



GETTLER-RYAN INC.

TRANSMITTAL

November 26, 2001

G-R #180022

12/18/01
Amir

4/10/01

TO: Mr. David B. De Witt
Phillips 66 Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

CC: Mr. Paul Blank
ERI, Inc.
73 Digital Drive, Suite 100
Novato, California 94949

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

RE: **Tosco(Unocal) Service Station
#7176
7850 Amador Valley Boulevard
Dublin, California**

DEC 1 7 2001

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	November 16, 2001	Groundwater Monitoring and Sampling Report Fourth Quarter - Event of October 5, 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 **December 10, 2001**, this report will be distributed to the following:

cc: Mr. Amir K. Gholami, REHS, Alameda County Health Care Services, 1131 Harbor Bay Pkwy., Alameda, CA 94502

Enclosure

QUARTERLY SUMMARY REPORT

Fourth Quarter 2001
(October - December)

TOSCO SERVICE STATION 7176
7850 Amador Valley Boulevard
Dublin, California

City/County ID: City of Dublin/Alameda County

Lead Agency: Alameda County Health Care Services Agency

BACKGROUND

In November 1994, Unocal Corporation (Unocal) replaced the fuel underground storage tanks (USTs) and removed the used-oil UST. Approximately 1,863 tons of hydrocarbon-impacted soil was excavated and transported to a Unocal-approved landfill. In July 1995, Unocal performed a soil and groundwater investigation that included drilling nine soil borings and constructing three on-site groundwater monitoring wells. During March 1998, Tosco performed an off-site soil and groundwater investigation that included installation of two off-site groundwater monitoring wells south and east of the site. Tosco continues quarterly groundwater monitoring and sampling of the wells.

During third quarter 2000, at the request of Tosco, ERI submitted a *Request and Work Plan for Case Closure* presenting the results of a groundwater receptor survey and risk-based corrective action Tier II analysis and requesting closure of the environmental case. During second quarter 2001, ERI submitted an *Addendum to Request and Work Plan for Case Closure*, including hydrographs and concentration versus time graphs for select wells, and required agency closure summary forms.

RECENT QUARTER ACTIVITIES

Performed quarterly groundwater monitoring, sampling, and reporting.

NEXT QUARTER ACTIVITIES

Continue quarterly groundwater monitoring, sampling, and reporting. Communicate with the Alameda County Health Care Services Agency to achieve case closure.

CHARACTERIZATION/REMEDIAL STATUS

Soil contamination delineated?	<u>Yes</u>
Dissolved groundwater delineated?	<u>No</u>
Free Product delineated?	<u>NA</u>
Amount of gw contaminant recovered this quarter?	<u>0 gallons</u>
Amount of gw contaminant recovered to date?	<u>15,511 gallons gw removed</u>
Soil remediation in progress?	<u>1,863 tons removed</u>
Dissolved/free product remediation in progress?	<u>No</u>

CONSULTANT: Environmental Resolutions, Inc.



GETTLER-RYAN INC.

November 16, 2001
G-R Job #180022

Mr. David B. De Witt
Phillips 66 Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

RE: Fourth Quarter Event of October 5, 2001
Groundwater Monitoring & Sampling Report
Tosco (Unocal) Service Station #7176
7850 Amador Valley Boulevard
Dublin, 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. Dissolved Oxygen Concentrations are summarized in Table 3. A Potentiometric Map is included as Figure 1.

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

Sincerely,

- For -
Deanna L. Harding
Project Coordinator

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

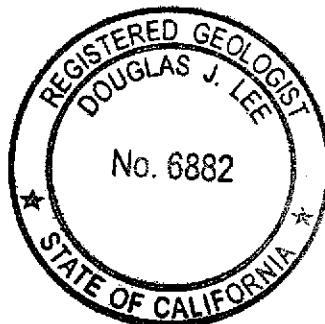
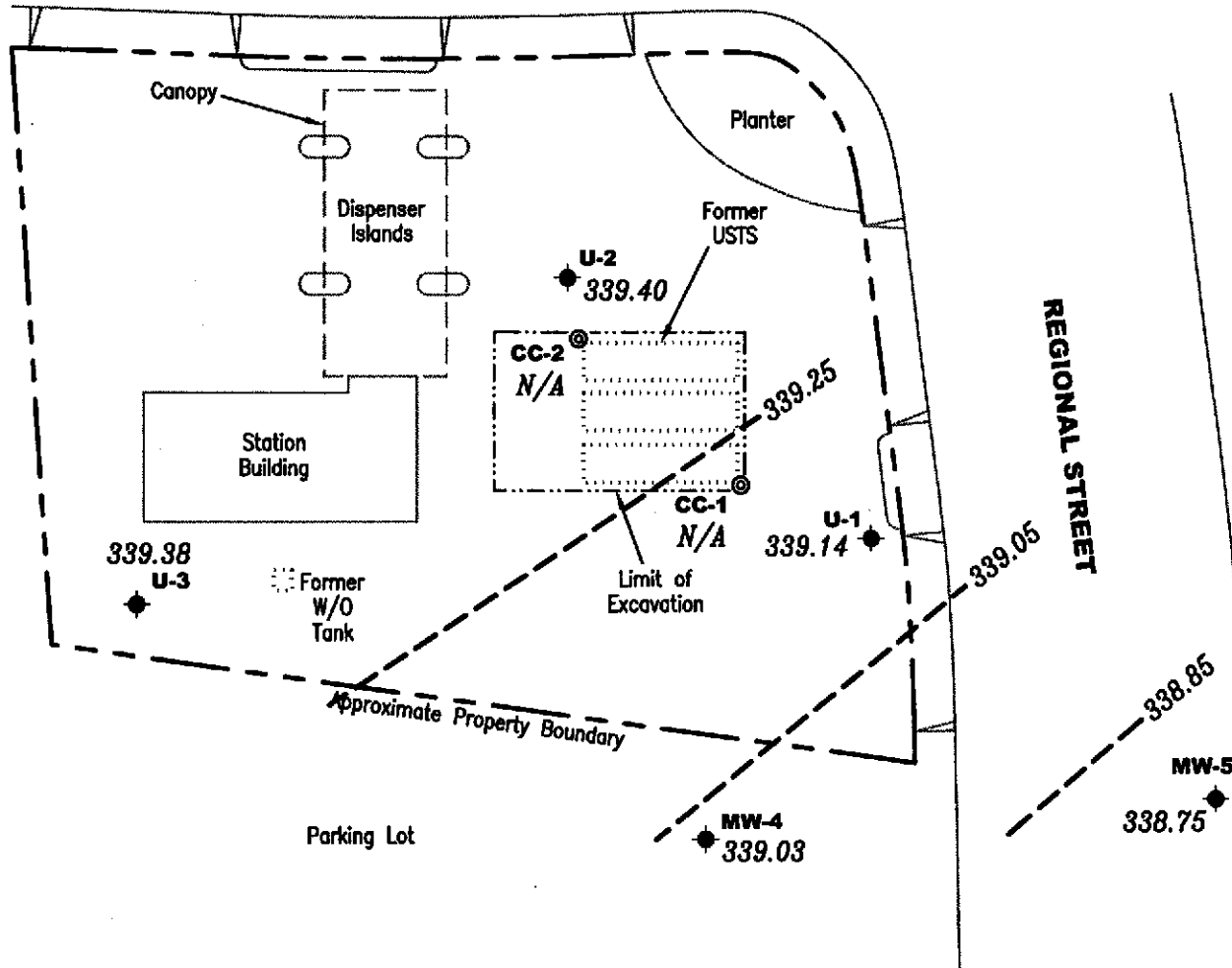


Figure 1: Potentiometric Map
Figure 2: Concentration Map
Table 1: Groundwater Monitoring Data and Analytical Results
Table 2: Groundwater Analytical Results - Oxygenate Compounds
Table 3: Dissolved Oxygen Concentrations
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets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

7176.qml

AMADOR VALLEY BOULEVARD

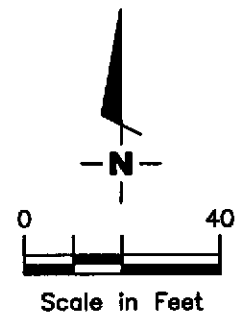
EXPLANATION



- ◆ Groundwater monitoring well
- ⊙ Conductor casing
- 99.99 Groundwater elevation in feet referenced to Mean Sea Level (MSL)
- 99.99 - Groundwater elevation contour, dashed where inferred.
- N/A Not available



Approximate groundwater flow direction at a gradient of 0.004 Ft./Ft.



