



# GETTLER-RYAN INC.

## TRANSMITTAL

ENVIRONMENTAL  
PROTECTION

00 MAY -9 AM 10:35

April 20, 2000

G-R #:180107

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

CC: Mr. Tim Ripp  
IT Corporation  
1921 Ringwood Avenue  
San Jose, California 95131

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

RE: Tosco (Unocal) SS #5430  
1935 Washington Avenue  
San Leandro, California

### WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	April 17, 2000	Groundwater Monitoring and Sampling Report Semi-Annual 2000 - Event of March 9, 2000

### COMMENTS:

This report is being sent to you for your review/comment, prior to being distributed on your behalf. If no comments are received by *May 4, 2000*, this report will be distributed to the following:

### Enclosure

cc: Mr. Scott Seery, Alameda County Health Care Services, 1131 Harbor Bay Parkway, Alameda, CA 94501  
Mr. Michael Bakaldin, City of San Leandro Fire Dept., 835 East 14th Street, San Leandro, CA 94577

agency/5430dbd.qmt



ENVIRONMENTAL  
PROTECTION

00 APR 24 PM 4: 28

**IT Corporation**

1921 Ringwood Avenue  
San Jose, CA 95131-1721  
Tel. 408.453.7300  
Fax. 408.437.9526

*A Member of The IT Group*

April 19, 2000  
Project 311-038.1A

Mr. Chuck Headlee  
Regional Water Quality Control Board  
San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, California 94612

Re: 76 Service Station 5430  
Quarterly Summary Report  
First Quarter 2000

Dear Mr. Headlee:

As directed by Mr. David DeWitt of Tosco Marketing Company, IT Corporation (IT) is forwarding the quarterly summary report for the following location:

<u>Service Station</u>	<u>Location</u>
5430	1935 Washington Avenue, San Leandro

If you have questions or comments, please do not hesitate to contact our office at (408) 453-7300.

Sincerely,

**IT Corporation**

Timothy L. Ripp  
Project Geologist

Enclosure

cc: Mr. David DeWitt, Tosco Marketing Company  
Mr. Tom Peacock, Alameda County Environmental Health Care Services

## **Quarterly Summary Report First Quarter 2000**

76 Service Station 5430  
1935 Washington Avenue at Castro Street  
San Leandro, California

County STID #: 1747  
County: Alameda

### **BACKGROUND**

Unocal files suggest that a product line leak occurred in June 1976, and that one of the original underground gasoline storage tanks failed a precision test in October 1981. In December 1981, the two original steel gasoline storage tanks were replaced with two fiberglass gasoline storage tanks. There are currently six on-site groundwater monitoring wells and one off-site groundwater monitoring well in use at the site. In July 1997, three off-site exploratory borings were drilled on the property to the south of the 76 station. Based on the findings of that investigation, the lateral extent of hydrocarbon impact to groundwater is considered delineated. The product dispensers and associated underground product piping were replaced in July and August 1998. The underground waste oil storage tank was also removed and replaced with an aboveground waste oil storage tank.

### **RECENT QUARTER ACTIVITIES**

Semi-annual groundwater monitoring and sampling activities were performed March 2000.

### **NEXT QUARTER ACTIVITIES**

The report documenting the March 2000 groundwater monitoring and sampling activities will be submitted in April 2000.

### **CHARACTERIZATION/REMEDIAL STATUS**

Soil contamination delineated? Yes.  
Dissolved groundwater delineated? Yes.  
Free product delineated? Not applicable.  
Amount of groundwater contaminant recovered this quarter? None.  
Soil remediation in progress? Not applicable.  
Anticipated start date? Not applicable.  
Anticipated completion date? Not applicable.  
Dissolved/free product remediation in progress? No.  
Anticipated start? Unknown.  
Anticipated completion? Unknown.

**CONSULTANT:** IT Corporation



# GETTLER-RYAN INC.

April 17, 2000  
G-R Job #180107

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

RE: Semi-Annual 2000 Groundwater Monitoring & Sampling Report  
Tosco (Unocal) Service Station #5430  
1935 Washington Avenue  
San Leandro, California

Dear Mr. De Witt:

This report documents the semi-annual groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On March 9, 2000, field personnel monitored and sampled seven wells (U-1 through U-7) at the above referenced site.

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

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

Sincerely,

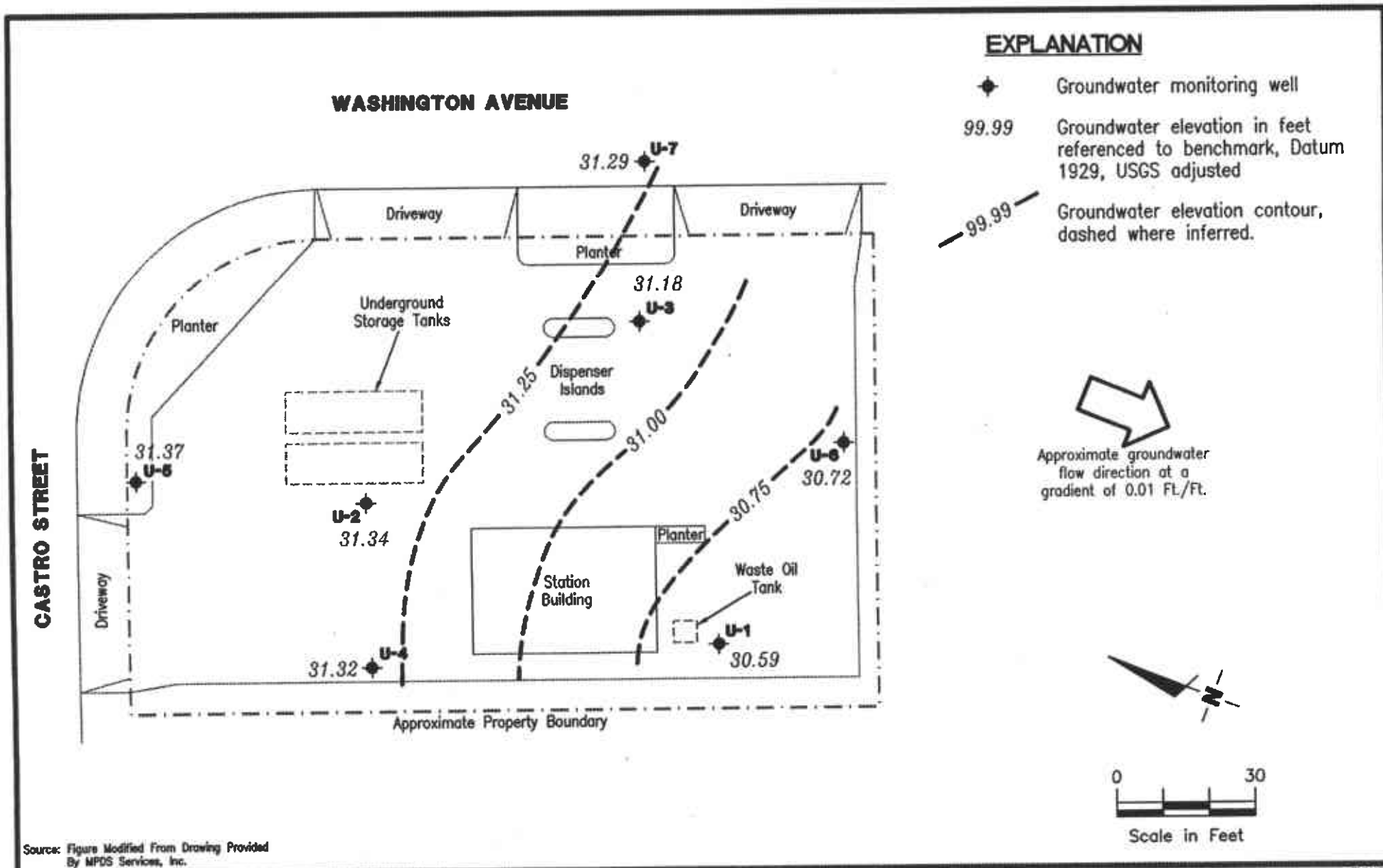
Deanna L. Harding  
Project Coordinator

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  
Attachments: Standard Operating Procedure - Groundwater Sampling  
Field Data Sheets  
Chain of Custody Document and Laboratory Analytical Reports

