4 %	60-140						
<b>MW-1 (L101023-02) Water</b> Sampled: 01/04/01 12:10 Received: 01/04/01 16:15									
Purgeable Hydrocarbons as Gasoline	63900	20000	ug/l	400	1010032	01/09/01	01/09/01	DHS LUFT	P-01
Benzene	6270	200	"	"	"	"	"	"	
Toluene	784	200	"	"	"	"	"	"	
Ethylbenzene	2670	200	"	"	"	"	"	"	
Xylenes (total)	12900	200	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		98.5 %	60-140						
<b>MW-6 (L101023-03) Water</b> Sampled: 01/04/01 10:41 Received: 01/04/01 16:15									
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l	1	1010032	01/09/01	01/09/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		89.5 %	60-140						
<b>MW-7 (L101023-04) Water</b> Sampled: 01/04/01 11:30 Received: 01/04/01 16:15									
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l	1	1010032	01/09/01	01/09/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	0.719	0.500	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		75.1 %	60-140						



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Gettler-Ryan/Geostrategies(1)  
 6747 Sierra Court, Suite J  
 Dublin CA, 94568

Project: Tosco(1)  
 Project Number: UNOCAL SS#1871/96 MACARTHUR B  
 Project Manager: Deanna Harding

Reported:  
 01/16/01 06:58

## Total Purgeable Hydrocarbons (C6-C12) and BTEX by DHS LUFT Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-8 (L101023-05) Water    Sampled: 01/04/01 10:10    Received: 01/04/01 16:15									
Purgeable Hydrocarbons as Gasoline	3790	500	ug/l	10	1010032	01/09/01	01/09/01	DHS LUFT	P-01
Benzene	141	5.00	"	"	"	"	"	"	"
Toluene	8.92	5.00	"	"	"	"	"	"	"
Ethylbenzene	128	5.00	"	"	"	"	"	"	"
Xylenes (total)	375	5.00	"	"	"	"	"	"	"
Surrogate: a,a,a-Trifluorotoluene		78.6 %		60-140	"	"	"	"	"



Gettler-Ryan/Geostrategies(1)  
 6747 Sierra Court, Suite J  
 Dublin CA, 94568

Project: Tosco(1)  
 Project Number: UNOCAL SS#1871/96 MACARTHUR B  
 Project Manager: Deanna Harding

Reported:  
 01/16/01 06:58

## MTBE by EPA Method 8260B Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (L101023-02) Water</b> Sampled: 01/04/01 12:10 Received: 01/04/01 16:15									
Methyl tert-butyl ether	38100	1000	ug/l	500	1010019	01/08/01	01/08/01	EPA 8260A	
Surrogate: 1,2-Dichloroethane-d4		101 %	76-114		"	"	"	"	
<b>MW-6 (L101023-03) Water</b> Sampled: 01/04/01 10:41 Received: 01/04/01 16:15									
Methyl tert-butyl ether	9510	400	ug/l	200	1010019	01/08/01	01/08/01	EPA 8260A	
Surrogate: 1,2-Dichloroethane-d4		100 %	76-114		"	"	"	"	
<b>MW-7 (L101023-04) Water</b> Sampled: 01/04/01 11:30 Received: 01/04/01 16:15									
Methyl tert-butyl ether	37.3	2.00	ug/l	1	1010029	01/08/01	01/08/01	EPA 8260A	
Surrogate: 1,2-Dichloroethane-d4		97.4 %	76-114		"	"	"	"	
<b>MW-8 (L101023-05) Water</b> Sampled: 01/04/01 10:10 Received: 01/04/01 16:15									
Methyl tert-butyl ether	34200	2000	ug/l	1000	1010019	01/08/01	01/08/01	EPA 8260A	
Surrogate: 1,2-Dichloroethane-d4		103 %	76-114		"	"	"	"	





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Gettler-Ryan/Geostrategies(1)  
6747 Sierra Court, Suite J  
Dublin CA, 94568

Project: Tosco(1)  
Project Number: UNOCAL SS#1871/96 MACARTHUR B  
Project Manager: Deanna Harding

Reported:  
01/16/01 06:58

## Total Purgeable Hydrocarbons (C6-C12) and BTEX by DHS LUFT - Quality Control Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1010032 - EPA 5030B (P/T)</b>										
Prepared & Analyzed: 01/09/01										
<b>Blank (1010032-BLK1)</b>										
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Surrogate: a,a,a-Trifluorotoluene	9.51		"	10.0		95.1	60-140			
Prepared & Analyzed: 01/09/01										
<b>LCS (1010032-BS1)</b>										
Benzene	9.58	0.500	ug/l	10.0		95.8	70-130			
Toluene	9.59	0.500	"	10.0		95.9	70-130			
Ethylbenzene	9.77	0.500	"	10.0		97.7	70-130			
Xylenes (total)	29.3	0.500	"	30.0		97.7	70-130			
Surrogate: a,a,a-Trifluorotoluene	10.4		"	10.0		104	60-140			
Prepared & Analyzed: 01/09/01										
<b>LCS (1010032-BS2)</b>										
Purgeable Hydrocarbons as Gasoline	262	50.0	ug/l	250		105	70-130			
Surrogate: a,a,a-Trifluorotoluene	9.93		"	10.0		99.3	60-140			
Prepared & Analyzed: 01/09/01										
<b>Matrix Spike (1010032-MS1)</b>										
Source: L101016-03										
Purgeable Hydrocarbons as Gasoline	287	50.0	ug/l	250	ND	115	60-140			
Surrogate: a,a,a-Trifluorotoluene	10.4		"	10.0		104	60-140			
Prepared & Analyzed: 01/09/01										
<b>Matrix Spike Dup (1010032-MSD1)</b>										
Source: L101016-03										
Purgeable Hydrocarbons as Gasoline	291	50.0	ug/l	250	ND	116	60-140	1.38	25	
Surrogate: a,a,a-Trifluorotoluene	10.9		"	10.0		109	60-140			