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

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

POTENTIOMETRIC MAP
 Tosco (Unocal) Service Station #7176
 7850 Amador Valley Boulevard
 Dublin, California

FIGURE

1

PROJECT NUMBER
180022

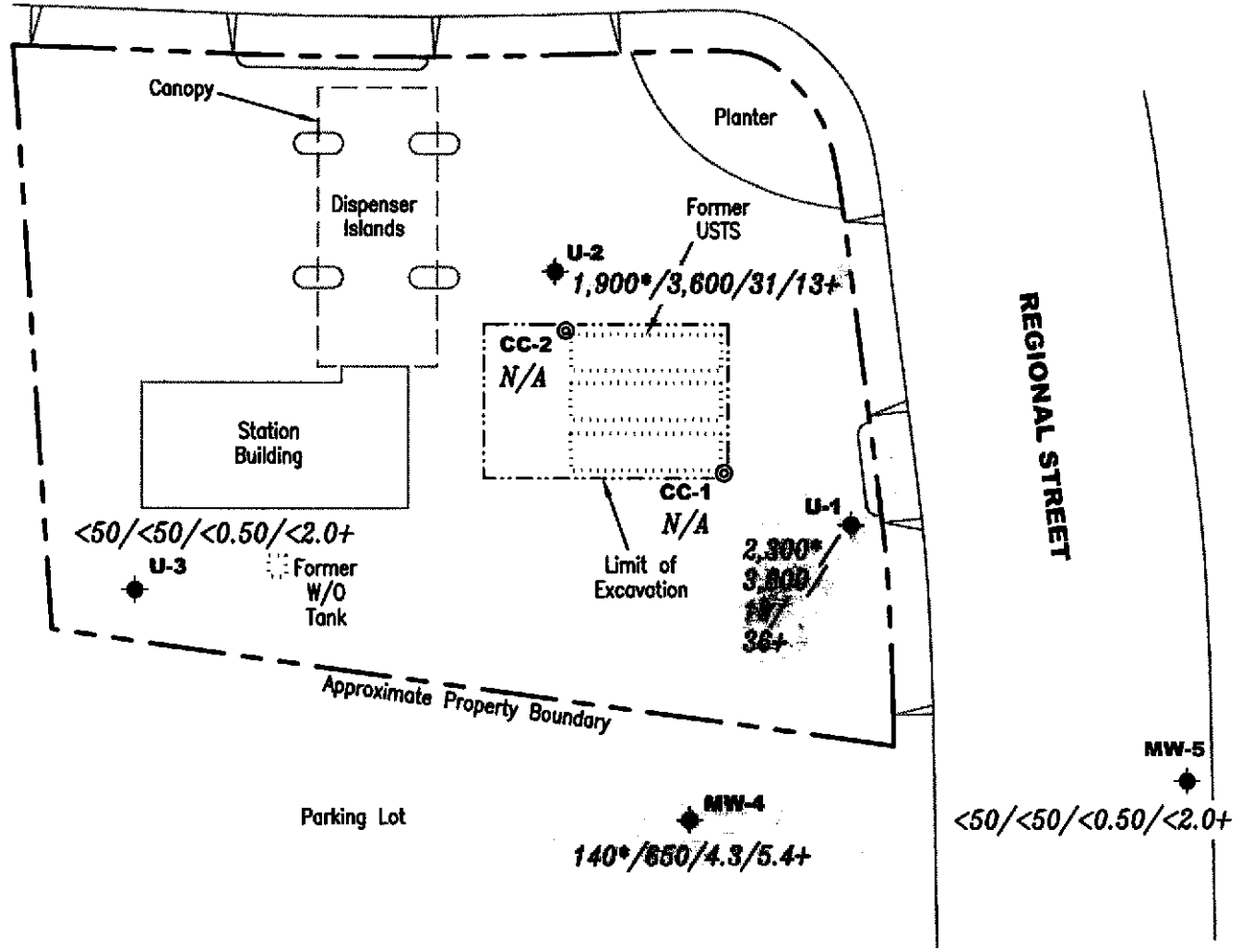
REVIEWED BY

DATE
October 5, 2001

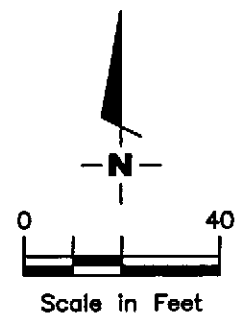
REVISED DATE

AMADOR VALLEY BOULEVARD

EXPLANATION



- ◆ Groundwater monitoring well
- ⊙ Conductor casing
- A/B/C/D TPH(D) (Total Petroleum Hydrocarbons as Diesel)/TPH(G) (Total Petroleum Hydrocarbons as Gasoline)/Benzene/MTBE concentrations in ppb
- * w/silica gel clean-up
- + MTBE by EPA Method 8260
- N/A Not Available



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

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

CONCENTRATION MAP
 Tosco (Unocal) Service Station #7176
 7850 Amador Valley Boulevard
 Dublin, California

FIGURE
2

PROJECT NUMBER
 180022

REVIEWED BY

DATE
 October 5, 2001

REVISED DATE

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #7176
 7850 Amador Valley Boulevard
 Dublin, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-D◆ (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-1											
355.62	07/08/95	12.59	10.0-30.0	343.03	³ 9,400/--	39,000	1,500	19	1,600	5,200	--
	10/12/95	15.38		340.24	⁵ 4,200/--	33,000	1,400	ND	1,400	3,100	-- ⁷
	01/11/96 ¹	16.33		339.29	⁵ 8,200/--	8,300	690	11	680	1,500	-- ⁸
	04/11/96 ²	12.20		343.42	⁵ 630/--	3,200	110	ND	180	290	790
	07/10/96	13.84		341.78	⁵ 2,200/--	2,600	81	4.4	210	230	510
	10/30/96	15.85		339.77	⁵ 560/--	2,200	67	19	140	150	360
	01/27/97	12.20		343.42	⁵ 2,300/--	4,600	98	ND	360	290	150
	04/08/97	13.46		342.16	⁵ 1,300/--	2,800	50	ND	220	140	ND
	07/17/97	15.30		340.32	⁶ 460/--	2,300	30	4.5	140	94	190
	10/17/97	16.33		339.29	⁶ 510/--	1,500	31	6.7	110	88	220
	01/19/98	14.34		341.28	¹⁰ 1,900/1,300 ¹⁰	3,100	46	3.4	310	200	170
355.59	NP 04/23/98	11.16		344.43	--/1,700 ¹¹	3,400	72	3.8	470	350	280
	NP 07/08/98	12.67		342.92	¹⁴ 2,000/--	4,500	51	ND ¹²	590	430	190
	10/05/98	14.57		341.02	--/2,500 ¹⁰	7,500 ¹⁶	53	ND ¹²	680	350	190/180 ¹⁷
	01/04/99	15.35		340.24	¹¹ 2,700/2,500 ¹¹	10,000 ¹⁹	ND ¹²	ND ¹²	1,200	540	ND ¹²
	04/05/99	13.64		341.95	¹⁰ 920/570 ¹⁰	4,900	34	ND ¹²	350	150	150/55 ¹⁷
	07/01/99	14.39		341.20	¹⁰ 2,700/3,600 ²⁶	10,000	45	ND ¹²	850	420	260/110 ¹⁷
	09/30/99	15.32		340.27	¹⁰ 2,360/1,680 ¹⁰	7,150 ²⁷	ND ¹²	ND ¹²	415	84.4	¹² ND/195 ¹⁷
	01/03/00	16.51		339.08	²⁶ 2,000/1,700 ²⁶	5,400 ²⁷	28	8.4	180	33	160/120 ¹⁷
	04/04/00	12.89		342.70	²⁶ 990/1,400 ²⁶	4,800 ²⁷	30	ND ¹²	210	93	170/160 ¹⁷
	07/14/00	14.56		341.03	²⁶ 2,800/1,200 ²⁶	6,200 ²⁷	41	16	170	32	170/120 ¹⁷
	10/27/00	15.96		339.63	²⁶ 1,400/1,300 ²⁶	3,830 ¹⁶	16.8	ND ¹²	68.6	7.99	55.2/38 ¹⁷
	01/08/01	15.72		339.87	--/873 ²⁹	2,410 ¹⁶	14.7	4.30	30.5	5.04	34.5/9.33 ¹⁷
	04/03/01	14.46		341.13	²⁶ 1,500/830 ²⁶	3,330 ¹⁶	15.8	5.96	74.8	7.06	¹² ND/13.3 ¹⁷
	07/06/01	15.65		339.94	¹⁰ 1,600/1,200 ^{10,30}	4,300 ¹⁶	23	6.4	57	6.8	58/36 ¹⁷
	10/05/01	16.45		339.14	¹⁰ 2,500/2,300 ³⁰	3,800 ¹⁶	19	<5.0	19	<5.0	64/36¹⁷

