

GETTLER-RYAN INC.

TRANSMITTAL

X

May 11, 2001

G-R #: 180022

TO:

Mr. David B. De Witt

Tosco Marketing Company

2000 Crow Canyon Place, Suite 400

San Ramon, California 94583

CC: M

Mr. Keith Romstad

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) SS #7176

7850 Amador Valley Blvd.

Dublin, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	May 7, 2001	Groundwater Monitoring and Sampling Report Second Quarter - Event of April 3, 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 *May 24, 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

trans/7176-DBD

May 7, 2001 G-R Job #180022

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

RE: Second Quarter Event of April 3, 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,

Deanna L. Harding

Project Coordinator

Stephen J. Carter

Senior Geologist, R.G. No. 5577

Figure 1:

Potentiometric Map

Figure 2: Table 1:

Concentration Map

Table 2:

Groundwater Monitoring Data and Analytical Results
Groundwater Analytical Results - Oxygenate Compounds

Table 3:

Dissolved Oxygen Concentrations

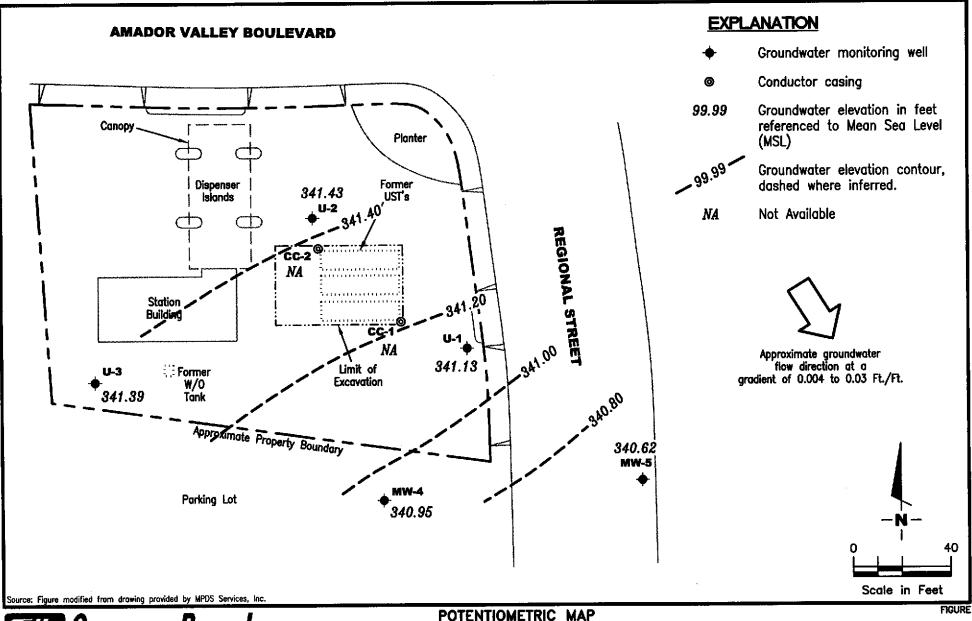
Attachments:

Standard Operating Procedure - Groundwater Sampling

Field Data Sheets

7176.gml

Chain of Custody Document and Laboratory Analytical Reports

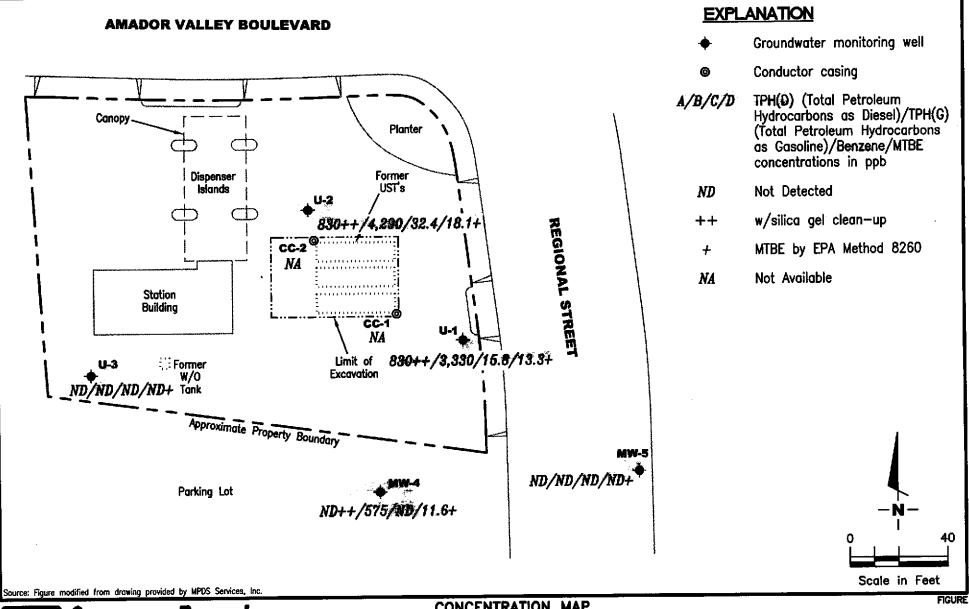




REVISED DATE

PROJECT NUMBER REVIEWED BY 180022

April 3, 2001





REVIEWED BY

CONCENTRATION MAP

Tosco (Unocal) Service Station #7176 7850 Amador Valley Boulevard

Dublin, California

DATE

REVISED DATE

PROJECT NUMBER 180022

April 3, 2001

Table 1
Groundwater Monitoring Data and Analytical Results

WELL ID/		DATE	DTW	S.I.	GWE	TPH-D♦	TPH-G	В	T	E	X	MTBE
TOC*			(ft.)	(ft. bgs)	(msl)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
												
U-1						2						
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	 ⁷
		10/12/95	15.38		340.24	54,200/	33,000	1,400	ND	1,400	3,100	8
		01/11/96 ¹	16.33		339.29	58,200/	8,300	690	11	680	1,500	
		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 2,2 00/	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	101,900/1,300 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	112,700/2,500 ¹¹	10,00019	ND ¹²	ND^{12}	1,200	540	ND ¹²
		04/05/99	13.64		341.95	10920/570 ¹⁰	4,900	34	ND^{12}	350	150	150/55 ¹⁷
		07/01/99	14.39		341.20	102,700/3,600 ²⁶	10,000	45	ND ¹²	850	420	260/110 ¹⁷
		09/30/99	15.32		340.27	102,360/1,680 ¹⁰	7,150 ²⁷	ND ¹²	ND ¹²	415	84.4	12ND/19517
		01/03/00	15.52		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
			14.36		339.63	²⁶ 1,400/1,300 ²⁶	3,830 ¹⁶	16.8	ND ¹²	68.6	7.99	55.2/38 ¹⁷
		10/27/00			339.87	/873 ²⁹	2,410 ¹⁶	14.7	4.30	30.5	5.04	34.5/9.33 ¹⁷
		01/08/01	15.72			²⁶ 1,500/830 ²⁶	3,330 ¹⁶	15.8	5.96	74.8	7.06	¹² ND/13.3 ¹⁷
		04/03/01	14.46		341.13	1,500/650	5,550	13.0	3.70	74.0	7.00	112, 2010
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
		01/11/961	17.06		339.53	58,600/	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