5430.qml



**Gettler - Ryan Inc.**

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

**POTENTIOMETRIC MAP**  
Tosco (Unocal) Service Station No. 5430  
1935 Washington Avenue  
San Leandro, California

FIGURE

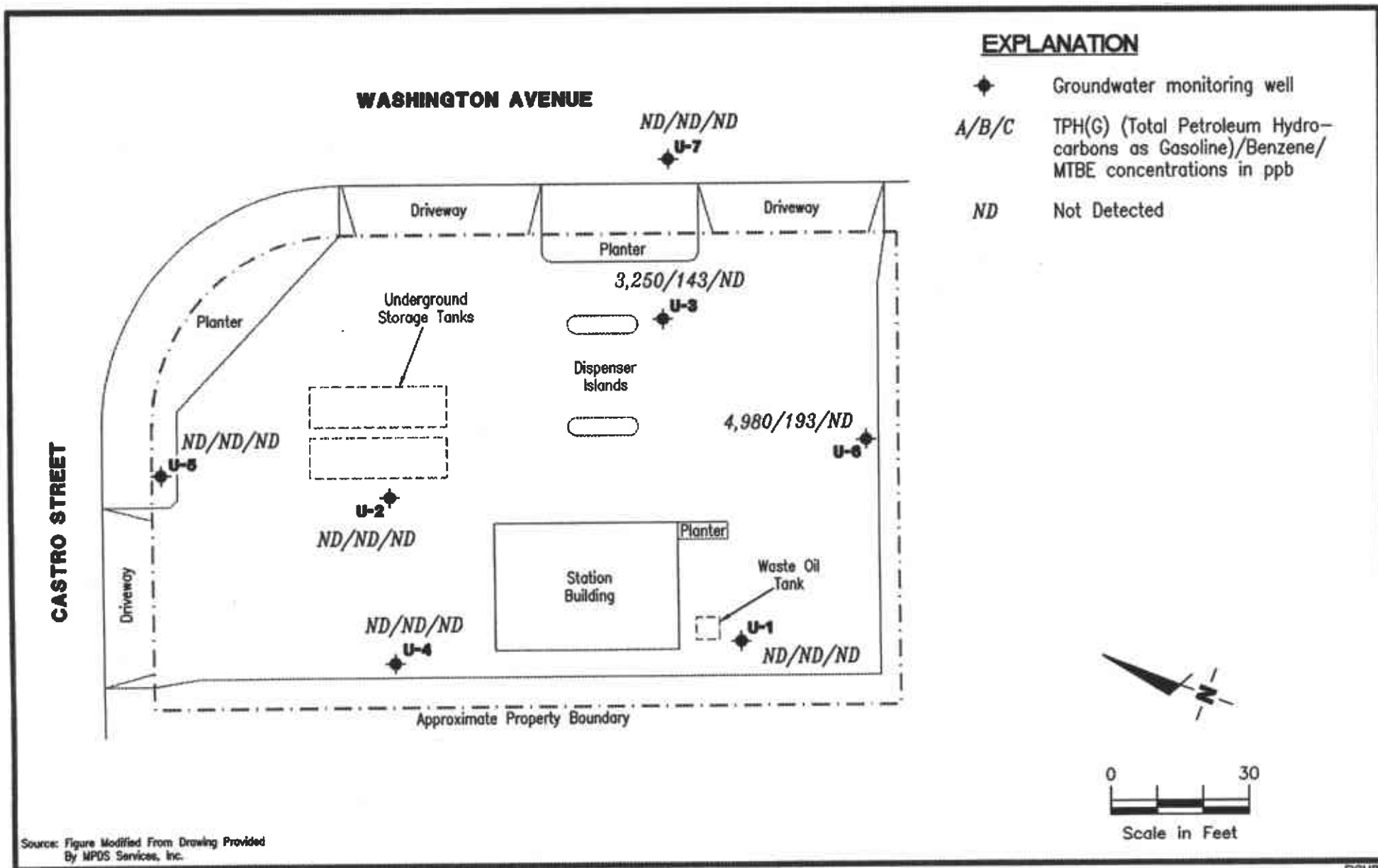
**1**

JOB NUMBER  
180107

REVIEWED BY

DATE  
March 9, 2000

REVISED DATE



Source: Figure Modified From Drawing Provided By NPDS Services, Inc.



**Gettler - Ryan Inc.**

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

**CONCENTRATION MAP**  
Tosco (Unocal) Service Station No. 5430  
1935 Washington Avenue  
San Leandro, California

FIGURE  
**2**

JOB NUMBER  
180107

REVIEWED BY

DATE  
March 9, 2000

REVISED DATE

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Tosco (Unocal) Service Station #5430  
1935 Washington Avenue  
San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (ft.)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	1,2-DCB (ppb)	1,2-DCA (ppb)
U-1												
56.58	08/13/93 <sup>1</sup>	31.60	24.98	50 <sup>2</sup>	310	0.84	ND	2.6	1.0	--	--	--
	09/07/93	31.60	24.98	--	--	--	--	--	--	--	--	--
56.10	12/16/93 <sup>1</sup>	33.19	22.91	130 <sup>3</sup>	ND	ND	ND	ND	ND	--	--	--
	01/13/94	33.06	23.04	--	--	--	--	--	--	--	--	--
	02/09/94	32.70	23.40	--	--	--	--	--	--	--	--	--
	03/25/94 <sup>1</sup>	31.07	25.03	57 <sup>3</sup>	58	0.63	0.79	ND	0.65	--	--	--
	05/18/94	31.76	24.34	--	--	--	--	--	--	--	--	--
	06/19/94 <sup>1</sup>	32.26	23.84	61 <sup>3</sup>	51	ND	1.4	ND	2.7	--	ND	7.4
	07/27/94	33.07	23.03	--	--	--	--	--	--	--	--	--
	08/18/94	33.50	22.60	--	--	--	--	--	--	--	--	--
	09/15/94 <sup>1</sup>	33.93	22.17	83 <sup>3</sup>	ND	0.50	0.85	ND	0.77	--	ND	9.5
	10/11/94	33.25	22.85	--	--	--	--	--	--	--	--	--
	11/08/94	34.05	22.05	--	--	--	--	--	--	--	--	--
	12/06/94 <sup>1</sup>	32.37	23.73	ND	ND	ND	ND	ND	ND	--	ND	5.8
	01/10/95	31.29	24.81	--	--	--	--	--	--	--	--	--
56.09	03/14/95	27.86	28.23	71 <sup>3</sup>	380	20	ND	ND	10	--	--	--
	06/20/95	28.20	27.89	170 <sup>3</sup>	500	50	ND	ND	4.4	--	--	--
	09/18/95	30.65	25.44	72.00	57	1.2	0.75	0.57	2.2	-- <sup>6</sup>	--	--
	12/14/95	32.20	23.89	ND	ND	0.72	1.4	1.2	3.6	--	ND	3.8
	03/06/96	26.53	29.56	ND	96	4.5	ND	ND	3.7	ND	--	--
	06/04/96	27.43	28.66	170 <sup>3</sup>	410	48	ND	3.4	7.9	ND	--	--
	09/06/96	30.25	25.84	ND	ND	ND	ND	ND	ND	ND	--	--
	03/08/97	26.03	30.06	--	ND	ND	ND	ND	ND	ND	ND	43
	09/04/97	31.56	24.53	--	ND	ND	ND	ND	ND	ND	ND	4.5
	03/09/98	20.63	35.46	--	ND	ND	ND	ND	ND	ND	ND	ND
	09/01/98	27.82	28.27	--	ND	0.59	ND	ND	ND	3.1	ND	8.9
	03/02/99	26.83	29.26	--	ND	ND	ND	ND	ND	ND	ND	4.5
	09/07/99	28.03	28.06	--	ND	ND	ND	ND	ND	ND	ND	ND
	03/09/00	25.50	30.59	--	ND	ND	ND	ND	ND	ND	ND	1.32

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5430  
 1935 Washington Avenue  
 San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (ft.)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	1,2-DCB (ppb)	1,2-DCA (ppb)
U-2												
55.77	08/13/93	30.87	24.90	--	1,400	ND	ND	ND	ND	--	--	--
	09/07/93	30.87	24.90	--	--	--	--	--	--	--	--	--
55.27	12/16/93	32.19	23.08	--	330	1.7	ND	11	8.5	--	--	--
	01/13/94	32.13	23.14	--	--	--	--	--	--	--	--	--
	02/09/94	33.50	21.77	--	--	--	--	--	--	--	--	--
	03/25/94	30.09	25.18	--	130	0.70	0.78	0.65	0.64	--	ND	11
(D)	03/25/94	--	--	--	--	--	--	--	--	--	ND	ND
	05/18/94	30.73	24.54	--	--	--	--	--	--	--	--	--
	06/19/94	31.31	23.96	--	180 <sup>4</sup>	ND	ND	ND	0.86	--	ND	0.54
	07/27/94	32.12	23.15	--	--	--	--	--	--	--	--	--
	08/18/94	32.50	22.77	--	--	--	--	--	--	--	--	--
	09/15/94	33.00	22.27	--	1,000 <sup>5</sup>	44	ND	ND	ND	--	ND	0.66
	10/11/94	32.35	22.92	--	--	--	--	--	--	--	--	--
	11/08/94	33.09	22.18	--	--	--	--	--	--	--	--	--
	12/06/94	31.44	23.83	--	250	19	ND	ND	ND	--	ND	ND
	01/10/95	30.25	25.02	--	--	--	--	--	--	--	--	--
55.29	03/14/95	26.36	28.93	--	89	ND	ND	ND	1.2	--	--	--
	06/20/95	26.74	28.55	--	ND	ND	0.58	ND	1.7	--	--	--
	09/18/95	29.65	25.64	--	ND	ND	ND	ND	0.85	-- <sup>6</sup>	--	--
	12/14/95	31.10	24.19	--	ND	ND	0.89	ND	2.0	-- <sup>7</sup>	ND	ND
	03/06/96	25.17	30.12	--	ND	ND	ND	ND	ND	80	--	--
	06/04/96	26.03	29.26	--	ND	ND	ND	ND	ND	110	--	--
	09/06/96	29.18	26.11	--	ND	ND	ND	ND	ND	ND	--	--
	03/08/97	24.64	30.65	--	ND	ND	ND	ND	ND	42	--	--
	09/04/97	30.59	24.70	--	ND	ND	ND	ND	ND	46	--	--
	03/09/98	19.22	36.07	--	ND	ND	ND	ND	ND	4.4	--	--
	09/01/98	26.40	28.89	--	ND	ND	ND	ND	ND	25	--	--
	03/02/99	25.48	29.81	--	ND	ND	ND	ND	ND	16	--	--
	09/07/99	26.51	28.78	--	ND	ND	ND	ND	ND	20	--	--
	03/09/00	23.95	31.34	--	ND	ND	ND	ND	ND	ND	--	--