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #7176
 7850 Amador Valley Boulevard
 Dublin, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-D♦ (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	TPHE (ppb)	
U-2 356.59	07/08/95	12.68	10.0-30.0	343.91	³ 4,700/--	17,000	430	ND	2,200	590	--	
	10/12/95	16.01		340.58	⁵ 3,600/--	24,000	310	60	1,900	190	-- ⁷	
	01/11/96 ¹	17.06		339.53	⁵ 8,600/--	10,000	210	55	1,400	240	-- ⁸	
	04/11/96 ²	12.75		343.84	⁵ 1,900/--	7,700	130	27	1,100	110	340	
	07/10/96	14.42		342.17	⁵ 2,300/--	5,600	59	15	610	42	250	
	10/30/96	16.82		339.77	⁵ 1,800/--	7,700	67	35	1,000	54	260	
	01/27/97	12.91		343.68	⁵ 660/--	1,600	14	ND	130	7.0	100	
	04/08/97	14.07		342.52	⁵ 2,000/--	4,300	35	ND	400	16	ND	
	07/17/97	15.96		340.63	⁶ 1,300/--	6,200	17	22	410	ND	130	
	10/17/97	17.03		339.56	⁶ 1,400/--	7,100	71	26	520	50	ND	
	01/19/98	15.10		341.49	¹⁰ 2,100/1,500 ¹⁰	5,300	46	11	350	16	110	
	356.55	NP 04/23/98	11.74		344.81	--/1,200 ¹¹	3,200	23	11	210	38	160
		NP 07/08/98	13.27		343.28	¹⁴ 1,100/--	1,600	34	8.5	100	7.4	190
		10/05/98	14.90		341.65	--/1,300 ¹⁰	2,900 ¹⁸	37	8.4	110	7.3	78
01/04/99		15.94		340.61	¹¹ 670/250 ²⁰	2,200 ²¹	35	ND ¹²	17	ND ¹²	86	
04/05/99		14.19		342.36	¹⁰ 660/490 ¹⁰	4,900	21	77	130	310	100/6.9 ¹⁷	
07/01/99		14.98		341.57	²⁴ 210/440 ²⁶	1,500 ²⁵	7.6	ND ¹²	ND ¹²	ND ¹²	¹² ND/35 ¹⁷	
09/30/99		16.00		340.55	¹⁰ 483/340 ¹⁰	256 ²⁷	1.85	ND ¹²	2.42	ND ¹²	26.3/29.8 ¹⁷	
01/03/00		17.20		339.35	²⁶ 2,400/1,900 ²⁶	3,400 ²⁷	23	13	ND ¹²	44	46/14 ¹⁷	
04/04/00		13.50		343.05	²⁶ 1,000/1,000 ²⁶	3,600 ²⁷	34	17	56	ND ¹²	59/25 ¹⁷	
07/14/00		15.23		341.32	²⁶ 1,000/350 ²⁶	3,100 ²⁷	16	13	15	10	100/19 ¹⁷	
10/27/00		16.74		339.81	²⁶ 2,000/1,900 ²⁶	4,180 ¹⁶	30.4	10.2	14.6	ND ¹²	55.5/15 ¹⁷	
01/08/01		16.68		339.87	--/624 ²⁹	3,300 ¹⁶	33.5	7.32	3.49	ND ¹²	66.7/7.49 ¹⁷	
04/03/01		15.12		341.43	²⁶ 1,500/830 ²⁶	4,290 ¹⁶	32.4	9.91	20.1	ND ¹²	66.6/18.1 ¹⁷	
07/06/01		16.32		340.23	¹⁰ 1,400/1,100 ^{10,30}	4,700 ¹⁶	35	11	12	5.3	62/19 ¹⁷	
10/05/01	17.15		339.40	¹⁰ 3,200/1,900 ¹⁸	3,600 ¹⁶	31	9.6	8.7	6.9	62/13 ¹⁷		

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #7176
 7850 Amador Valley Boulevard
 Dublin, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-D◆ (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-3											
358.13	07/08/95	14.58	10.0-30.0	343.55	³ 710/--	1,100 ^d	0.57	2.1	1.7	2.4	--
	10/12/95	17.60		340.53	⁶ 470/--	560	ND	0.87	0.7	1.1	--
	01/11/96 ¹	18.65		339.48	⁶ 260/--	230	0.62	0.91	0.97	1.9	--
	04/11/96	13.20		344.93	ND/--	68 ^o	ND	ND	ND	ND	ND
	07/10/96	15.98		342.15	ND/--	ND	ND	ND	ND	ND	ND
	10/30/96	18.24		339.89	ND/--	70	ND	ND	ND	ND	ND
	01/27/97	14.41		343.72	ND/--	ND	ND	ND	ND	ND	ND
	04/08/97	15.73		342.40	ND/--	ND	ND	ND	ND	ND	ND
	07/17/97	17.54		340.59	ND/--	ND	ND	ND	ND	ND	ND
	10/17/97	18.64		339.49	⁶ 63/--	ND	ND	ND	ND	ND	ND
	01/19/98	16.67		341.46	¹⁰ 68/ND	ND	ND	ND	ND	ND	ND
358.09	NP 04/23/98	13.28		344.81	--/ND	ND	ND	ND	ND	ND	ND
	NP 07/08/98	14.90		343.19	¹⁵ 80/--	ND	ND	ND	ND	ND	ND
	10/05/98	16.50		341.59	--/ND	ND	ND	ND	ND	ND	ND
	01/04/99	17.70		340.39	ND/--	ND	ND	ND	ND	ND	ND
	04/05/99	15.67		342.42	ND/--	ND	ND	ND	ND	ND	ND/ND ¹⁷
	07/01/99	16.79		341.30	ND/--	ND	ND	ND	ND	ND	ND/ND ¹⁷
	09/30/99	17.60		340.49	ND/--	ND	ND	ND	ND	ND	ND/ND ¹⁷
	01/03/00	18.86		339.23	ND/--	ND	ND	ND	ND	ND	ND/ND ¹⁷
	04/04/00	15.10		342.99	ND/--	ND	ND	ND	ND	ND	ND/ND ¹⁷
	07/14/00	16.85		341.24	ND/--	ND	ND	ND	ND	ND	ND/ND ¹⁷
	10/27/00	18.35		339.74	ND/--	ND	ND	ND	ND	ND	ND/ND ¹⁷
	01/08/01	18.31		339.78	--/ND	ND	ND	ND	ND	ND	ND/ND ¹⁷
	04/03/01	16.70		341.39	ND/--	ND	ND	ND	ND	ND	ND/ND ¹⁷
	07/06/01	17.90		340.19	ND/--	ND	ND	ND	ND	ND	ND/ND ¹⁷
	10/05/01	18.71		339.38	<50/--	<50	<0.50	<0.50	<0.50	<0.50	<5.0/<2.0 ¹⁷

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #7176
 7850 Amador Valley Boulevard
 Dublin, California

WELL ID/ TOC*	DATE	DTW (ft.)	SI (ft.bgs)	GWE (msl)	TPH-D \blacklozenge (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-4											
356.41	04/23/98	12.11	10.0-25.0	344.30	--/1,400 ¹¹	2,500	5.9	6.4	16	31	ND ¹²
	07/08/98	13.70		342.71	¹¹ 1,400/--	1,000 ¹³	ND ¹²	ND ¹²	ND ¹²	ND ¹²	ND ¹²
	10/05/98	15.18		341.23	--/230 ¹⁰	890 ¹⁶	ND ¹²	ND ¹²	ND ¹²	14	ND ¹²
	01/04/99	16.39		340.02	¹⁰ 71/71 ¹⁰	230 ²²	0.56	1.3	1.4	1.8	10
	04/05/99	14.61		341.80	¹⁰ 340/210 ¹⁰	620 ²³	ND ¹²	1.8	2.1	ND ¹²	6.0/9.3 ¹⁷
	07/01/99	15.43		340.98	²⁴ 260/310 ²⁶	700 ¹⁹	2.1	ND ¹²	1.9	2.4	¹² ND/21 ¹⁷
	09/30/99	16.27		340.14	¹⁰ 420/220 ¹⁰	582 ²⁷	2.60	1.30	1.98	ND ¹²	23.1/22.5 ¹⁷
	01/03/00	17.50		338.91	²⁶ 250/260 ²⁶	800 ²⁷	4.2	4.6	3.3	11	31/17 ¹⁷
	04/04/00	13.91		342.50	^{10,15} 460/340 ²⁶	710 ²⁷	2.0	1.3	4.4	2.0	21/22 ¹⁷
	07/14/00	15.58		340.83	²⁶ 220/76 ²⁶	490 ²⁸	0.89	1.3	0.85	1.8	21/12 ¹⁷
	10/27/00	16.96		339.45	²⁶ 160/120 ²⁶	598 ²¹	ND	1.56	4.65	ND	15.4/14 ¹⁷
	01/08/01	16.64		339.77	--/202 ²⁹	522 ²⁷	4.09	1.69	2.53	1.26	17.2/14.3 ¹⁷
	04/03/01	15.46		340.95	²⁶ 180/ND	575 ²¹	ND ¹²	ND ¹²	ND ¹²	ND ¹²	14.0/11.6 ¹⁷
	07/06/01	16.63		339.78	¹⁰ 230/200 ^{10,30}	720 ¹⁶	4.7	1.5	2.5	0.74	10/7.1 ¹⁷
	10/05/01	17.38		339.03	¹⁰ 180/140 ¹⁰	650 ²⁷	4.3	1.2	1.1	1.8	5.9/5.4 ¹⁷
MW-5											
355.03	04/23/98	11.15	10.0-25.0	343.88	--/100 ¹¹	120	0.53	0.90	1.0	3.8	13
	07/08/98	12.63		342.40	¹⁰ 170/--	ND	ND	ND	ND	ND	12
	10/05/98	14.00		341.03	--/100 ¹⁰	ND	ND	ND	ND	ND	12
	01/04/99	15.21		339.82	ND/--	ND	ND	ND	ND	ND	ND
	04/05/99	13.76		341.27	ND/--	ND	ND	ND	ND	ND	ND/ND ¹⁷
	07/01/99	14.48		340.55	ND/--	ND	ND	ND	ND	ND	¹² ND/2.3 ¹⁷
	09/30/99	15.15		339.88	¹⁰ 60.4/ND	50.8 ²⁷	ND	ND	ND	ND	ND/ND ¹⁷
	01/03/00	16.34		338.69	ND/--	ND	ND	ND	ND	ND	ND/ND ¹⁷
	04/04/00	12.90		342.13	¹⁵ 69/ND	ND	ND	ND	ND	ND	ND/ND ¹⁷
	07/14/00	14.48		340.55	ND/--	ND	ND	ND	ND	ND	ND/ND ¹⁷