Table 1
Groundwater Monitoring Data and Analytical Results

WELL ID/	(2.08832)	DATE	DTW	S.I.	GWE	TPH-D♦	TPH-G	В	Т	E	X	MTBE
TOC*		DN12	(ft.)	(ft. bgs)	(msl)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
	and a series of the series of					5		•		(10)	42	250
U-2		07/10/96	14.42	10.0-30.0	342.17	⁵ 2,300/	5,600	59	15	610 1,000	42 54	260
(cont)		10/30/96	16.82		339.77	⁵ 1,800/	7,700	67	35 ND	1,000	7.0	100
		01/27/97	12.91		343.68	⁵ 660/	1,600	14	ND	400	16	ND
		04/08/97	14.07		342.52	⁵ 2,000/	4,300	35	ND	410	ND	130
		07/17/97	15.96		340.63	⁶ 1,300/	6,200	17	22	520	50	ND
		10/17/97	17.03		339.56	61,400/	7,100	71	26		30 16	110
		01/19/98	15.10		341.49	102,100/1,500 ¹⁰	5,300	46	11	350	38	160
356.55	NP	04/23/98	11.74		344.81	/1,200 ¹¹	3,200	23	11	210	38 7.4	190
	NP	07/08/98	13.27		343.28	¹⁴ 1,100/	1,600	34	8.5	100		78
		10/05/98	14.90		341.65	/1,300 ¹⁰	2,900 ¹⁸	37	8.4	110	7.3 ND ¹²	76 86
		01/04/99	15.94		340.61	¹¹ 670/250 ²⁰	$2,200^{21}$	35	ND ¹²	17		100/6.9 ¹⁷
•		04/05/99	14.19	*	342.36	10660/490 ¹⁰	4,900	21	77	130 ND ¹²	310 ND ¹²	100/6.9 12ND/35 ¹⁷
		07/01/99	14.98		341.57	²⁴ 210/440 ²⁶	$1,500^{25}$	7.6	ND ¹²		ND ¹²	26.3/29.8 ¹⁷
		09/30/99	16.00		340.55	¹⁰ 483/340 ¹⁰	256 ²⁷	1.85	ND ¹²	2.42		46/14 ¹⁷
		01/03/00	17.20		339.35	²⁶ 2,400/1,900 ²⁶	$3,400^{27}$	23	13	ND ¹²	44 ND ¹²	40/14 59/25 ¹⁷
		04/04/00	13.50		343.05	²⁶ 1,000/1,000 ²⁶	3,600 ²⁷	34	17	56		39/23 100/19 ¹⁷
		07/14/00	15.23		341.32	²⁶ 1,000/350 ²⁶	3,100 ²⁷	16	13	15	10	
		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
U-3											• 1	
358.13		07/08/95	14.58	10.0-30.0	343.55	³ 710/	1,100 ⁴	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 ⁹	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	NĎ
		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

Table 1
Groundwater Monitoring Data and Analytical Results

WELL ID/		DATE	DTW	S.I.	GWE	TPH-D♦	TPH-G	В	T	E	X	MTBE
TOC*			(ft.)	(ft. bgs)	(msl)	(ppb)	(ppb)	(ррв)	(ppb)	(ppb)	(ppb)	(ppb)
U-3		10/17/97	18.64	10.0-30.0	339.49	⁶ 63/	ND	ND	ND	ND	ND	ND
(cont)		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
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				
		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	10340/210 ¹⁰	620 ²³	ND ¹²	1.8	2.1	ND ¹²	6.0/9.317
		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	10420/220 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	10,15460/340 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	21/1217
		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

Table 1
Groundwater Monitoring Data and Analytical Results

WELL ID/	DATE	DTW	S.I.	GWE	TPH-D♦	TPH-G	В	T	E	X	MTBE
TOC*		(ft.)	(ft. bgs)	(msl)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
		_									
MW-5					/100 ^{t1}	100	0.53	0.90	1.0	3.8	13
355.03	04/23/98	11.15	10.0-25.0	343.88	/100 ¹⁰ 170/	120 ND	ND	0.90 ND	ND	ND	12
	07/08/98	12.63		342.40	/100 ¹⁰	ND		ND	ND	ND	12
	10/05/98	14.00		341.03		ND	ND	ND ND	ND ND	ND	ND
	01/04/99	15.21		339.82	ND/	ND	ND	ND ND	ND	ND	ND/ND ¹⁷
	04/05/99	13.76		341.27	ND/	ND	ND		ND ND	ND	¹² ND/2.3 ¹⁷
	07/01/99	14.48		340.55	ND/	ND	ND	ND		ND ND	ND/ND ¹⁷
	09/30/99	15.15		339.88	¹⁰ 60.4/ND	50.8 ²⁷	ND	ND	ND	ND ND	ND/ND ¹⁷
	01/03/00	16.34		338.69	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
	10/27/00	15.75		339.28	ND/	ND	ND	ND	ND	ND	ND/ND ¹⁷
	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	NU/NU
Trip Blank							. vm	ND	MD	ND	ND
TB-LB	01/19/98					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