**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Tosco (Unocal) Service Station #5430  
1935 Washington Avenue  
San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (ft.)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	1,2-DCB (ppb)	1,2-DCA (ppb)
<b>U-3</b>												
55.66	08/13/93	30.70	24.96	--	23,000	1,000	ND	1,700	1,600	--	--	--
	09/07/93	30.70	24.96	--	--	--	--	--	--	--	--	--
55.24	12/16/93	32.08	23.16	--	15,000	570	ND	940	670	--	--	--
	01/13/94	31.98	23.26	--	--	--	--	--	--	--	--	--
	02/09/94	33.82	21.42	--	--	--	--	--	--	--	--	--
	03/25/94	30.03	25.21	--	18,000	560	40	1,000	770	--	ND	480
	05/18/94	30.66	24.58	--	--	--	--	--	--	--	--	--
	06/19/94	31.19	24.05	--	17,000	580	ND	1,300	90	--	ND	410
	07/27/94	31.98	23.26	--	--	--	--	--	--	--	--	--
	08/18/94	32.39	22.85	--	--	--	--	--	--	--	--	--
	09/15/94	32.84	22.40	--	12,000	370	ND	970	610	--	ND	420
	10/11/94	32.20	23.04	--	--	--	--	--	--	--	--	--
	11/08/94	33.01	22.23	--	--	--	--	--	--	--	--	--
	12/06/94	31.34	23.90	--	17,000	390	ND	990	560	--	ND	430
	01/10/95	30.23	25.01	--	--	--	--	--	--	--	--	--
55.23	03/14/95	25.44	29.79	--	13,000	860	120	1,300	1,700	--	--	--
	06/20/95	26.70	28.53	--	9,800	590	ND	800	1,000	--	--	--
	09/18/95	29.55	25.68	--	9,800	600	ND	1,000	760	-- <sup>6</sup>	--	--
	12/14/95	31.02	24.21	--	10,000	520	ND	920	630	-- <sup>7</sup>	ND	240
	03/06/96	25.25	29.98	--	19,000	1,400	ND	1,800	3,000	73	--	--
	06/04/96	26.00	29.23	--	8,800	510	ND	600	830	ND	--	--
	09/06/96	29.06	26.17	--	15,000	360	20	540	450	ND	--	--
	03/08/97	24.65	30.58	--	3,500	310	ND	230	630	ND	ND	100
	09/04/97	30.44	24.79	--	700	27	ND	48	34	ND	ND	160
	03/09/98	19.20	36.03	--	410	22	1.2	ND <sup>9</sup>	6.1	24	ND	4.4
	09/01/98	26.33	28.90	--	ND	ND	ND	ND	ND	6.1	ND	ND
	03/02/99	25.50	29.73	--	2,100	110	2.6	ND <sup>9</sup>	240	39	ND	6.7
	09/07/99 <sup>13</sup>	27.63	27.60	--	2,400 <sup>12</sup>	67	ND <sup>9</sup>	150	150	ND <sup>9</sup>	ND	1.1
	<b>03/09/00</b>	<b>24.05</b>	<b>31.18</b>	--	<b>3,250<sup>12</sup></b>	<b>143</b>	<b>ND<sup>9</sup></b>	<b>59.0</b>	<b>326</b>	<b>ND<sup>9</sup></b>	<b>ND<sup>9</sup></b>	<b>ND<sup>9</sup></b>

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Tosco (Unocal) Service Station #5430  
1935 Washington Avenue  
San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (ft.)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	1,2-DCB (ppb)	1,2-DCA (ppb)
<b>U-4</b>												
55.39	03/14/95	26.52	28.87	--	490	3.2	2.1	0.79	1.2	--	ND	ND
	06/20/95	26.90	28.49	--	ND	ND	ND	ND	1.5	--	--	--
	09/18/95	29.79	25.60	--	ND	ND	ND	ND	ND	-- <sup>6</sup>	--	--
	12/14/95	31.23	24.16	--	ND	ND	0.59	ND	0.79	-- <sup>7</sup>	ND	ND
	03/06/96	25.30	30.09	--	ND	ND	ND	ND	0.62	50	--	--
	06/04/96	26.19	29.20	--	ND	ND	ND	ND	ND	290	--	--
	09/06/96	29.32	26.07	--	ND	ND	ND	ND	ND	ND	--	--
	03/08/97	24.79	30.60	--	ND	ND	ND	ND	ND	ND	--	--
	09/04/97	30.71	24.68	--	ND	ND	ND	ND	ND	18	--	--
	03/09/98	19.37	36.02	--	ND	ND	ND	ND	ND	ND	--	--
	09/01/98	26.56	28.83	--	ND	ND	ND	ND	ND	ND	--	--
	03/02/99	25.62	29.77	--	110	0.89	0.53	ND	0.79	4.9	--	--
	09/07/99	26.82	28.57	--	ND	ND	ND	ND	ND	3.0	--	--
	<b>03/09/00</b>	<b>24.07</b>	<b>31.32</b>	--	<b>ND</b>	<b>ND</b>	<b>0.615</b>	<b>ND</b>	<b>1.05</b>	<b>ND</b>	--	--
<b>U-5</b>												
54.18	03/14/95	25.20	28.98	--	ND	ND	ND	ND	1.2	--	ND	ND
	06/20/95	25.60	28.58	--	ND	ND	ND	ND	1.6	--	--	--
	09/18/95	28.55	25.63	--	ND	ND	ND	ND	0.66	--	--	--
	12/14/95	29.94	24.24	--	ND	ND	ND	ND	ND	--	ND	ND
	03/06/96	24.03	30.15	--	ND	ND	ND	ND	ND	ND	--	--
	06/04/96	24.91	29.27	--	ND	ND	ND	ND	ND	ND	--	--
	09/06/96	28.06	26.12	--	ND	ND	ND	ND	ND	ND	--	--
	03/08/97	23.49	30.69	--	ND	ND	ND	ND	ND	ND	--	--
	09/04/97	29.46	24.72	--	ND	ND	ND	ND	ND	ND	--	--
	03/09/98	18.10	36.08	--	ND	ND	ND	ND	ND	ND	--	--
	09/01/98	25.27	28.91	--	ND	ND	ND	ND	ND	ND	--	--
	03/02/99	24.35	29.83	--	ND	ND	ND	ND	ND	ND	--	--
	09/07/99	26.39	27.79	--	ND	ND	ND	ND	ND	ND	--	--
	<b>03/09/00</b>	<b>22.81</b>	<b>31.37</b>	--	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	--	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Tosco (Unocal) Service Station #5430  
1935 Washington Avenue  
San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (ft.)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	1,2-DCB (ppb)	1,2-DCA (ppb)
<b>U-6</b>												
55.36	03/14/95	26.94	28.42	--	14,000	170	36	790	1,500	--	ND	210
	06/20/95	27.15	28.21	--	8,500	170	11	950	1,300	--	--	--
	09/18/95	29.95	25.41	--	9,500	260	ND	1,400	1,800	-- <sup>6</sup>	--	--
	12/14/95	31.32	24.04	--	15,000	240	ND	1,400	1,700	-- <sup>7</sup>	ND	370
	03/06/96	25.71	29.65	--	2,400	54	ND	170	250	ND	--	--
	06/04/96	26.52	28.84	--	4,600	83	ND	400	520	46	--	--
	09/06/96	29.41	25.95	--	12,000	180	6.4	690	600	95	--	--
	03/08/97	25.25	30.11	--	2,000	180	ND	96	290	ND	--	--
	09/04/97	30.75	24.61	--	680	17	ND	52	39	ND	--	--
	03/09/98	19.84	35.52	--	690	41	8.5	3.2	140	16	--	--
	09/01/98	INACCESSIBLE (PAVED OVER)				--	--	--	--	--	--	--
	03/02/99	25.95	29.41	--	3,900	240	ND <sup>9</sup>	650	430	45	--	--
	09/07/99	28.19	27.17	--	320 <sup>12</sup>	14	ND <sup>9</sup>	5.2	ND <sup>9</sup>	10	--	--
	<b>03/09/00</b>	<b>24.64</b>	<b>30.72</b>	--	<b>4,980<sup>12</sup></b>	<b>193</b>	<b>ND<sup>9</sup></b>	<b>520</b>	<b>365</b>	<b>ND<sup>9</sup></b>	--	--
<b>U-7</b>												
55.05	03/14/95	26.13	28.92	--	ND	ND	ND	ND	ND	--	ND	ND
	06/20/95	26.38	28.67	--	ND	ND	ND	ND	ND	--	--	--
	09/18/95	29.21	25.84	--	ND	ND	ND	ND	ND	--	--	--
	12/14/95	30.75	24.30	--	ND	ND	ND	ND	0.88	--	ND	ND
	03/06/96	25.10	29.95	--	ND	ND	ND	ND	ND	ND	--	--
	06/04/96	25.67	29.38	--	ND	ND	ND	ND	ND	ND	--	--
	09/06/96	28.75	26.30	--	ND	ND	ND	ND	ND	ND	--	--
	03/08/97	24.33	30.72	--	ND	ND	ND	ND	ND	ND	ND	ND
	09/04/97 <sup>8</sup>	30.16	24.89	--	ND	ND	ND	ND	ND	ND	ND	ND
	03/09/98	18.91	36.14	--	ND	ND	ND	ND	ND	ND	ND	ND
	09/01/98 <sup>10</sup>	26.04	29.01	--	88	ND	ND	ND	ND	2.9	ND	ND
	03/02/99 <sup>11</sup>	25.30	29.75	--	ND	ND	ND	ND	ND	ND	ND	ND
	09/07/99	27.27	27.78	--	ND	ND	ND	ND	ND	ND	ND	ND
	<b>03/09/00<sup>14</sup></b>	<b>23.76</b>	<b>31.29</b>	--	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>1.09</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5430  
 1935 Washington Avenue  
 San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (ft.)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	1,2-DCB (ppb)	1,2-DCA (ppb)
<b>Trip Blank</b>												
TB-LB	03/09/98	--	--	--	ND	ND	0.53	ND	ND	ND	--	--
	09/01/98	--	--	--	ND	ND	ND	ND	ND	5.0	--	--
	03/02/99	--	--	--	ND	ND	ND	ND	ND	ND	--	--
	09/07/99	--	--	--	ND	ND	ND	ND	ND	ND	--	--
	<b>03/09/00</b>	--	--	--	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>--</b>	<b>--</b>