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #7176
 7850 Amador Valley Boulevard
 Dublin, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-D◆ (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-5	10/27/00	15.75	10.0-25.0	339.28	ND/--	ND	ND	ND	ND	ND	ND/ND ¹⁷
(cont)	01/08/01	15.25		339.78	--/ND	ND	ND	ND	ND	ND	ND/ND ¹⁷
	04/03/01	14.41		340.62	ND/--	ND	ND	ND	ND	ND	ND/ND ¹⁷
	07/06/01	15.52		339.51	ND/--	ND	ND	ND	ND	ND	ND/ND ¹⁷
	10/05/01	16.28		338.75	<50/--	<50	<0.50	<0.50	<0.50	<0.50	<5.0/<2.0 ¹⁷
Trip Blank											
TB-LB	01/19/98	--	--	--	--	ND	ND	ND	ND	ND	ND
	04/23/98	--	--	--	--	ND	ND	ND	ND	ND	ND
	07/08/98	--	--	--	--	ND	ND	ND	ND	ND	ND
	10/05/98	--	--	--	--	ND	ND	0.70	ND	0.71	ND
	01/04/99	--	--	--	--	ND	ND	0.74	ND	0.92	ND
	04/05/99	--	--	--	--	ND	ND	ND	ND	ND	ND
	07/01/99	--	--	--	--	ND	ND	ND	ND	ND	ND
	09/30/99	--	--	--	--	ND	ND	ND	ND	ND	ND
	01/03/00	--	--	--	--	ND	ND	ND	ND	ND	ND
	04/04/00	--	--	--	--	ND	ND	ND	ND	ND	ND
	07/14/00	--	--	--	--	ND	ND	ND	ND	ND	ND
	10/27/00	--	--	--	--	ND	ND	ND	ND	ND	ND
	01/08/01	--	--	--	--	ND	ND	ND	ND	ND	ND
	04/03/01	--	--	--	--	ND	ND	ND	ND	ND	ND
	07/06/01	--	--	--	--	ND	ND	ND	ND	ND	ND
	10/05/01	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #7176
 7850 Amador Valley Boulevard
 Dublin, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to January 19, 1998, were compiled from reports prepared by MPDS Services, Inc.

TOC = Top of Casing	TPH-D = Total Petroleum Hydrocarbons as Diesel	(ppb) = Parts per billion
DTW = Depth to Water	TPH-G = Total Petroleum Hydrocarbons as Gasoline	ND = Not Detected
(ft.) = Feet	B = Benzene	-- = Not Measured/Not Analyzed
S.I. = Screen Interval	T = Toluene	NP = No purge
(ft.bgs) = Feet Below Ground Surface	E = Ethylbenzene	
GWE = Groundwater Elevation	X = Xylenes	
(msl) = Mean sea level	MTBE = Methyl tertiary butyl ether	

* TOC elevations were surveyed relative to msl, per the Benchmark AM-STW1977 located at the easterly return at the most easterly corner of intersection at Amador Valley Boulevard and Starward Street, (Elevation = 344.17 feet, msl).

◆ Analytical results reported as follows: TPH-D/TPH-D with silica gel cleanup.

¹ Polynuclear Aromatic Hydrocarbons (PNAs) compound naphthalene was detected in well U-1 at a concentration of 320 ppb and at a concentration of 310 ppb in well U-2. All other PNAs compounds were ND in both wells.

² PNAs compounds were ND.

³ Laboratory report indicates unidentified hydrocarbons C9-C26.

⁴ Laboratory report indicates gasoline and unidentified hydrocarbons >C12.

⁵ Laboratory report indicates the hydrocarbons detected appeared to be a diesel and non-diesel mixture.

⁶ Laboratory report indicates the hydrocarbons detected did not appear to be diesel.

⁷ Laboratory has potentially identified the presence of MTBE at reportable levels in the groundwater sample collected from this well.

⁸ 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.

⁹ Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.

¹⁰ Laboratory report indicates unidentified hydrocarbons C9-C24.

¹¹ Laboratory report indicates diesel and unidentified hydrocarbons <C14.

¹² Detection limit raised. Refer to analytical reports.

¹³ Laboratory report indicates unidentified hydrocarbons >C8.

¹⁴ Laboratory report indicates unidentified hydrocarbons <C14.

¹⁵ Laboratory report indicates discrete peaks.

¹⁶ Laboratory report indicates weathered gasoline C6-C12.

¹⁷ MTBE by EPA Method 8260.

¹⁸ Laboratory report indicates unidentified hydrocarbons <C8.

¹⁹ Laboratory report indicates gasoline and unidentified hydrocarbons C6-C12.

²⁰ Laboratory report indicates diesel and unidentified hydrocarbons <C16.

Table 1
Groundwater Monitoring Data and Analytical Results
Tosco (Unocal) Service Station #7176
7850 Amador Valley Boulevard
Dublin, California

EXPLANATIONS: (cont)

- 21 Laboratory report indicates unidentified hydrocarbons C6-C12.
- 22 Laboratory report indicates gasoline and unidentified hydrocarbons >C10.
- 23 Laboratory report indicates gasoline and unidentified hydrocarbons <C7.
- 24 Laboratory report indicates unidentified hydrocarbons C10-C24.
- 25 Laboratory report indicates gasoline and unidentified hydrocarbons <C6.
- 26 Laboratory report indicates unidentified hydrocarbons <C16.
- 27 Laboratory report indicates gasoline C6-C12.
- 28 Laboratory report indicates gasoline C6-C12 + unidentified hydrocarbons C6-C12.
- 29 Laboratory report indicates hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.
- 30 Laboratory report indicates sample was generated out of hold time. The sample was originally run within hold time, but needed to be re-analyzed.

Table 2
Groundwater Analytical Results - Oxygenate Compounds
 Tosco (Unocal) Service Station #7176
 7850 Amador Valley Boulevard
 Dublin, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
U-1	04/05/99	ND ¹	ND ¹	55	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	07/01/99	ND	ND	110	ND	ND	ND	ND	ND
	09/30/99	ND ¹	ND ¹	195	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	01/03/00	ND	ND	120	ND	ND	ND	ND	ND
	04/04/00	ND ¹	ND ¹	160	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	07/14/00	ND ¹	ND ¹	120	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	10/27/00	ND	ND	38	ND	ND	ND	ND	ND
	01/08/01	ND ¹	ND ¹	9.33	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	04/03/01	ND ¹	ND ¹	13.3	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	07/06/01	ND	ND	36	ND	ND	ND	ND	ND
10/05/01	<1,000	<100	36	<2.0	<2.0	<2.0	<2.0	<2.0	
U-2	04/05/99	ND ¹	ND ¹	6.9	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	07/01/99	ND	ND	35	ND	ND	ND	ND	ND
	09/30/99	ND	ND	29.8	ND	ND	ND	ND	ND
	01/03/00	ND	ND	14	ND	ND	ND	ND	ND
	04/04/00	ND ¹	ND ¹	25	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	07/14/00	ND	ND	19	ND	ND	ND	ND	ND
	10/27/00	ND	ND	15	ND	ND	ND	ND	ND
	01/08/01	ND ¹	ND ¹	7.49	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	04/03/01	ND	ND	18.1	ND	ND	ND	ND	ND
	07/06/01	ND	ND	19	ND	ND	ND	ND	ND
10/05/01	<1,000	<100	13	<2.0	<2.0	<2.0	<2.0	<2.0	
U-3	04/05/99	ND	ND	ND	ND	ND	ND	ND	ND
	07/01/99	ND	ND	ND	ND	ND	ND	ND	ND
	09/30/99	ND	ND	ND	ND	ND	ND	ND	ND
	01/03/00	ND	ND	ND	ND	ND	ND	ND	ND
	04/04/00	ND	ND	ND	ND	ND	ND	ND	ND
	07/14/00	ND	ND	ND	ND	ND	ND	ND	ND

Table 2
Groundwater Analytical Results - Oxygenate Compounds
 Tosco (Unocal) Service Station #7176
 7850 Amador Valley Boulevard
 Dublin, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
U-3 (cont)	10/27/00	ND	ND	ND	ND	ND	ND	ND	ND
	01/08/01	ND	ND	ND	ND	ND	ND	ND	ND
	04/03/01	ND	ND	ND	ND	ND	ND	ND	ND
	07/06/01	ND	ND	ND	ND	ND	ND	ND	ND
	10/05/01	<1,000	<100	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
MW-4	04/05/99	ND	ND	9.3	ND	ND	ND	ND	ND
	07/01/99	ND	ND	21	ND	ND	ND	ND	ND
	09/30/99	ND	ND	22.5	ND	ND	ND	ND	ND
	01/03/00	ND	ND	17	ND	ND	ND	ND	ND
	04/04/00	ND	ND	22	ND	ND	ND	ND	ND
	07/14/00	ND	ND	12	ND	ND	ND	ND	ND
	10/27/00	ND	ND	14	ND	ND	ND	ND	ND
	01/08/01	ND	ND	14.3	ND	ND	ND	ND	ND
	04/03/01	ND	ND	11.6	ND	ND	ND	ND	ND
	07/06/01	ND	ND	7.1	ND	ND	ND	ND	ND
	10/05/01	<1,000	<100	5.4	<2.0	<2.0	<2.0	<2.0	<2.0
MW-5	04/05/99	ND	ND	ND	ND	ND	ND	ND	ND
	07/01/99	ND	ND	2.3	ND	ND	ND	ND	ND
	09/30/99	ND	ND	ND	ND	ND	ND	ND	ND
	01/03/00	ND	ND	ND	ND	ND	ND	ND	ND
	04/04/00	ND	ND	ND	ND	ND	ND	ND	ND
	07/14/00	ND	ND	ND	ND	ND	ND	ND	ND
	10/27/00	ND	ND	ND	ND	ND	ND	ND	ND
	01/08/01	ND	ND	ND	ND	ND	ND	ND	ND
	04/03/01	ND	ND	ND	ND	ND	ND	ND	ND
	07/06/01	ND	ND	ND	ND	ND	ND	ND	ND
	10/05/01	<1,000	<100	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0

Table 2
Groundwater Analytical Results - Oxygenate Compounds
Tosco (Unocal) Service Station #7176
7850 Amador Valley Boulevard
Dublin, California

EXPLANATIONS:

TBA = Tertiary butyl alcohol
MTBE = Methyl tertiary butyl ether
DIPE = Di-isopropyl ether
ETBE = Ethyl tertiary butyl ether
TAME = Tertiary amyl methyl ether
1,2-DCA = 1,2-Dichloroethane
EDB = 1,2-Dibromomethane
(ppb) = Parts per billion
ND = Not Detected

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

¹ Detection limit raised. Refer to analytical reports.