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

B = Benzene

(ppb) = Parts per billion

DTW = Depth to Water

T = Toluene

ND = Not Detected

(ft.) = Feet

E = Ethylbenzene

-- = Not Measured/Not Analyzed

S.I. = Screen Interval

X = Xylenes

NP = No purge

(ft. bgs) = Feet Below Ground Surface

MTBE = Methyl tertiary butyl ether

GWE = Groundwater Elevation

(msl) = Mean sea level

TPH-D = Total Petroleum Hydrocarbons as Diesel

TPH-G = Total Petroleum Hydrocarbons as Gasoline

- * 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.
- 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.
- 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.
- Laboratory has potentially identified the presence of MTBE at reportable levels in the groundwater sample collected from this well.
- 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.
- Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.
- Laboratory report indicates unidentified hydrocarbons C9-C24.
- Laboratory report indicates diesel and unidentified hydrocarbons <C14.
- Detection limit raised. Refer to analytical reports.
- 13 Laboratory report indicates unidentified hydrocarbons >C8.
- Laboratory report indicates unidentified hydrocarbons <C14.</p>
- Laboratory report indicates discrete peaks.
- Laboratory report indicates weathered gasoline C6-C12.
- 17 MTBE by EPA Method 8260.
- Laboratory report indicates unidentified hydrocarbons <C8.</p>

Table 1

Groundwater Monitoring Data and Analytical Results

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

EXPLANATIONS: (cont)

- Laboratory report indicates gasoline and unidentified hydrocarbons C6-C12.
- ²⁰ Laboratory report indicates diesel and unidentified hydrocarbons <C16.
- ²¹ Laboratory report indicates unidentified hydrocarbons C6-C12.
- Laboratory report indicates gasoline and unidentified hydrocarbons >C10.
- 23 Laboratory report indicates gasoline and unidentified hydrocarbons <C7.</p>
- Laboratory report indicates unidentified hydrocarbons C10-C24.
- Laboratory report indicates gasoline and unidentified hydrocarbons <C6.
- Laboratory report indicates unidentified hydrocarbons <C16.</p>
- Laboratory report indicates gasoline C6-C12.
- Laboratory report indicates gasoline C6-C12 + unidentified hydrocarbons C6-C12.
- Laboratory report indicates hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.

Table 2
Groundwater Analytical Results - Oxygenate Compounds

WELL ID	DATE	ETHANOL	TBA	MTBE	DIPE	ETBE	TAME	EDB	1,2-DCA
		(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
			•		1	1	1	1	2792
U-1	04/05/99	ND^1	ND ¹	55	ND^1	ND ¹	ND^1	ND ¹	ND¹
	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^{I}	ND	160	NDi	ND¹	ND	ND ^I	ND ¹
	07/14/00	ND^1	ND¹	120	ND ¹	ND ^t	ND ¹	ND^1	ND ¹
	10/27/00	ND	ND	38	ND	ND	ND	ND	ND
	01/08/01	${\sf ND}^1$	ND ¹	9.33	ND ¹	ND^1	ND ¹	ND ¹	ND ¹
	04/03/01	ND^1	ND^1	13.3	\mathbf{ND}^1	ND ¹	ND ¹	ND ¹	ND ¹
	•								*
U-2	04/05/99	ND¹	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	ND¹	ND	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 ^t	ND ¹	7.49	ND^1	ND ¹	\mathbf{ND}^1	ND^1	\mathbf{ND}^1
	04/03/01	ND	ND	18.1	ND	ND	ND	ND	ND
	*								
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
	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	ND
	U4/U3/U1 .	NU	ND	ND	ND	MD	ND	NU	MD

Table 2
Groundwater Analytical Results - Oxygenate Compounds

WELL ID	DATE	ETHANOL	TBA	MTBE	DIPE	ETBE	TAME	EDB	1,2-DCA
WEEL ID	<i>D</i> 1110	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
							NID	ND	ND
MW-4	04/05/99	ND	ND	9.3	ND	ND	ND		ND ND
	07/01/99	ND	ND	21	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
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
		ND ND	ND						
	01/08/01			ND	ND	NĎ	ND	ND	ND
	04/03/01	ND	ND	MD	MP	142	• ••		