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5430  
 1935 Washington Avenue  
 San Leandro, California

**EXPLANATIONS:**

Groundwater monitoring data and analytical results prior to March 9, 1998, were compiled from reports prepared by MPDS Services, Inc.

TOC = Top of Casing	B = Benzene	1,2-DCA = 1,2-Dichloroethane
DTW = Depth to Water	T = Toluene	ppb = Parts per billion
(ft.) = Feet	E = Ethylbenzene	ND = Not Detected
GWE = Groundwater Elevation	X = Xylenes	-- = Not Measured/Not Analyzed
TPH(D) = Total Petroleum Hydrocarbons as Diesel	MTBE = Methyl tertiary butyl ether	(D) = Duplicate
TPH(G) = Total Petroleum Hydrocarbons as Gasoline	1,2-DCB = 1,2-Dichlorobenzene	

\* TOC elevations were surveyed March 1995, based on Benchmark provided by City of San Leandro, City Engineers Office, Datum 1929, USGS adjusted. Prior to December 16, 1993, the DTW measurements were taken from the top of well covers.

- 1 Total Oil and Grease (TOG) was ND.
- 2 Not a typical diesel pattern; lower boiling hydrocarbons in the boiling range of stoddard calculated as diesel.
- 3 Laboratory report indicates the hydrocarbons detected did not appear to be diesel.
- 4 Laboratory report indicates the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.
- 5 Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.
- 6 Laboratory has potentially identified the presence of MTBE at reportable levels in the groundwater sample collected from this well.
- 7 Laboratory has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40 ppb in the sample collected from this well.
- 8 Carbon tetrachloride was detected at a concentration of 1.3 ppb.
- 9 Detection limit raised. Refer to analytical reports.
- 10 Carbon tetrachloride was detected at a concentration of 2.0 ppb, and Chloroform was detected at a concentration of 0.60 ppb.
- 11 Carbon tetrachloride was detected at a concentration of 1.2 ppb.
- 12 Laboratory report indicates gasoline C6-C12.
- 13 Bromodichloromethane was detected at 1.4 ppb and Chloroform was detected at 31 ppb. All EPA Method 8010 reanalyzed by an alternate column or method to confirm the identification and/or concentration of these results.
- 14 Laboratory report indicates Carbon tetrachloride was detected at 0.801 ppb.

Note: All EPA Method 8010 constituents were ND, except as indicated above.

## STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

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

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

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

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

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

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

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/ Facility # 7030 5430  
 Address: 1935 Washington Ave.  
 City: San Leandro

Job#: 180107  
 Date: 3/9/00  
 Sampler: Vault

Well ID: U-1  
 Well Diameter: 2 in.  
 Total Depth: 39.60 ft.  
 Depth to Water: 25.50 ft.

Well Condition: OK

Hydrocarbon Thickness:	<u>0</u> (feet)	Amount Bailed (product/water):	<u>0</u> (Gallons)
Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

14.10 X VF 0.17 = 2.39 X 3 (case volume) = Estimated Purge Volume: 7.19 (gal.)

Purge Equipment: Disposable Bailer  
 Bailer  
 Stack  
 Section  
 Grundfos  
 Other: \_\_\_\_\_

Sampling Equipment: Disposable Bailer  
 Bailer  
 Pressure Bailer  
 Grab Sample  
 Other: \_\_\_\_\_

Starting Time: 10:50  
 Sampling Time: 11:10  
 Purging Flow Rate: 1 gpm.  
 Did well de-water? no

Weather Conditions: Rain  
 Water Color: clear Odor: no  
 Sediment Description: \_\_\_\_\_  
 If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ mhos/cmX100	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>10:52</u>	<u>2.5</u>	<u>7.80</u>	<u>11.57</u>	<u>67.7</u>	_____	_____	_____
<u>10:55</u>	<u>5</u>	<u>7.67</u>	<u>11.68</u>	<u>68.2</u>	_____	_____	_____
<u>10:58</u>	<u>7.5</u>	<u>7.36</u>	<u>11.72</u>	<u>68.3</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-1</u>	<u>3 VOA</u>	<u>Y</u>	<u>HCl</u>	<u>SEQUOIA</u>	<u>TPH(G)/btex/mtbe</u>
<u>U-1</u>	<u>2 VOA</u>	<u>~</u>	<u>-</u>	<u>~</u>	<u>8010</u>
_____	_____	_____	_____	_____	_____

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/ Facility Tosco #5430 Job#: 180107  
 Address: 1935 Washington Ave. Date: 3/9/00  
 City: San Leandro Sampler: Vert/Ky

Well ID U-2 Well Condition: Ok  
 Well Diameter 2 in. Hydrocarbon Thickness: φ Amount Bailed φ (Gallons)  
 Total Depth 29.27 ft. (product/water): φ  
 Depth to Water 23.95 ft. Volume 2" = 0.17 3" = 0.38 4" = 0.66  
 Factor (VF) 6" = 1.50 12" = 5.80

5.32 X VF 0.17 = 0.90 X 3 (case volume) = Estimated Purge Volume: 2.71 (gal.)

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

Starting Time: 11:35 Weather Conditions: Rain  
 Sampling Time: 11:50 Water Color: clear Odor: NO  
 Purging Flow Rate: 0.571 gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? NO If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 100$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>11:37</u>	<u>1</u>	<u>7.80</u>	<u>5.85</u>	<u>67.6</u>			
<u>11:38</u>	<u>2</u>	<u>7.67</u>	<u>5.76</u>	<u>68.0</u>			
<u>11:40</u>	<u>3</u>	<u>7.64</u>	<u>5.71</u>	<u>68.2</u>			

**LABORATORY INFORMATION**

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

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



**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/ Facility T 0110 # 5430  
 Address: 1935 Washington Ave.  
 City: San Leandro

Job#: 180107  
 Date: 3/9/00  
 Sampler: Ventura

Well ID U-3  
 Well Diameter 2 in.  
 Total Depth 38.53 ft.  
 Depth to Water 24.05 ft.

Well Condition: OK

Hydrocarbon Thickness: Ø (feet) Amount Bailed (product/water): Ø (Gallons)

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

14.48 x VF 0.17 = 2.46 x 3 (case volume) = Estimated Purge Volume: 7.38 (gal.)