Table 3
Dissolved Oxygen Concentrations
 Tosco (Unocal) Service Station #7176
 7850 Amador Valley Boulevard
 Dublin, California

WELL ID	DATE	Before Purging (mg/L)	After Purging (mg/L)
U-1	01/11/96	--	3.41
	04/11/96	3.77	3.78
	07/10/96 ¹	1.22	--
	10/30/96 ¹	1.41	--
	01/27/97 ¹	1.34	--
	04/08/97 ¹	2.09	--
	07/17/97 ¹	2.00	--
	10/17/97 ¹	1.86	--
	01/19/98 ¹	2.91	--
	04/23/98 ¹	0.59	--
	07/08/98 ¹	1.10	--
U-2	01/11/96	--	3.99
	04/11/96	3.32	3.41
	07/10/96 ¹	1.01	--
	10/30/96 ¹	1.42	--
	01/27/97 ¹	1.29	--
	04/08/97 ¹	1.69	--
	07/17/97 ¹	2.08	--
	10/17/97 ¹	1.80	--
	01/19/98 ¹	2.95	--
	04/23/98 ¹	0.55	--
	07/08/98 ¹	1.36	--
U-3	01/11/96	--	5.05
	04/11/96	5.16	4.96
	07/10/96 ¹	3.44	--
	10/30/96 ¹	2.18	--
	01/27/97 ¹	2.61	--
	04/08/97 ¹	3.73	--
	07/17/97 ¹	2.65	--
	10/17/97 ¹	2.44	--
	01/19/98 ¹	6.51	--
	04/23/98 ¹	4.72	--
	07/08/98 ¹	4.35	--
CC-1	10/02/95	2.83	--

EXPLANATIONS:

Dissolved oxygen concentrations prior to January 19, 1998, were compiled from reports prepared by MPDS Services, Inc.

(mg/L) = Milligrams per liter

-- = Not Measured

CC-1 = Conductor casing in the underground storage tank backfill

¹ The wells were not purged on this date.

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/City # Tosco # 7176 Job #: 180022
 Address: 7850 Amador Valley Blvd. Date: 10/5/01
 City: Dublin, CA Sampler: Vertkes

Well ID: U-1 Well Condition: OK
 Well Diameter: 2 in. Amount Bailed (product/water): 0 (gal.)
 Total Depth: 27.80 ft. Hydrocarbon Thickness: 0.00 in.
 Depth to Water: 16.45 ft.

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

$11.35 \times VF \ 0.17 = 1.92 \times 3 \text{ (case volume)} = \text{Estimated Purge Volume: } \underline{6.0} \text{ (gal.)}$

Purge Equipment: Disposable Bailer
 Sampling Equipment: Disposable Bailer
 Stack
 Suction
 Grundfos
 Other: _____

Starting Time: 1545
 Sampling Time: 1605
 Purging Flow Rate: _____ gpm.
 Did well de-water? no

Weather Conditions: cloudy
 Water Color: grayish Odor: 0
 Sediment Description: soft
 If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm}$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1550</u>	<u>2</u>	<u>7.42</u>	<u>1153</u>	<u>70.0</u>			
<u>1555</u>	<u>4</u>	<u>7.30</u>	<u>1170</u>	<u>70.7</u>			
<u>1600</u>	<u>6</u>	<u>7.26</u>	<u>1132</u>	<u>70.6</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-1</u>	<u>5 X VDA VIAL</u>	<u>Y</u>	<u>HCL</u>	<u>Sagunier</u>	<u>(TPH, BTEX, MTOE, 60043+1, 2, DCA & EDB) (2200)</u>
<u> </u>	<u>1 Amber</u>	<u> </u>	<u>NONE</u>	<u> </u>	<u>TPH-D</u>

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/ Facility # Tasco # 7176 Job #: 180022
 Address: 7850 Amador Valley Blvd. Date: 10/5/01
 City: Dublin, CA Sampler: Ventley

Well ID: U-2 Well Condition: ON
 Well Diameter: 2 in. Hydrocarbon Thickness: 0.09 in. Amount Bailed (product/water): 0 (gal.)
 Total Depth: 26.46 ft. Volume 2" = 0.17 3" = 0.38 4" = 0.66
 Depth to Water: 17.15 ft. Volume Factor (VF) 6" = 1.50 12" = 5.80

9.21 x VF 0.17 = 1.56 x 3 (case volume) = Estimated Purge Volume: 5.0 (gal.)

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

Starting Time: 1515 Weather Conditions: cloudy
 Sampling Time: 1535 Water Color: grayish Odor: Y
 Purging Flow Rate: _____ gpm. Sediment Description: silt
 Did well de-water? no If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity (µmhos/cm)	Temperature (F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1519</u>	<u>1.5</u>	<u>7.40</u>	<u>1170</u>	<u>70.2</u>			
<u>1523</u>	<u>3</u>	<u>7.28</u>	<u>1157</u>	<u>70.7</u>			
<u>1528</u>	<u>5</u>	<u>7.24</u>	<u>1148</u>	<u>70.9</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-2</u>	<u>5 x VOA VIAL</u>	<u>Y</u>	<u>HCL</u>	<u>Sagunig</u>	<u>TPH6/BTEX/MTOE</u> <u>6oxy+1,2DCA+EDB</u> (8260)
<u>u</u>	<u>1 Amber</u>	<u>-</u>	<u>NONE</u>	<u>-</u>	<u>TPH-D</u>

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/ Facility # Tosco # 7176 Job#: 180022
 Address: 7850 Amador Valley Blvd. Date: 10/5/01
 City: Dublin, CA Sampler: Vaughn

Well ID: U-3 Well Condition: OK
 Well Diameter: 2 in. Amount Bailed (product/water): 0 (gal.)
 Total Depth: 28.41 ft. Hydrocarbon Thickness: 0-00 in.
 Depth to Water: 18.71 ft. Volume Factor (VF):
 2" = 0.17 3" = 0.38 4" = 0.66
 6" = 1.50 12" = 5.80

Purge Equipment: Disposable Bailer x VF 0.17 = 1.64 x 3 (case volume) = Estimated Purge Volume: 5.0 (gal.)

Sampling Equipment: Disposable Bailer
 Bailer
 Stack
 Suction
 Grundfos
 Other: _____

Starting Time: 1440 Weather Conditions: ptly cldy
 Sampling Time: 1500 Water Color: brn Odor: no
 Purging Flow Rate: _____ gpm. Sediment Description: silt
 Did well de-water? no If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity (µmhos/cm)	Temperature (°F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
1444	1.5	7.72	945	69.3			
1448	3	7.58	931	69.8			
1454	5	7.54	925	70.0			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
U-3	5 X VDA VIAL	Y	HCL	Saguino	(TPHG/BTEX/MTOE) (6043+L DATED B (8260))
~	1 Amber	~	NONE	~	

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/ Facility # Tosco # 7176 Job#: 180022
 Address: 7850 Amador Valley Blvd. Date: 10/5/01
 City: Dublin, CA Sampler: Venther

Well ID: MW-4 Well Condition: OK
 Well Diameter: 2 in. Amount Bailed (product/water): 0 (gal.)
 Total Depth: 2540 ft. Hydrocarbon Thickness: 0.50 in.
 Depth to Water: 17.38 ft.

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

8.02 x VF oil = 1.36 x 3 (case volume) = Estimated Purge Volume: 4.5 (gal.)

Purge Equipment: Disposable Bailer
 Stack
 Suction
 Grundfos
 Other: _____

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

Starting Time: 1405 Weather Conditions: ptly cldy
 Sampling Time: 1425 Water Color: brn Odor: mild
 Purging Flow Rate: _____ gpm Sediment Description: slit
 Did well de-water? no If yes: Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity μ mhos/cm	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1409</u>	<u>1.5</u>	<u>7.50</u>	<u>1104</u>	<u>69.6</u>	_____	_____	_____
<u>1413</u>	<u>3</u>	<u>7.37</u>	<u>1090</u>	<u>70.1</u>	_____	_____	_____
<u>1417</u>	<u>4.5</u>	<u>7.32</u>	<u>1083</u>	<u>70.3</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-4</u>	<u>5 x VDA VIAL</u>	<u>Y</u>	<u>HCL</u>	<u>Saguia</u>	<u>(TPH, BTEX, MTOE, Benz, 2,4,6-EDB) (8760)</u>
<u>"</u>	<u>1 Amber</u>	<u>"</u>	<u>NONE</u>	<u>"</u>	<u>TPH-D</u>

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/ Facility # Tosco # 7176 Job #: 180022
 Address: 7850 Amador Valley Blvd. Date: 10/5/01
 City: Dublin, CA Sampler: Varthol

Well ID: MW-5 Well Condition: OK
 Well Diameter: 2 in. Amount Bailed (product/water): 0 (gal.)
 Total Depth: 24.88 ft. Hydrocarbon Thickness: 0.00 in.
 Depth to Water: 16.28 ft.