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

EDB = 1,2-Dibromomethane

1,2-DCA = 1,2-Dichloroethane

(ppb) = Parts per billion

ND = Not Detected

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

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	After Purging
		(mg/L)	(mg/L)
U-1	01/11/96		3.41
0-1	04/11/96	3.77	3.78
	07/10/96 ¹	1.22	
•	10/30/96 ¹	1.41	
	01/27/971	1.34	
	04/08/971	2.09	**
	07/17/971	2.00	**
	10/17/97 ¹	1.86	
	01/19/981	2.91	
	04/23/981	0.59	
	07/08/981	1.10	
U-2	01/11/96		3,99
0-2	04/11/96	3.32	3.41
	07/10/96 ¹	1.01	
	10/30/96 ¹	1.42	
	01/27/971	1.29	
	04/08/97 ¹	1.69	
	07/17/97 ¹	2.08	**
	10/17/97 ¹	1.80	**
	01/19/981	2.95	••
	04/23/981	0.55	
	07/08/981	1.36	••
U-3	01/11/96	<u></u>	5.05
	04/11/96	5.16	4.96
	07/10/96 ¹	3.44	
	10/30/96 ¹	2.18	
	01/27/971	2.61	
	04/08/971	3.73	
	07/17/971	2.65	
	10/17/97 ¹	2.44	
	01/19/98 ¹	6.51	·
	04/23/981	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

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.