Purge Equipment: Disposable Bailer  
 Bailer  
 Stack  
 Suction  
 Grundfos  
 Other: \_\_\_\_\_

Sampling Equipment:  Disposable Bailer  
 Bailer  
 Pressure Bailer  
 Grab Sample  
 Other: \_\_\_\_\_

Starting Time: 2:00  
 Sampling Time: 2:25  
 Purging Flow Rate: 1 gpm.  
 Did well de-water? no

Weather Conditions: cloudy  
 Water Color: clear Odor: y  
 Sediment Description: \_\_\_\_\_  
 If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 100$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>2:08</u>	<u>2.5</u>	<u>7.31</u>	<u>10.79</u>	<u>70.7</u>	_____	_____	_____
<u>2:10</u>	<u>5</u>	<u>7.33</u>	<u>10.87</u>	<u>70.6</u>	_____	_____	_____
<u>2:13</u>	<u>7.5</u>	<u>7.29</u>	<u>10.93</u>	<u>70.7</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-3</u>	<u>3 VOA</u>	<u>Y</u>	<u>HCl</u>	<u>SEQUOIA</u>	<u>TPH(G)/btex/mtbe</u>
<u>U-3</u>	<u>2 VOA</u>	<u>~</u>	<u>~</u>	<u>~</u>	<u>8010</u>
_____	_____	_____	_____	_____	_____

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/ Facility Tosco 5930 Job#: 180107  
 Address: 1935 Washington Ave Date: 3/9/00  
 City: San Leandro Sampler: Vault

Well ID U-4 Well Condition: OK  
 Well Diameter 2 in. Hydrocarbon Thickness: 5 (feet) Amount Bailed (product/water): 0 (Gallons)  
 Total Depth 39.03 ft.  
 Depth to Water 24.07 ft.

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

19.96 x VF 0.17 = 2.54 x 3 (case volume) = Estimated Purge Volume: 7.62 (gal.)

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

Starting Time: 12:25 Weather Conditions: cldy  
 Sampling Time: 12:45 Water Color: cl Odor: no  
 Purging Flow Rate: 1 gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? no If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 100$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>12:28</u>	<u>2.5</u>	<u>7.81</u>	<u>7.69</u>	<u>68.1</u>			
<u>12:30</u>	<u>5</u>	<u>7.68</u>	<u>7.77</u>	<u>68.1</u>			
<u>12:33</u>	<u>8</u>	<u>7.65</u>	<u>7.79</u>	<u>68.0</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE /	LABORATORY	ANALYSES
<u>U-4</u>	<u>3 VOA</u>	<u>Y</u>	<u>HCl</u>	<u>SEQUOIA</u>	<u>TPH(G)/btex/mtbe</u>

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/ Facility # Tosco 5430  
 Address: 1935 Washington Ave.  
 City: San Leandro

Job#: 180107  
 Date: 3/8/00  
 Sampler: Ventura

Well ID U-5

Well Condition: OK

Well Diameter 2 in.

Hydrocarbon Thickness: φ (feet) Amount Bailed (product/water): φ (Gallons)

Total Depth 38.51 ft.

Depth to Water 22.81 ft.

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

15.70 x VF 0.17 = 2.66 x 3 (case volume) = Estimated Purge Volume: 8.00 (gal.)

Purge Equipment: Disposable Bailer  
 Bailer  
 Stack  
~~Suction~~  
 Grundfos  
 Other: \_\_\_\_\_

Sampling Equipment: Disposable Bailer  
 Bailer  
 Pressure Bailer  
 Grab Sample  
 Other: \_\_\_\_\_

Starting Time: 9:15  
 Sampling Time: 9:30  
 Purging Flow Rate: 1 gpm.  
 Did well de-water? no

Weather Conditions: Rain  
 Water Color: brn Odor: no  
 Sediment Description: silt  
 If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 100$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>9:17</u>	<u>2.5</u>	<u>8.05</u>	<u>5.16</u>	<u>66.4</u>			
<u>9:20</u>	<u>5</u>	<u>7.94</u>	<u>5.60</u>	<u>67.7</u>			
<u>9:23</u>	<u>8</u>	<u>7.80</u>	<u>5.68</u>	<u>68.1</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-5</u>	<u>3 VOA</u>	<u>Y</u>	<u>HCl</u>	<u>SEQUOIA</u>	<u>TPH(G)/btex/mtbe</u>

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/ Facility TOSCO # 5430-  
 Address: 1935 Washington Ave  
 City: San Leandro

Job#: 180107  
 Date: 3/9/00  
 Sampler: Santley

Well ID U-6  
 Well Diameter 2 in.  
 Total Depth 40.00 ft.  
 Depth to Water 24.64 ft.

Well Condition: OK

Hydrocarbon Thickness: Ø (feet) Amount Bailed (product/water): Ø (Gallons)

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

15.36 x VF 0.17 = 2.61 X 3 (case volume) = Estimated Purge Volume: 7.83 (gal.)

Purge Equipment: Disposable Bailer  
 Bailer  
 Stack  
~~Suction~~  
 Grundfos  
 Other: \_\_\_\_\_

Sampling Equipment: Disposable Bailer  
 Bailer  
 Pressure Bailer  
 Grab Sample  
 Other: \_\_\_\_\_

Starting Time: 1:10  
 Sampling Time: 1:30  
 Purging Flow Rate: \_\_\_\_\_ gpm.  
 Did well de-water? no

Weather Conditions: p cldy  
 Water Color: clear Odor: no mild  
 Sediment Description: \_\_\_\_\_  
 If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal)	pH	Conductivity $\mu\text{mhos/cm} \times 100$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1:13</u>	<u>2.5</u>	<u>7.01</u>	<u>11.44</u>	<u>71.1</u>	_____	_____	_____
<u>1:15</u>	<u>5</u>	<u>7.10</u>	<u>11.61</u>	<u>71.4</u>	_____	_____	_____
<u>1:18</u>	<u>8</u>	<u>7.14</u>	<u>11.69</u>	<u>71.8</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE /	LABORATORY	ANALYSES
<u>U-6</u>	<u>3 VOA</u>	<u>Y</u>	<u>HCl</u>	<u>SEQUOIA</u>	<u>TPH(G)/btex/mtbe</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/ Tosco  
 Facility #5430  
 Address: 1935 Washington Ave.  
 City: San Leandro

Job#: 180107  
 Date: 3/9/00  
 Sampler: Vault

Well ID U-7

Well Condition: OK

Well Diameter 2 in.

Hydrocarbon Thickness: Ø (feet) Amount Bailed (product/water): Ø (Gallons)

Total Depth 37.78 ft.

Depth to Water 23.76 ft.

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

14.02 x VF 0.17 = 2.38 x 3 (case volume) = Estimated Purge Volume: 7.15 (gal.)

Purge Equipment: Disposable Bailer  
 Bailer  
 Stack  
Suction  
 Grundfos  
 Other: \_\_\_\_\_

Sampling Equipment: Disposable Bailer  
 Bailer  
 Pressure Bailer  
 Grab Sample  
 Other: \_\_\_\_\_

Starting Time: 10:13

Weather Conditions: Rain

Sampling Time: 10:35

Water Color: clear Odor: no

Purging Flow Rate: 1 gpm.

Sediment Description: \_\_\_\_\_

Did well de-water? no

If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 100$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>10:16</u>	<u>2.5</u>	<u>8.01</u>	<u>6.92</u>	<u>68.1</u>			
<u>10:18</u>	<u>5</u>	<u>7.85</u>	<u>7.02</u>	<u>68.7</u>			
<u>10:21</u>	<u>7.5</u>	<u>7.81</u>	<u>6.97</u>	<u>69.0</u>			
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-7</u>	<u>3 VOA</u>	<u>Y</u>	<u>HCl</u>	<u>SEQUOIA</u>	<u>TPH(G)/btex/mtbe</u>
<u>U-7</u>	<u>2 VOA</u>	<u>~</u>	<u>~</u>	<u>~</u>	<u>8010</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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



Tosco Marketing Company  
2020 Cree Canyon Pl., Ste. 400  
San Ramon, California 94583

Facility Number UNOCAL SS#5430 / 4003091  
 Facility Address 1935 WASHINGTON AVE. SAN LEANDRO, CA.  
 Consultant Project Number 180107.85  
 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 Dewitt  
 (Phone) 925-277-2384  
 Laboratory Name Sequoia Analytical  
 Laboratory Release Number \_\_\_\_\_  
 Samples Collected by (Name) Vaughn Jackson  
 Collection Date 3/9/00  
 Signature Vaughn Jackson

Sample Number	Lab Sample Number	Number of Containers	Matrix		Type	Time	Sample Preservation	Iced (Yes or No)	Analysis To Be Performed										Remarks	DO NOT BILL TB-LB ANALYSIS						
			S = Soil	W = Water					A = Air	C = Charcoal	G = Grab Composite	D = Discrete	TPH Gas + BTEX w/MTBE (8016)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)			Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Mn (ICAP or M)				
TB-LB		1	W		G		HCl	Y	X																	
U-1		5	W		G	11:50 AM		Y	X																	
U-2		3	W		G	11:50 AM		Y	X																	
U-3		5	W		G	12:25 PM		Y	X																	
U-4		3	W		G	12:45 PM		Y	X																	
U-5		3	W		G	9:30 AM		Y	X																	
U-6		3	W		G	1:30 AM		Y	X																	
U-7		5	W		G	10:30 AM		Y	X																	