Gettler-Ryan/Geostrategies(1)  
6747 Sierra Court, Suite J  
Dublin CA, 94568

Project: Tosco(1)  
Project Number: UNOCAL SS#1871/96 MACARTHUR B  
Project Manager: Deanna Harding

Reported:  
01/16/01 06:58

**MTBE 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 1010019 - EPA 5030B [P/T]**

Prepared & Analyzed: 01/05/01										
<b>Blank (1010019-BLK1)</b>										
Methyl tert-butyl ether	ND	2.00	ug/l							
Surrogate: 1,2-Dichloroethane-d4	49.3		"	50.0		98.6	76-114			

Prepared & Analyzed: 01/08/01										
<b>Blank (1010019-BLK2)</b>										
Methyl tert-butyl ether	ND	2.00	ug/l							
Surrogate: 1,2-Dichloroethane-d4	49.2		"	50.0		98.4	76-114			

Prepared & Analyzed: 01/05/01										
<b>LCS (1010019-BS1)</b>										
Methyl tert-butyl ether	41.8	2.00	ug/l	50.0		83.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	49.9		"	50.0		99.8	76-114			

Prepared & Analyzed: 01/08/01										
<b>LCS (1010019-BS2)</b>										
Methyl tert-butyl ether	41.4	2.00	ug/l	50.0		82.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	49.1		"	50.0		98.2	76-114			

Source: L012210-18 Prepared & Analyzed: 01/05/01										
<b>Matrix Spike (1010019-MS1)</b>										
Methyl tert-butyl ether	40.7	2.00	ug/l	50.0		81.4	60-140			
Surrogate: 1,2-Dichloroethane-d4	50.6		"	50.0		101	76-114			

Source: L012210-18 Prepared & Analyzed: 01/05/01										
<b>Matrix Spike Dup (1010019-MSD1)</b>										
Methyl tert-butyl ether	41.1	2.00	ug/l	50.0		82.2	60-140	0.978	25	
Surrogate: 1,2-Dichloroethane-d4	50.5		"	50.0		101	76-114			

**Batch 1010029 - EPA 5030B [P/T]**

Prepared & Analyzed: 01/08/01										
<b>Blank (1010029-BLK1)</b>										
Methyl tert-butyl ether	ND	2.00	ug/l							
Surrogate: 1,2-Dichloroethane-d4	49.2		"	50.0		98.4	76-114			





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: UNOCAL SS#1871/96 MACARTHUR B Project Manager: Deanna Harding	Reported: 01/16/01 06:58
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## MTBE 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
<b>Batch 1010029 - EPA 5030B [P/T]</b>										
<b>Prepared &amp; Analyzed: 01/11/01</b>										
<b>Blank (1010029-BLK2)</b>										
Methyl tert-butyl ether	ND	2.00	ug/l							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	49.4		"	50.0		98.8	76-114			
<b>Prepared &amp; Analyzed: 01/08/01</b>										
<b>LCS (1010029-BS1)</b>										
Methyl tert-butyl ether	41.4	2.00	ug/l	50.0		82.8	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	49.1		"	50.0		98.2	76-114			
<b>Prepared &amp; Analyzed: 01/11/01</b>										
<b>LCS (1010029-BS2)</b>										
Methyl tert-butyl ether	42.3	2.00	ug/l	50.0		84.6	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	50.1		"	50.0		100	76-114			
<b>Prepared &amp; Analyzed: 01/08/01</b>										
<b>Matrix Spike (1010029-MS1)</b>										
<b>Source: L101023-04</b>										
Methyl tert-butyl ether	78.3	2.00	ug/l	50.0	37.3	82.0	60-140			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	51.5		"	50.0		103	76-114			
<b>Prepared &amp; Analyzed: 01/08/01</b>										
<b>Matrix Spike Dup (1010029-MSD1)</b>										
<b>Source: L101023-04</b>										
Methyl tert-butyl ether	75.9	2.00	ug/l	50.0	37.3	77.2	60-140	3.11	25	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	52.6		"	50.0		105	76-114			



Gettler-Ryan/Geostrategies(1)  
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Project: Tosco(1)  
Project Number: UNOCAL SS#1871/96 MACARTHUR B  
Project Manager: Deanna Harding

Reported:  
01/16/01 06:58

**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