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

$8.60 \times VF_{0.17} = 1.46 \times 3 \text{ (case volume)} = \text{Estimated Purge Volume: } 4.5 \text{ (gal.)}$

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

Starting Time: 1330 Weather Conditions: overcast
 Sampling Time: 1352 Water Color: brn. Odor: NO
 Purging Flow Rate: _____ opm. Sediment Description: silt
 Did well de-water? ✓ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity (µmhos/cm)	Temperature (°F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1334</u>	<u>1.5</u>	<u>7.76</u>	<u>963</u>	<u>69.3</u>			
<u>1338</u>	<u>3</u>	<u>7.60</u>	<u>945</u>	<u>69.8</u>			
<u>1342</u>	<u>4.5</u>	<u>7.56</u>	<u>939</u>	<u>69.7</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-5</u>	<u>5 X VOA VIAL</u>	<u>Y</u>	<u>HCL</u>	<u>Saguino</u>	<u>TPH, BTEX, MTOE</u>
<u>"</u>	<u>1 Amber</u>	<u>~</u>	<u>NONE</u>	<u>"</u>	<u>6043+12DCA+EPB (8268)</u> <u>TPH-D</u>

COMMENTS: _____



Tosco Marketing Company
2000 East Katella Pl., P.O. Box
San Anselmo, California 94543

Facility Number UNOCAL SS# 7176
 Facility Address 7850 Amador Valley Blvd. Dublin, CA
 Consultant Project Number 180022.85
 Consultant Name Gattler-Ryan Inc. (G-R Inc.)
 Address 6747 Sierra Court, Suite I, Dublin, CA 94568
 Project Contact (Name) Deanna L. Harding
 (Phone) 510-551-7555 (Fax Number) 510-551-7888

Contact (Name) MR. DAVE DEWITT
 (Phone) (925) 277-2384
 Laboratory Name Sequoia Analytical
 Laboratory Release Number _____
 Samples Collected by (Name) Vortex Tashjian
 Collection Date 10/5/01
 Signature Deanna Harding

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water G = Ground	Type C = Grab C = Composite D = Discrete	Time	Sample Preservation	Lead (Y or No)	Analysis To Be Performed										Remarks	
								TPH Gas - STEK WASTE (8015)	TPH Gas (8015)	Oil and Grease (4520)	Purgeable Hydrocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals CALCIUM, ZINC, LEAD, or AS	60445 (8260)	60445 (8260)		60445 (8260)
TB-LB	01	1	W	Ce		HCl	Y	X											Run silica gel
U-1	02	6	"	"	1605	"	F	X	X										check-up on gas
U-2	03	6	"	"	1535	"	F	X	X										Diesel hits
U-3	04	6	"	"	1500	"	F	X	X										
MW-4	05	6	"	"	1425	"	F	X	X										
MW-5	06	6	"	"	1352	"	F	X	X										

Relinquished By (Signature) <u>Deanna Harding</u>	Organization G-R Inc.	Date/Time 10/5/01	Received By (Signature) <u>[Signature]</u>	Organization	Date/Time 10/5/01	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 6 Days 10-Days <u>In Controlled</u>
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)	Organization	Date/Time	



**Sequoia
Analytical**

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25 October, 2001

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

Latonya K. Pelt
Project Manager
Gettler-Ryan/Geostrategies(1)
6747 Sierra Court, Suite J
Dublin, CA 94568

RE: Tosco(1)
Sequoia Report: L110053

Enclosed are the results of analyses for samples received by the laboratory on 10/05/01 17:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Latonya Pelt
Project Manager

CA ELAP Certificate #2360



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

Project: Tosco(1)
Project Number: Unocal SS#7176, Dublin, CA
Project Manager: Deanna Harding

Reported:
10/25/01 14:57

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	L110053-01	Water	10/05/01 00:00	10/05/01 17:30
U-1	L110053-02	Water	10/05/01 16:05	10/05/01 17:30
U-2	L110053-03	Water	10/05/01 15:35	10/05/01 17:30
U-3	L110053-04	Water	10/05/01 15:00	10/05/01 17:30
MW-4	L110053-05	Water	10/05/01 14:25	10/05/01 17:30
MW-5	L110053-06	Water	10/05/01 13:52	10/05/01 17:30

Sequoia Analytical - San Carlos

Latonya K. Pelt

Latonya Pelt, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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

 Project: Tosco(1)
 Project Number: Unocal SS#7176, Dublin, CA
 Project Manager: Deanna Harding

 Reported:
 10/25/01 14:57

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TB-LB (L110053-01) Water Sampled: 10/05/01 00:00 Received: 10/05/01 17:30									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1100067	10/16/01	10/17/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		102 %		70-130	"	"	"	"	
U-1 (L110053-02) Water Sampled: 10/05/01 16:05 Received: 10/05/01 17:30									
Purgeable Hydrocarbons as Gasoline	3800	500	ug/l	10	1100068	10/16/01	10/17/01	DHS LUFT	P-02
Benzene	19	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	19	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	64	50	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		95.4 %		70-130	"	"	"	"	
U-2 (L110053-03) Water Sampled: 10/05/01 15:35 Received: 10/05/01 17:30									
Purgeable Hydrocarbons as Gasoline	3600	500	ug/l	10	1100068	10/16/01	10/17/01	DHS LUFT	P-02
Benzene	31	5.0	"	"	"	"	"	"	
Toluene	9.6	5.0	"	"	"	"	"	"	
Ethylbenzene	8.7	5.0	"	"	"	"	"	"	
Xylenes (total)	6.9	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	62	50	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		97.0 %		70-130	"	"	"	"	



Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#7176, Dublin, CA Project Manager: Deanna Harding	Reported: 10/25/01 14:57
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**Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B
Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-3 (L110053-04) Water Sampled: 10/05/01 15:00 Received: 10/05/01 17:30									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1100076	10/17/01	10/17/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		83.7 %	70-130		"	"	"	"	
MW-4 (L110053-05) Water Sampled: 10/05/01 14:25 Received: 10/05/01 17:30									
Purgeable Hydrocarbons as Gasoline	650	50	ug/l	1	1100076	10/17/01	10/17/01	DHS LUFT	P-01
Benzene	4.3	0.50	"	"	"	"	"	"	
Toluene	1.2	0.50	"	"	"	"	"	"	
Ethylbenzene	1.1	0.50	"	"	"	"	"	"	
Xylenes (total)	1.8	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	5.9	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		142 %	70-130		"	"	"	"	S-04
MW-5 (L110053-06) Water Sampled: 10/05/01 13:52 Received: 10/05/01 17:30									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1100076	10/17/01	10/17/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		71.4 %	70-130		"	"	"	"	



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

Project: Tosco(1)
Project Number: Unocal SS#7176, Dublin, CA
Project Manager: Deanna Harding

Reported:
10/25/01 14:57

**Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B
Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (L110053-02) Water Sampled: 10/05/01 16:05 Received: 10/05/01 17:30									
Ethanol	ND	1000	ug/l	1	1100051	10/11/01	10/11/01	EPA 8260B	
1,2-Dibromoethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	36	2.0	"	"	"	"	"	"	A-01
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	100	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		79.0 %		76-114	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		105 %		88-110	"	"	"	"	
U-2 (L110053-03) Water Sampled: 10/05/01 15:35 Received: 10/05/01 17:30									
Ethanol	ND	1000	ug/l	1	1100054	10/11/01	10/11/01	EPA 8260B	
1,2-Dibromoethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	13	2.0	"	"	"	"	"	"	A-01
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	100	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		114 %		76-114	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		94.8 %		88-110	"	"	"	"	
U-3 (L110053-04) Water Sampled: 10/05/01 15:00 Received: 10/05/01 17:30									
Ethanol	ND	1000	ug/l	1	1100054	10/11/01	10/11/01	EPA 8260B	
1,2-Dibromoethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	100	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		110 %		76-114	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		97.2 %		88-110	"	"	"	"	

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

 Project: Tosco(1)
 Project Number: Unocal SS#7176, Dublin, CA
 Project Manager: Deanna Harding

 Reported:
 10/25/01 14:57

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-4 (L110053-05) Water Sampled: 10/05/01 14:25 Received: 10/05/01 17:30									
Ethanol	ND	1000	ug/l	1	1100050	10/11/01	10/11/01	EPA 8260B	
1,2-Dibromoethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	5.4	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	100	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		99.2 %		76-114	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		108 %		88-110	"	"	"	"	
MW-5 (L110053-06) Water Sampled: 10/05/01 13:52 Received: 10/05/01 17:30									
Ethanol	ND	1000	ug/l	1	1100054	10/11/01	10/11/01	EPA 8260B	
1,2-Dibromoethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	100	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		110 %		76-114	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		95.4 %		88-110	"	"	"	"	

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

 Project: Tosco(1)
 Project Number: Unocal SS#7176, Dublin, CA
 Project Manager: Deanna Harding

Reported:
 10/25/01 14:57

Diesel Hydrocarbons (C9-C24) by 8015B modified
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (L110053-02) Water Sampled: 10/05/01 16:05 Received: 10/05/01 17:30									
Diesel Range Organics (C9-C24)	2500	50	ug/l	1	1J17048	10/17/01	10/18/01	8015Bm	D-15
Surrogate: <i>n</i> -Pentacosane		136 %	50-150		"	"	"	"	
U-2 (L110053-03) Water Sampled: 10/05/01 15:35 Received: 10/05/01 17:30									
Diesel Range Organics (C9-C24)	3200	500	ug/l	10	1J17048	10/17/01	10/19/01	8015Bm	D-15
Surrogate: <i>n</i> -Pentacosane		77.4 %	50-150		"	"	"	"	
U-3 (L110053-04) Water Sampled: 10/05/01 15:00 Received: 10/05/01 17:30									
Diesel Range Organics (C9-C24)	ND	50	ug/l	1	1J19005	10/19/01	10/22/01	8015Bm	
Surrogate: <i>n</i> -Pentacosane		76.8 %	50-150		"	"	"	"	
MW-4 (L110053-05) Water Sampled: 10/05/01 14:25 Received: 10/05/01 17:30									
Diesel Range Organics (C9-C24)	180	50	ug/l	1	1J19005	10/19/01	10/22/01	8015Bm	D-15
Surrogate: <i>n</i> -Pentacosane		86.4 %	50-150		"	"	"	"	
MW-5 (L110053-06) Water Sampled: 10/05/01 13:52 Received: 10/05/01 17:30									
Diesel Range Organics (C9-C24)	ND	50	ug/l	1	1J19005	10/19/01	10/23/01	8015Bm	
Surrogate: <i>n</i> -Pentacosane		86.0 %	50-150		"	"	"	"	