Released By (Signature) <u>Vaughn Jackson</u>	Organization G-R Inc.	Date/Time 3/9/00 5:35 PM	Received By (Signature) <u>Kevin Co</u>	Organization 	Date/Time 3/9/00
Released By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Released 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



RECEIVED

MAR 20 2000

GETTLER-RYAN INC.  
GENERAL CONTRACTORS

March 23, 2000

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

RE: Tosco(4)/L003091

Dear Deanna Harding:

Enclosed are the results of analyses for sample(s) received by the laboratory on March 9, 2000. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Wayne Stevenson  
Project Manager

CA ELAP Certificate Number I-2360





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

Project: Tosco(4)  
Project Number: Unocal SS#5430  
Project Manager: Deanna Harding

Sampled: 3/9/00  
Received: 3/9/00  
Reported: 3/23/00

**ANALYTICAL REPORT FOR L003091**

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
TB-LB	L003091-01	Water	3/9/00
U-1	L003091-02	Water	3/9/00
U-2	L003091-03	Water	3/9/00
U-3	L003091-04	Water	3/9/00
U-4	L003091-05	Water	3/9/00
U-5	L003091-06	Water	3/9/00
U-6	L003091-07	Water	3/9/00
U-7	L003091-08	Water	3/9/00







Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite D Dublin, CA 94568	Project: Tosco(4) Project Number: Unocal SS#5430 Project Manager: Deanna Harding	Sampled: 3/9/00 Received: 3/9/00 Reported: 3/23/00
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**Sample Description:** **TB-LB**  
**Laboratory Sample Number:** **L003091-01**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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**Sequoia Analytical - San Carlos**

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

Purgeable Hydrocarbons as Gasoline	0030092	3/20/00	3/20/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	70.0-130		90.7	%	





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite D Dublin, CA 94568	Project: Tosco(4) Project Number: Unocal SS#5430 Project Manager: Deanna Harding	Sampled: 3/9/00 Received: 3/9/00 Reported: 3/23/00
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**Sample Description:** U-1  
**Laboratory Sample Number:** L003091-02

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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**Sequoia Analytical - San Carlos**

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

Purgeable Hydrocarbons as Gasoline	0030091	3/20/00	3/20/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	"	"	70.0-130		98.7	%	

**Volatile Organic Compounds by EPA Method 8010B**

Freon 113	0030115	3/22/00	3/23/00		1.00	ND	ug/l	
Bromodichloromethane	"	"	"		0.500	ND	"	
Bromoform	"	"	"		0.500	ND	"	
Bromomethane	"	"	"		1.00	ND	"	
Carbon tetrachloride	"	"	"		0.500	ND	"	
Chlorobenzene	"	"	"		0.500	ND	"	
Chloroethane	"	"	"		1.00	ND	"	
2-Chloroethylvinyl ether	"	"	"		1.00	ND	"	
Chloroform	"	"	"		0.500	ND	"	
Chloromethane	"	"	"		1.00	ND	"	
Dibromochloromethane	"	"	"		0.500	ND	"	
1,3-Dichlorobenzene	"	"	"		0.500	ND	"	
1,4-Dichlorobenzene	"	"	"		0.500	ND	"	
1,2-Dichlorobenzene	"	"	"		0.500	ND	"	
1,1-Dichloroethane	"	"	"		0.500	ND	"	
<b>1,2-Dichloroethane</b>	"	"	"		0.500	<b>1.32</b>	"	
1,1-Dichloroethene	"	"	"		0.500	ND	"	
cis-1,2-Dichloroethene	"	"	"		0.500	ND	"	
trans-1,2-Dichloroethene	"	"	"		0.500	ND	"	
1,2-Dichloropropane	"	"	"		0.500	ND	"	
cis-1,3-Dichloropropene	"	"	"		0.500	ND	"	
trans-1,3-Dichloropropene	"	"	"		0.500	ND	"	
Methylene chloride	"	"	"		5.00	ND	"	
1,1,2,2-Tetrachloroethane	"	"	"		0.500	ND	"	
Tetrachloroethene	"	"	"		0.500	ND	"	
1,1,1-Trichloroethane	"	"	"		0.500	ND	"	
1,1,2-Trichloroethane	"	"	"		0.500	ND	"	
Trichloroethene	"	"	"		0.500	ND	"	
Trichlorofluoromethane	"	"	"		0.500	ND	"	
Vinyl chloride	"	"	"		0.500	ND	"	
<i>Surrogate: 1-Chloro-2-fluorobenzene</i>	"	"	"	70.0-130		84.5	%	





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite D Dublin, CA 94568	Project: Tosco(4) Project Number: Unocal SS#5430 Project Manager: Deanna Harding	Sampled: 3/9/00 Received: 3/9/00 Reported: 3/23/00
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**Sample Description:** U-2  
**Laboratory Sample Number:** L003091-03

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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Sequoia Analytical - San Carlos

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

Purgeable Hydrocarbons as Gasoline	0030091	3/20/00	3/20/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	"	"	70.0-130		102	%	





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite D Dublin, CA 94568	Project: Tosco(4) Project Number: Unocal SS#5430 Project Manager: Deanna Harding	Sampled: 3/9/00 Received: 3/9/00 Reported: 3/23/00
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**Sample Description:** U-3  
**Laboratory Sample Number:** L003091-04

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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**Sequoia Analytical - San Carlos**

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

Purgeable Hydrocarbons as Gasoline	0030099	3/21/00	3/22/00		500	<b>3250</b>	ug/l	1
Benzene	"	"	"		5.00	<b>143</b>	"	
Toluene	"	"	"		5.00	ND	"	
Ethylbenzene	"	"	"		5.00	<b>59.0</b>	"	
Xylenes (total)	"	"	"		5.00	<b>326</b>	"	
Methyl tert-butyl ether	"	"	"		50.0	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		107	%	

**Volatile Organic Compounds by EPA Method 8010B**

Freon 113	0030115	3/22/00	3/23/00		25.0	ND	ug/l	2
Bromodichloromethane	"	"	"		12.5	ND	"	
Bromoform	"	"	"		12.5	ND	"	
Bromomethane	"	"	"		25.0	ND	"	
Carbon tetrachloride	"	"	"		12.5	ND	"	
Chlorobenzene	"	"	"		12.5	ND	"	
Chloroethane	"	"	"		25.0	ND	"	
2-Chloroethylvinyl ether	"	"	"		25.0	ND	"	
Chloroform	"	"	"		12.5	ND	"	
Chloromethane	"	"	"		25.0	ND	"	
Dibromochloromethane	"	"	"		12.5	ND	"	
1,3-Dichlorobenzene	"	"	"		12.5	ND	"	
1,4-Dichlorobenzene	"	"	"		12.5	ND	"	
1,2-Dichlorobenzene	"	"	"		12.5	ND	"	
1,1-Dichloroethane	"	"	"		12.5	ND	"	
1,2-Dichloroethane	"	"	"		12.5	ND	"	
1,1-Dichloroethene	"	"	"		12.5	ND	"	
cis-1,2-Dichloroethene	"	"	"		12.5	ND	"	
trans-1,2-Dichloroethene	"	"	"		12.5	ND	"	
1,2-Dichloropropane	"	"	"		12.5	ND	"	
cis-1,3-Dichloropropene	"	"	"		12.5	ND	"	
trans-1,3-Dichloropropene	"	"	"		12.5	ND	"	
Methylene chloride	"	"	"		125	ND	"	
1,1,2,2-Tetrachloroethane	"	"	"		12.5	ND	"	
Tetrachloroethene	"	"	"		12.5	ND	"	
1,1,1-Trichloroethane	"	"	"		12.5	ND	"	
1,1,2-Trichloroethane	"	"	"		12.5	ND	"	
Trichloroethene	"	"	"		12.5	ND	"	
Trichlorofluoromethane	"	"	"		12.5	ND	"	
Vinyl chloride	"	"	"		12.5	ND	"	
Surrogate: 1-Chloro-2-fluorobenzene	"	"	"	70.0-130		81.7	%	





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite D Dublin, CA 94568	Project: Tosco(4) Project Number: Unocal SS#5430 Project Manager: Deanna Harding	Sampled: 3/9/00 Received: 3/9/00 Reported: 3/23/00
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**Sample Description:** U-4  
**Laboratory Sample Number:** L003091-05

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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Sequoia Analytical - San Carlos

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

Purgeable Hydrocarbons as Gasoline	0030107	3/22/00	3/22/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	<b>0.615</b>	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	<b>1.05</b>	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		99.7	%	





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite D Dublin, CA 94568	Project: Tosco(4) Project Number: Unocal SS#5430 Project Manager: Deanna Harding	Sampled: 3/9/00 Received: 3/9/00 Reported: 3/23/00
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**Sample Description:** U-5  
**Laboratory Sample Number:** L003091-06

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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Sequoia Analytical - San Carlos

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

Purgeable Hydrocarbons as Gasoline	0030091	3/20/00	3/20/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	70.0-130		91.0	%	





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite D Dublin, CA 94568	Project: Tosco(4) Project Number: Unocal SS#5430 Project Manager: Deanna Harding	Sampled: 3/9/00 Received: 3/9/00 Reported: 3/23/00
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**Sample Description:** U-6  
**Laboratory Sample Number:** L003091-07

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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**Sequoia Analytical - San Carlos**

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

Purgeable Hydrocarbons as Gasoline	0030099	3/21/00	3/22/00		500	4980	ug/l	1
Benzene	"	"	"		5.00	193	"	
Toluene	"	"	"		5.00	ND	"	
Ethylbenzene	"	"	"		5.00	520	"	
Xylenes (total)	"	"	"		5.00	365	"	
Methyl tert-butyl ether	"	"	"		50.0	ND	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	70.0-130		100	%	





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite D Dublin, CA 94568	Project: Tosco(4) Project Number: Unocal SS#5430 Project Manager: Deanna Harding	Sampled: 3/9/00 Received: 3/9/00 Reported: 3/23/00
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Sample Description: U-7  
Laboratory Sample Number: L003091-08

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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**Sequoia Analytical - San Carlos**

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

Purgeable Hydrocarbons as Gasoline	0030091	3/20/00	3/21/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	1.09	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		102	%	

**Volatile Organic Compounds by EPA Method 8010B**

Freon 113	0030115	3/22/00	3/23/00		1.00	ND	ug/l	
Bromodichloromethane	"	"	"		0.500	ND	"	
Bromoform	"	"	"		0.500	ND	"	
Bromomethane	"	"	"		1.00	ND	"	
Carbon tetrachloride	"	"	"		0.500	0.801	"	
Chlorobenzene	"	"	"		0.500	ND	"	
Chloroethane	"	"	"		1.00	ND	"	
2-Chloroethylvinyl ether	"	"	"		1.00	ND	"	
Chloroform	"	"	"		0.500	ND	"	
Chloromethane	"	"	"		1.00	ND	"	
Dibromochloromethane	"	"	"		0.500	ND	"	
1,3-Dichlorobenzene	"	"	"		0.500	ND	"	
1,4-Dichlorobenzene	"	"	"		0.500	ND	"	
1,2-Dichlorobenzene	"	"	"		0.500	ND	"	
1,1-Dichloroethane	"	"	"		0.500	ND	"	
1,2-Dichloroethane	"	"	"		0.500	ND	"	
1,1-Dichloroethene	"	"	"		0.500	ND	"	
cis-1,2-Dichloroethene	"	"	"		0.500	ND	"	
trans-1,2-Dichloroethene	"	"	"		0.500	ND	"	
1,2-Dichloropropane	"	"	"		0.500	ND	"	
cis-1,3-Dichloropropene	"	"	"		0.500	ND	"	
trans-1,3-Dichloropropene	"	"	"		0.500	ND	"	
Methylene chloride	"	"	"		5.00	ND	"	
1,1,2,2-Tetrachloroethane	"	"	"		0.500	ND	"	
Tetrachloroethene	"	"	"		0.500	ND	"	
1,1,1-Trichloroethane	"	"	"		0.500	ND	"	
1,1,2-Trichloroethane	"	"	"		0.500	ND	"	
Trichloroethene	"	"	"		0.500	ND	"	
Trichlorofluoromethane	"	"	"		0.500	ND	"	
Vinyl chloride	"	"	"		0.500	ND	"	
Surrogate: 1-Chloro-2-fluorobenzene	"	"	"	70.0-130		79.4	%	







Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite D Dublin, CA 94568	Project: Tosco(4) Project Number: Unocal SS#5430 Project Manager: Deanna Harding	Sampled: 3/9/00 Received: 3/9/00 Reported: 3/23/00
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control  
Sequoia Analytical - San Carlos**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Reporting Limit Units	Recov. Recov. Limits	RPD %	RPD Limit	RPD %	Notes*
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<b>Batch: 0030091</b>	<b>Date Prepared: 3/20/00</b>	<b>Extraction Method: EPA 5030B [P/T]</b>								
<b>Blank</b>	<b>0030091-BLK1</b>									
Purgeable Hydrocarbons as Gasoline	3/20/00			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	0.500				
Methyl tert-butyl ether	"			ND	"	5.00				
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	10.0		10.4	"	70.0-130	104			

<b>LCS</b>	<b>0030091-BS1</b>									
Benzene	3/20/00	10.0		8.73	ug/l	70.0-130	87.3			
Toluene	"	10.0		8.09	"	70.0-130	80.9			
Ethylbenzene	"	10.0		8.07	"	70.0-130	80.7			
Xylenes (total)	"	30.0		24.3	"	70.0-130	81.0			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	10.0		10.6	"	70.0-130	106			

<b>LCS</b>	<b>0030091-BS2</b>									
Purgeable Hydrocarbons as Gasoline	3/20/00	250		226	ug/l	70.0-130	90.4			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	10.0		9.53	"	70.0-130	95.3			

<b>Matrix Spike</b>	<b>0030091-MS1</b>	<b>L003140-01</b>								
Benzene	3/20/00	10.0	ND	9.53	ug/l	60.0-140	95.3			
Toluene	"	10.0	ND	9.01	"	60.0-140	90.1			
Ethylbenzene	"	10.0	ND	9.09	"	60.0-140	90.9			
Xylenes (total)	"	30.0	ND	27.8	"	60.0-140	92.7			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	10.0		9.51	"	70.0-130	95.1			

<b>Matrix Spike Dup</b>	<b>0030091-MSD1</b>	<b>L003140-01</b>								
Benzene	3/20/00	10.0	ND	8.53	ug/l	60.0-140	85.3	25.0	11.1	
Toluene	"	10.0	ND	7.90	"	60.0-140	79.0	25.0	13.1	
Ethylbenzene	"	10.0	ND	7.84	"	60.0-140	78.4	25.0	14.8	
Xylenes (total)	"	30.0	ND	24.0	"	60.0-140	80.0	25.0	14.7	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	10.0		8.86	"	70.0-130	88.6			

<b>Batch: 0030092</b>	<b>Date Prepared: 3/20/00</b>	<b>Extraction Method: EPA 5030B [P/T]</b>								
<b>Blank</b>	<b>0030092-BLK1</b>									
Purgeable Hydrocarbons as Gasoline	3/20/00			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	0.500				





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite D Dublin, CA 94568	Project: Tosco(4) Project Number: Unocal SS#5430 Project Manager: Deanna Harding	Sampled: 3/9/00 Received: 3/9/00 Reported: 3/23/00
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control**  
**Sequoia Analytical - San Carlos**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
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**Blank (continued)**

**0030092-BLK1**

Methyl tert-butyl ether	3/20/00			ND	ug/l	5.00				
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.5	"	70.0-130	105			

**LCS**

**0030092-BS1**

Benzene	3/20/00	10.0		9.69	ug/l	70.0-130	96.9			
Toluene	"	10.0		9.29	"	70.0-130	92.9			
Ethylbenzene	"	10.0		9.23	"	70.0-130	92.3			
Xylenes (total)	"	30.0		27.4	"	70.0-130	91.3			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.15	"	70.0-130	91.5			

**LCS**

**0030092-BS2**

Purgeable Hydrocarbons as Gasoline	3/20/00	250		226	ug/l	70.0-130	90.4			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.57	"	70.0-130	95.7			

**Matrix Spike**

**0030092-MS1**

**L003140-13**

Benzene	3/20/00	10.0	ND	10.7	ug/l	60.0-140	107			
Toluene	"	10.0	ND	10.5	"	60.0-140	105			
Ethylbenzene	"	10.0	ND	10.5	"	60.0-140	105			
Xylenes (total)	"	30.0	ND	30.5	"	60.0-140	102			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.1	"	70.0-130	101			

**Matrix Spike Dup**

**0030092-MSD1**

**L003140-13**

Benzene	3/20/00	10.0	ND	11.1	ug/l	60.0-140	111	25.0	3.67	
Toluene	"	10.0	ND	10.9	"	60.0-140	109	25.0	3.74	
Ethylbenzene	"	10.0	ND	10.8	"	60.0-140	108	25.0	2.82	
Xylenes (total)	"	30.0	ND	32.5	"	60.0-140	108	25.0	5.71	
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.1	"	70.0-130	101			

**Batch: 0030099**

**Date Prepared: 3/21/00**

**Extraction Method: EPA 5030B (P/T)**

**Blank**

**0030099-BLK1**

Purgeable Hydrocarbons as Gasoline	3/21/00			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	0.500				
Methyl tert-butyl ether	"			ND	"	5.00				
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.86	"	70.0-130	98.6			