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

Project: Tosco(1)
Project Number: Unocal SS#7176, Dublin, CA
Project Manager: Deanna Harding

Reported:
10/25/01 14:57

**Diesel Hydrocarbons (C9-C24) with Silica Gel Cleanup by DHS LUFT
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (L110053-02) Water Sampled: 10/05/01 16:05 Received: 10/05/01 17:30									
Diesel Range Organics (C9-C24)	2300	100	ug/l	2	1J19023	10/19/01	10/23/01	DHS LUFT	D-15
<i>Surrogate: n-Pentacosane</i>		71.4 %	40-140		"	"	"	"	
U-2 (L110053-03) Water Sampled: 10/05/01 15:35 Received: 10/05/01 17:30									
Diesel Range Organics (C9-C24)	1900	100	ug/l	2	1J19023	10/19/01	10/23/01	DHS LUFT	D-15
<i>Surrogate: n-Pentacosane</i>		91.6 %	40-140		"	"	"	"	
MW-4 (L110053-05) Water Sampled: 10/05/01 14:25 Received: 10/05/01 17:30									
Diesel Range Organics (C9-C24)	140	50	ug/l	1	1J23030	10/19/01	10/24/01	DHS LUFT	D-15
<i>Surrogate: n-Pentacosane</i>		90.2 %	40-140		"	"	"	"	

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

 Project: Tosco(1)
 Project Number: Unocal SS#7176, Dublin, CA
 Project Manager: Deanna Harding

 Reported:
 10/25/01 14:57

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1100067 - EPA 5030B (P/T)										
Blank (1100067-BLK1)										
Prepared & Analyzed: 10/16/01										
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	5.0	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	8.05		"	10.0		80.5	70-130			
LCS (1100067-BS1)										
Prepared & Analyzed: 10/16/01										
Benzene	9.51	0.50	ug/l	10.0		95.1	70-130			
Toluene	9.45	0.50	"	10.0		94.5	70-130			
Ethylbenzene	9.70	0.50	"	10.0		97.0	70-130			
Xylenes (total)	28.9	0.50	"	30.0		96.3	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	8.01		"	10.0		80.1	70-130			
LCS (1100067-BS2)										
Prepared & Analyzed: 10/16/01										
Purgeable Hydrocarbons as Gasoline	228	50	ug/l	250		91.2	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	11.6		"	10.0		116	70-130			
Matrix Spike (1100067-MS1)										
Source: L110034-07 Prepared & Analyzed: 10/16/01										
Benzene	8.75	0.50	ug/l	10.0	ND	87.5	60-140			
Toluene	8.71	0.50	"	10.0	ND	87.1	60-140			
Ethylbenzene	9.13	0.50	"	10.0	ND	91.3	60-140			
Xylenes (total)	27.3	0.50	"	30.0	ND	91.0	60-140			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.6		"	10.0		106	70-130			
Matrix Spike Dup (1100067-MSD1)										
Source: L110034-07 Prepared & Analyzed: 10/16/01										
Benzene	9.51	0.50	ug/l	10.0	ND	95.1	60-140	8.32	25	
Toluene	9.28	0.50	"	10.0	ND	92.8	60-140	6.34	25	
Ethylbenzene	9.63	0.50	"	10.0	ND	96.3	60-140	5.33	25	
Xylenes (total)	28.7	0.50	"	30.0	ND	95.7	60-140	5.00	25	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.3		"	10.0		103	70-130			



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

Project: Tosco(1)
Project Number: Unocal SS#7176, Dublin, CA
Project Manager: Deanna Harding

Reported:
10/25/01 14:57

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1100068 - EPA 5030B (P/T)

Blank (1100068-BLK1)

Prepared & Analyzed: 10/16/01

Purgeable Hydrocarbons as Gasoline	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	5.0	"							
Surrogate: <i>a,a,a</i> -Trifluorotoluene	10.5		"	10.0		105	70-130			

LCS (1100068-BS1)

Prepared & Analyzed: 10/16/01

Benzene	9.46	0.50	ug/l	10.0		94.6	70-130			
Toluene	9.47	0.50	"	10.0		94.7	70-130			
Ethylbenzene	9.54	0.50	"	10.0		95.4	70-130			
Xylenes (total)	28.4	0.50	"	30.0		94.7	70-130			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	9.35		"	10.0		93.5	70-130			

LCS (1100068-BS2)

Prepared & Analyzed: 10/16/01

Purgeable Hydrocarbons as Gasoline	230	50	ug/l	250		92.0	70-130			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	9.28		"	10.0		92.8	70-130			

Matrix Spike (1100068-MS1)

Source: L110036-03

Prepared & Analyzed: 10/16/01

Benzene	9.47	0.50	ug/l	10.0	ND	94.7	60-140			
Toluene	9.33	0.50	"	10.0	ND	93.3	60-140			
Ethylbenzene	9.55	0.50	"	10.0	ND	95.5	60-140			
Xylenes (total)	27.9	0.50	"	30.0	ND	93.0	60-140			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	10.3		"	10.0		103	70-130			

Matrix Spike Dup (1100068-MSD1)

Source: L110036-03

Prepared & Analyzed: 10/16/01

Benzene	9.14	0.50	ug/l	10.0	ND	91.4	60-140	3.55	25	
Toluene	9.28	0.50	"	10.0	ND	92.8	60-140	0.537	25	
Ethylbenzene	9.82	0.50	"	10.0	ND	98.2	60-140	2.79	25	
Xylenes (total)	29.0	0.50	"	30.0	ND	96.7	60-140	3.87	25	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	11.9		"	10.0		119	70-130			



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

Project: Tosco(1)
Project Number: Unocal SS#7176, Dublin, CA
Project Manager: Deanna Harding

Reported:
10/25/01 14:57

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1100076 - EPA 5030B (P/T)

Blank (1100076-BLK1)

Prepared & Analyzed: 10/17/01

Purgeable Hydrocarbons as Gasoline	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	5.0	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	8.61		"	10.0		86.1	70-130			

LCS (1100076-BS1)

Prepared & Analyzed: 10/17/01

Benzene	9.15	0.50	ug/l	10.0		91.5	70-130			
Toluene	9.06	0.50	"	10.0		90.6	70-130			
Ethylbenzene	9.20	0.50	"	10.0		92.0	70-130			
Xylenes (total)	27.4	0.50	"	30.0		91.3	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	8.34		"	10.0		83.4	70-130			

LCS (1100076-BS2)

Prepared & Analyzed: 10/17/01

Purgeable Hydrocarbons as Gasoline	227	50	ug/l	250		90.8	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.42		"	10.0		94.2	70-130			

Matrix Spike (1100076-MS1)

Source: L110060-02

Prepared & Analyzed: 10/17/01

Purgeable Hydrocarbons as Gasoline	256	50	ug/l	250	ND	102	60-140			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.2		"	10.0		102	70-130			

Matrix Spike Dup (1100076-MSD1)

Source: L110060-02

Prepared & Analyzed: 10/17/01

Purgeable Hydrocarbons as Gasoline	241	50	ug/l	250	ND	96.4	60-140	6.04	25	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.08		"	10.0		90.8	70-130			

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

 Project: Tosco(1)
 Project Number: Unocal SS#7176, Dublin, CA
 Project Manager: Deanna Harding

 Reported:
 10/25/01 14:57

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

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1100050 - EPA 5030B [P/T]
Blank (1100050-BLK1)

Prepared & Analyzed: 10/10/01

Ethanol	ND	1000	ug/l							
1,2-Dibromoethane	ND	2.0	"							
1,2-Dichloroethane	ND	2.0	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
Methyl tert-butyl ether	ND	2.0	"							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	100	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	48.8		"	50.0		97.6	76-114			
<i>Surrogate: Toluene-d8</i>	49.2		"	50.0		98.4	88-110			

Blank (1100050-BLK2)

Prepared & Analyzed: 10/11/01

Ethanol	ND	1000	ug/l							
1,2-Dibromoethane	ND	2.0	"							
1,2-Dichloroethane	ND	2.0	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
Methyl tert-butyl ether	ND	2.0	"							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	100	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	50.4		"	50.0		101	76-114			
<i>Surrogate: Toluene-d8</i>	50.2		"	50.0		100	88-110			

LCS (1100050-BS1)

Prepared & Analyzed: 10/10/01

Methyl tert-butyl ether	57.1	2.0	ug/l	50.0		114	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	52.9		"	50.0		106	76-114			
<i>Surrogate: Toluene-d8</i>	50.3		"	50.0		101	88-110			



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

Project: Tosco(1)
Project Number: Unocal SS#7176, Dublin, CA
Project Manager: Deanna Harding

Reported:
10/25/01 14:57

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1100050 - EPA 5030B [P/T]

LCS (1100050-BS2)

Prepared & Analyzed: 10/11/01

Methyl tert-butyl ether	51.5	2.0	ug/l	50.0		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	50.2		"	50.0		100	76-114			
Surrogate: Toluene-d8	47.9		"	50.0		95.8	88-110			