**LCS**

**0030099-BS1**

Benzene	3/21/00	10.0		7.95	ug/l	70.0-130	79.5			
Toluene	"	10.0		7.30	"	70.0-130	73.0			





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite D Dublin, CA 94568	Project: Tosco(4) Project Number: Unocal SS#5430 Project Manager: Deanna Harding	Sampled: 3/9/00 Received: 3/9/00 Reported: 3/23/00
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control  
Sequoia Analytical - San Carlos**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>LCS (continued)</b>										
	<b>0030099-BS1</b>									
Ethylbenzene	3/21/00	10.0		7.33	ug/l	70.0-130	73.3			
Xylenes (total)	"	30.0		22.4	"	70.0-130	74.7			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.6	"	70.0-130	106			
<b>LCS</b>										
	<b>0030099-BS2</b>									
Purgeable Hydrocarbons as Gasoline	3/21/00	250		215	ug/l	70.0-130	86.0			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.6	"	70.0-130	106			
<b>Matrix Spike</b>										
	<b>0030099-MS1</b>		<b>L003153-04</b>							
Purgeable Hydrocarbons as Gasoline	3/21/00	250	ND	240	ug/l	60.0-140	96.0			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.39	"	70.0-130	93.9			
<b>Matrix Spike Dup</b>										
	<b>0030099-MSD1</b>		<b>L003153-04</b>							
Purgeable Hydrocarbons as Gasoline	3/21/00	250	ND	238	ug/l	60.0-140	95.2	25.0	0.837	
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.55	"	70.0-130	95.5			
<b>Batch: 0030107</b>										
	<b>Date Prepared: 3/22/00</b>			<b>Extraction Method: EPA 5030B [P/T]</b>						
<b>Blank</b>										
	<b>0030107-BLK1</b>									
Purgeable Hydrocarbons as Gasoline	3/22/00			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	0.500				
Methyl tert-butyl ether	"			ND	"	5.00				
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.7	"	70.0-130	107			
<b>LCS</b>										
	<b>0030107-BS1</b>									
Benzene	3/22/00	10.0		11.4	ug/l	70.0-130	114			
Toluene	"	10.0		11.0	"	70.0-130	110			
Ethylbenzene	"	10.0		10.9	"	70.0-130	109			
Xylenes (total)	"	30.0		32.4	"	70.0-130	108			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.0	"	70.0-130	100			
<b>LCS</b>										
	<b>0030107-BS2</b>									
Purgeable Hydrocarbons as Gasoline	3/22/00	250		283	ug/l	70.0-130	113			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		12.1	"	70.0-130	121			
<b>Matrix Spike</b>										
	<b>0030107-MS1</b>		<b>L003154-05</b>							
Benzene	3/22/00	10.0	ND	8.48	ug/l	60.0-140	84.8			
Toluene	"	10.0	ND	8.02	"	60.0-140	80.2			
Ethylbenzene	"	10.0	ND	7.41	"	60.0-140	74.1			





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite D Dublin, CA 94568	Project: Tosco(4) Project Number: Unocal SS#5430 Project Manager: Deanna Harding	Sampled: 3/9/00 Received: 3/9/00 Reported: 3/23/00
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control  
Sequoia Analytical - San Carlos**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>Matrix Spike (continued)</b>	<b>0030107-MS1</b>		<b>L003154-05</b>							
Xylenes (total)	3/22/00	30.0	ND	23.5	ug/l	60.0-140	78.3			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.43	"	70.0-130	94.3			
<b>Matrix Spike Dup</b>	<b>0030107-MSD1</b>		<b>L003154-05</b>							
Benzene	3/22/00	10.0	ND	9.94	ug/l	60.0-140	99.4	25.0	15.9	
Toluene	"	10.0	ND	9.46	"	60.0-140	94.6	25.0	16.5	
Ethylbenzene	"	10.0	ND	9.19	"	60.0-140	91.9	25.0	21.4	
Xylenes (total)	"	30.0	ND	28.4	"	60.0-140	94.7	25.0	19.0	
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.76	"	70.0-130	97.6			





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite D Dublin, CA 94568	Project: Tosco(4) Project Number: Unocal SS#5430 Project Manager: Deanna Harding	Sampled: 3/9/00 Received: 3/9/00 Reported: 3/23/00
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**Volatile Organic Compounds by EPA Method 8010B/Quality Control**  
**Sequoia Analytical - San Carlos**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Reporting Limit Units	Recov. Recov. Limits	RPD % Limit	RPD % Notes*
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**Batch: 0030115**

**Date Prepared: 3/22/00**

**Extraction Method: EPA 5030B [P/T]**

**Blank**

**0030115-BLK1**

Freon 113	3/22/00			ND	ug/l	1.00		
Bromodichloromethane	"			ND	"	0.500		
Bromoform	"			ND	"	0.500		
Bromomethane	"			ND	"	1.00		
Carbon tetrachloride	"			ND	"	0.500		
Chlorobenzene	"			ND	"	0.500		
Chloroethane	"			ND	"	1.00		
2-Chloroethylvinyl ether	"			ND	"	1.00		
Chloroform	"			ND	"	0.500		
Chloromethane	"			ND	"	1.00		
Dibromochloromethane	"			ND	"	0.500		
1,3-Dichlorobenzene	"			ND	"	0.500		
1,4-Dichlorobenzene	"			ND	"	0.500		
1,2-Dichlorobenzene	"			ND	"	0.500		
1,1-Dichloroethane	"			ND	"	0.500		
1,2-Dichloroethane	"			ND	"	0.500		
1,1-Dichloroethene	"			ND	"	0.500		
cis-1,2-Dichloroethene	"			ND	"	0.500		
trans-1,2-Dichloroethene	"			ND	"	0.500		
1,2-Dichloropropane	"			ND	"	0.500		
cis-1,3-Dichloropropene	"			ND	"	0.500		
trans-1,3-Dichloropropene	"			ND	"	0.500		
Methylene chloride	"			ND	"	5.00		
1,1,2,2-Tetrachloroethane	"			ND	"	0.500		
Tetrachloroethene	"			ND	"	0.500		
1,1,1-Trichloroethane	"			ND	"	0.500		
1,1,2-Trichloroethane	"			ND	"	0.500		
Trichloroethene	"			ND	"	0.500		
Trichlorofluoromethane	"			ND	"	0.500		
Vinyl chloride	"			ND	"	0.500		

<i>Surrogate: 1-Chloro-2-fluorobenzene</i>	"	10.0		8.26	"	70.0-130	82.6	
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**LCS**

**0030115-BS1**

Chlorobenzene	3/22/00	10.0		7.87	ug/l	70.0-130	78.7	
1,1-Dichloroethene	"	10.0		8.40	"	65.0-135	84.0	
Trichloroethene	"	10.0		8.62	"	70.0-130	86.2	

<i>Surrogate: 1-Chloro-2-fluorobenzene</i>	"	10.0		8.39	"	70.0-130	83.9	
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**Matrix Spike**

**0030115-MS1**

**L003091-08**

Chlorobenzene	3/23/00	10.0	ND	9.40	ug/l	60.0-140	94.0	
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Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite D Dublin, CA 94568	Project: Tosco(4) Project Number: Unocal SS#5430 Project Manager: Deanna Harding	Sampled: 3/9/00 Received: 3/9/00 Reported: 3/23/00
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**Volatile Organic Compounds by EPA Method 8010B/Quality Control**  
**Sequoia Analytical - San Carlos**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>Matrix Spike (continued)</b>	<b>0030115-MS1</b>	<b>L003091-08</b>								
1,1-Dichloroethene	3/23/00	10.0	ND	9.63	ug/l	60.0-140	96.3			
Trichloroethene	"	10.0	ND	9.71	"	60.0-140	97.1			
Surrogate: 1-Chloro-2-fluorobenzene	"	10.0		8.70	"	70.0-130	87.0			
<b>Matrix Spike Dup</b>	<b>0030115-MSD1</b>	<b>L003091-08</b>								
Chlorobenzene	3/23/00	10.0	ND	8.05	ug/l	60.0-140	80.5	25.0	15.5	
1,1-Dichloroethene	"	10.0	ND	8.84	"	60.0-140	88.4	25.0	8.55	
Trichloroethene	"	10.0	ND	8.93	"	60.0-140	89.3	25.0	8.37	
Surrogate: 1-Chloro-2-fluorobenzene	"	10.0		8.22	"	70.0-130	82.2			





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite D Dublin, CA 94568	Project: Tosco(4) Project Number: Unocal SS#5430 Project Manager: Deanna Harding	Sampled: 3/9/00 Received: 3/9/00 Reported: 3/23/00
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**Notes and Definitions**

#	Note
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- 1 Chromatogram Pattern: Gasoline C6-C12
- 2 This sample was diluted due to high non-target compounds.
- 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
- Recov. Recovery
- RPD Relative Percent Difference