Matrix Spike (1100050-MS1)

Source: L110044-08

Prepared: 10/10/01 Analyzed: 10/11/01

Methyl tert-butyl ether	47.4	2.0	ug/l	50.0	ND	94.8	60-140			
Surrogate: 1,2-Dichloroethane-d4	49.0		"	50.0		98.0	76-114			
Surrogate: Toluene-d8	48.8		"	50.0		97.6	88-110			

Matrix Spike Dup (1100050-MSD1)

Source: L110044-08

Prepared: 10/10/01 Analyzed: 10/11/01

Methyl tert-butyl ether	48.0	2.0	ug/l	50.0	ND	96.0	60-140	1.26	25	
Surrogate: 1,2-Dichloroethane-d4	49.1		"	50.0		98.2	76-114			
Surrogate: Toluene-d8	49.9		"	50.0		99.8	88-110			

Batch 1100051 - EPA 5030B [P/T]

Blank (1100051-BLK1)

Prepared & Analyzed: 10/11/01

Ethanol	ND	1000	ug/l							
1,2-Dibromoethane	ND	2.0	"							
1,2-Dichloroethane	ND	2.0	"							
(Di)-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
Methyl tert-butyl ether	ND	2.0	"							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	100	"							
Surrogate: 1,2-Dichloroethane-d4	50.4		"	50.0		101	76-114			
Surrogate: Toluene-d8	50.2		"	50.0		100	88-110			

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

 Project: Tosco(1)
 Project Number: Unocal SS#7176, Dublin, CA
 Project Manager: Deanna Harding

 Reported:
 10/25/01 14:57

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

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1100051 - EPA 5030B [P/T]
Blank (1100051-BLK2)

Prepared & Analyzed: 10/15/01

Ethanol	ND	1000	ug/l							
1,2-Dibromoethane	ND	2.0	"							
1,2-Dichloroethane	ND	2.0	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
Methyl tert-butyl ether	ND	2.0	"							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	100	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	51.9		"	50.0		104	76-114			
<i>Surrogate: Toluene-d8</i>	52.5		"	50.0		105	88-110			

LCS (1100051-BS1)

Prepared & Analyzed: 10/11/01

Methyl tert-butyl ether	51.5	2.0	ug/l	50.0		103	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	50.2		"	50.0		100	76-114			
<i>Surrogate: Toluene-d8</i>	47.9		"	50.0		95.8	88-110			

LCS (1100051-BS2)

Prepared & Analyzed: 10/15/01

Methyl tert-butyl ether	58.4	2.0	ug/l	50.0		117	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	56.2		"	50.0		112	76-114			
<i>Surrogate: Toluene-d8</i>	50.5		"	50.0		101	88-110			

Matrix Spike (1100051-MS1)

Source: L110057-02

Prepared & Analyzed: 10/11/01

Methyl tert-butyl ether	58.8	2.0	ug/l	50.0	ND	118	60-140			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	55.6		"	50.0		111	76-114			
<i>Surrogate: Toluene-d8</i>	49.6		"	50.0		99.2	88-110			

Matrix Spike Dup (1100051-MSD1)

Source: L110057-02

Prepared & Analyzed: 10/11/01

Methyl tert-butyl ether	58.3	2.0	ug/l	50.0	ND	117	60-140	0.851	25	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	53.4		"	50.0		107	76-114			
<i>Surrogate: Toluene-d8</i>	49.4		"	50.0		98.8	88-110			



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

Project: Tosco(1)
Project Number: Unocal SS#7176, Dublin, CA
Project Manager: Deanna Harding

Reported:
10/25/01 14:57

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1100054 - EPA 5030B [P/T]

Blank (1100054-BLK1)

Prepared & Analyzed: 10/11/01

Ethanol	ND	1000	ug/l							
1,2-Dibromoethane	ND	2.0	"							
1,2-Dichloroethane	ND	2.0	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
Methyl tert-butyl ether	ND	2.0	"							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	100	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	47.2		"	50.0		94.4	76-114			
<i>Surrogate: Toluene-d8</i>	49.5		"	50.0		99.0	88-110			

LCS (1100054-BS1)

Prepared & Analyzed: 10/11/01

Methyl tert-butyl ether	45.4	2.0	ug/l	50.0		90.8	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	48.4		"	50.0		96.8	76-114			
<i>Surrogate: Toluene-d8</i>	48.4		"	50.0		96.8	88-110			

Matrix Spike (1100054-MS1)

Source: L110057-07

Prepared & Analyzed: 10/11/01

Methyl tert-butyl ether	49.5	2.0	ug/l	50.0	3.0	93.0	60-140			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	49.5		"	50.0		99.0	76-114			
<i>Surrogate: Toluene-d8</i>	50.8		"	50.0		102	88-110			

Matrix Spike Dup (1100054-MSD1)

Source: L110057-07

Prepared & Analyzed: 10/11/01

Methyl tert-butyl ether	50.8	2.0	ug/l	50.0	3.0	95.6	60-140	2.76	25	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	51.0		"	50.0		102	76-114			
<i>Surrogate: Toluene-d8</i>	49.6		"	50.0		99.2	88-110			

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

 Project: Tosco(1)
 Project Number: Unocal SS#7176, Dublin, CA
 Project Manager: Deanna Harding

 Reported:
 10/25/01 14:57

Diesel Hydrocarbons (C9-C24) by 8015B modified - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1J17048 - EPA 3510B
Blank (1J17048-BLK1)

Prepared: 10/17/01 Analyzed: 10/18/01

Diesel Range Organics (C9-C24)	ND	50	ug/l							
Surrogate: n-Pentacosane	45.3		"	50.0		90.6	50-150			

LCS (1J17048-BS1)

Prepared: 10/17/01 Analyzed: 10/18/01

Diesel Range Organics (C9-C24)	387	50	ug/l	500		77.4	60-140			
Surrogate: n-Pentacosane	45.9		"	50.0		91.8	50-150			

LCS Dup (1J17048-BSD1)

Prepared: 10/17/01 Analyzed: 10/18/01

Diesel Range Organics (C9-C24)	370	50	ug/l	500		74.0	60-140	4.49	50	
Surrogate: n-Pentacosane	45.7		"	50.0		91.4	50-150			

Batch 1J19005 - EPA 3510B
Blank (1J19005-BLK1)

Prepared: 10/19/01 Analyzed: 10/22/01

Diesel Range Organics (C9-C24)	ND	50	ug/l							
Surrogate: n-Pentacosane	39.3		"	50.0		78.6	50-150			

LCS (1J19005-BS1)

Prepared: 10/19/01 Analyzed: 10/22/01

Diesel Range Organics (C9-C24)	318	50	ug/l	500		63.6	60-140			
Surrogate: n-Pentacosane	43.1		"	50.0		86.2	50-150			

LCS Dup (1J19005-BSD1)

Prepared: 10/19/01 Analyzed: 10/22/01

Diesel Range Organics (C9-C24)	357	50	ug/l	500		71.4	60-140	11.6	50	
Surrogate: n-Pentacosane	42.8		"	50.0		85.6	50-150			

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

 Project: Tosco(1)
 Project Number: Unocal SS#7176, Dublin, CA
 Project Manager: Deanna Harding

Reported:
 10/25/01 14:57

Diesel Hydrocarbons (C9-C24) with Silica Gel Cleanup by DHS LUFT - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J19023 - EPA 3510B										
Blank (1J19023-BLK1)				Prepared: 10/19/01 Analyzed: 10/22/01						
Diesel Range Organics (C9-C24)	ND	50	ug/l							
Surrogate: <i>n</i> -Pentacosane	31.0		"	50.0		62.0	40-140			
LCS (1J19023-BS1)				Prepared: 10/19/01 Analyzed: 10/22/01						
Diesel Range Organics (C9-C24)	247	50	ug/l	500		49.4	40-140			
Surrogate: <i>n</i> -Pentacosane	29.7		"	50.0		59.4	40-140			
LCS Dup (1J19023-BSD1)				Prepared: 10/19/01 Analyzed: 10/22/01						
Diesel Range Organics (C9-C24)	253	50	ug/l	500		50.6	40-140	2.40	50	
Surrogate: <i>n</i> -Pentacosane	31.6		"	50.0		63.2	40-140			
Batch 1J23030 - EPA 3510B										
Blank (1J23030-BLK1)				Prepared: 10/19/01 Analyzed: 10/24/01						
Diesel Range Organics (C9-C24)	ND	50	ug/l							
Surrogate: <i>n</i> -Pentacosane	41.6		"	50.0		83.2	40-140			
LCS (1J23030-BS1)				Prepared: 10/19/01 Analyzed: 10/24/01						
Diesel Range Organics (C9-C24)	280	50	ug/l	500		56.0	40-140			
Surrogate: <i>n</i> -Pentacosane	44.4		"	50.0		88.8	40-140			
LCS Dup (1J23030-BSD1)				Prepared: 10/19/01 Analyzed: 10/24/01						
Diesel Range Organics (C9-C24)	288	50	ug/l	500		57.6	40-140	2.82	50	
Surrogate: <i>n</i> -Pentacosane	40.1		"	50.0		80.2	40-140			



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Project Number: Unocal SS#7176, Dublin, CA
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Reported:
10/25/01 14:57

Notes and Definitions

- A-01 MTBE has 3-methyl pentane interference.
- D-15 Chromatogram Pattern: Unidentified Hydrocarbons C9-C24
- P-01 Chromatogram Pattern: Gasoline C6-C12
- P-02 Chromatogram Pattern: Weathered Gasoline C6-C12
- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- 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