		FIELD D	ATA SHEET				
ent/ cility # <u>70.50</u>	0# 7176		Job#:		80022		
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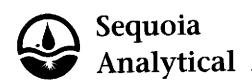
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Equipment: Bailer Stack Suction Grab Sample Starting Time: 2;45 Weather Conditions: Cle of Conductivity Temperature (gal.) Time Volume pH Conductivity Temperature (gal.) 2;51 G 7.80 10250 69.6 LABORATORY INFORMATION SAMPLE ID (17) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES LABORATORY INFORMATION LABORATORY INFORMATION TEMPERATURE (GO) ONLY (Conductivity Temperature (gal.) (The Conductivity Temperature (gal.) (my) (ppm) LABORATORY INFORMATION (ppm)		•					·		,
Starting Time: Starting Time: Starting Time: Sampling Time: Sampling Time: Sediment Description: If yes; Time: Volume: (gal.) Time Volume (gal.) 2 8.03 1024 2 8.03 1024 1025 LABORATORY INFORMATION SAMPLE ID (5) - CONTAINER REFRIG. Pressure Bailer Grab Sample Other: Odor: LOCA Volume: (gal.) Odor: LOCA Odor O	-	•	Baller		Equipment			91	
Starting Time: Starting Time: Sampling Time: Sampling Time: Purging Flow Rate: Opm. Sediment Description: Odor: NO	references see	Stack		•		Pres	sure Bailer		
Starting Time: 2:45 Weather Conditions: Clear Sampling Time: 3:90 Water Color: Vn : Odor: NO Purging Flow Rate: 1 gam. Sediment Description: Time: Volume: If yes; Time: If yes; Time: Volume: If yes; Time: If yes; T	<					_	Sample		
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Sampling Time: Purging Flow Rate: Did well de-water? Time Volume pH Conductivity punhow/cm (gal.) 2 8.03 10-41 69.9 2:51 Container LABORATORY INFORMATION SAMPLE ID (9) - CONTAINER LABORATORY INFORMATION REFRIG. PRESERV. TYPE: LABORATORY LABORATORY LABORATORY LABORATORY PRESERV. TYPE: LABORATORY LABORATORY LABORATORY ANALYSES FRESERV. TYPE: LABORATORY ANALYSES FRESERV. TYPE: LABORATORY ANALYSES TPH-D	Starting Time:	2;4	15			ns:	1.	Odor No	2
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Time Volume pH Conductivity Temperature D.O. ORP Alkalinity (ppm) 247 2 8.03 10-41 69.9 2:49 7 7.94 10-44 69.6 2:51 6 7.80 10-50 69.6 LABORATORY INFORMATION SAMPLE ID (5) - CONTAINER REFRIG. PRESERV. TYPE: LABORATORY 4.000 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40 10-40				-	endiment Descri	otion: ——			
Time Volume pH Conductivity Temperature (mg/L) (mV) (ppm) 247 2 8.03 1041 69.9 2:49 7 7.94 1024 69.6 2:51 6 7.80 10250 69.6 LABORATORY INFORMATION SAMPLE ID (9) - CONTAINER REFRIG. PRESERV. TYPE: LABORATORY ANALYSES U-3 5 x VDA VIAL Y HCL SEQUOID / TPHG STEX /M TOE + (6) 0xys+1,20c4 fed B (2) TPH-D	• –	te:		_			Volume	h:	
2 8 03 10 69 9 9 9 10 9 9 9 9 9 9 9 9 9	Purging Flow Rat	_		_			_ Volum	8:	(gel.)
2: 49 7 7.94 10.44 69.6 2:51 6 7.80 10.50 69.6 SAMPLE ID (1) - CONTAINER REFRIG. PRESERV. TYPE: LABORATORY ANALYSES U-3 5 x VDA VIAL Y HCL 5EQUOID (TPHG BTE K MTGE + 16) OKYS+1,2 DCA YEDB (2) TPH-D	Purging Flow Rate Did well de-wate	er? <i>/</i> ^	0	_	f yes; Time:	<u> </u>	D.O.	ORP	Alkalinity
2:59 6 7.80 10.50 69.6 LABORATORY INFORMATION SAMPLE ID (3) - CONTAINER REFRIG. PRESERV. TYPE: LABORATORY ANALYSES U-3 5 x VDQ VIAL Y HCL 5EQUOID / TPHG BTEK /M TOE + U-3 5 x VDQ VIAL Y HCL 5EQUOID / TPHG BTEK /M TOE + TPH-D	Purging Flow Rate Did well de-wate	er?	0	Conds Lamba	f yes; Time: activity Tem os/cm	perature F	D.O.	ORP	Alkalinity
LABORATORY INFORMATION SAMPLE ID (1) - CONTAINER REFRIG. PRESERV. TYPE: LABORATORY ANALYSES U-3 5 x VDQ VIAL Y HCL SEQUOID / TPHG BTEX /MTDE + [6] OKYS+1,2DCA FEDB (2) TPH-D	Purging Flow Rate Did well de-wate	volume (gal.)	pН	Conds	f yes; Time: activity Tem os/cm	perature F	D.O.	ORP	Alkalinity
LABORATORY INFORMATION SAMPLE ID (F) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES U-3 5 x vda vial 4 Hel 5EQUOID / TPHG BTEX MTDE + [6)0xys+1,2Dca fed b 7 TPH-D	Purging Flow Rate Did well de-wate Time	Volume (gal.)	рн 8.03	Conda umb	rectivity Temporal G	F.9	D.O.	ORP	Alkalinity
SAMPLE ID (1) - CONTAINER REFRIG. PRESERV. TYPE: LABORATOR! U-3 5 x VDA VIAL Y HELL SEQUELY / TPHG BTEX /MTDE + [6) OKYS+1, 2 DCA FEDB (2) TPH-D	Purging Flow Rate Did well de-wate Time 247 2:49	Volume (gal.)	рн 8.03 7.94	Conda umb	rectivity Temporal G	F.9	D.O.	ORP	Alkalinity
SAMPLE ID (4) - CONTAINER REFRIG. PRESERV. TYPE: LABORATORY U-3 5 x VDA VIAL Y HEL SEQUOIA / TPHG BTEX /MTDE + [6) OKYS+1, ZDCA FEDB (2) TPH-D	Purging Flow Rate Did well de-wate Time 247 2:49	Volume (gal.)	рн 8.03 7.94	Conda umb	rectivity Temporal G	F.9	D.O.	ORP	Alkalinity
SAMPLE ID (4) - CONTAINER REFRIG. PRESERV. TYPE: LABORATORY U-3 5 x VDA VIAL Y HEL SEQUOIA / TPHG BTEX /MTDE + [6) OKYS+1, ZDCA FEDB (2) TPH-D	Purging Flow Rate Did well de-wate Time 247 2:49	Volume (gal.)	рн 8.03 7.94	Conda umb	rectivity Temporal G	F.9	D.O.	ORP	Alkalinity
SAMPLE ID (1) - CONTAINER REFRIG. PRESERV. TYPE CASONIAL / TPHG BTEX /MTOE + U-3 5 x VDA VIAL Y HOL SEQUOID / TPHG BTEX /MTOE + [6) OXYS+1, 2DCA FEDB (2) TPH-D	Purging Flow Rate Did well de-wate Time 247 2:49	Volume (gal.)	рн 8.03 7.94	Conda	tryes; Time:	7.9 1.6	D.O.	ORP	Alkalinity
U-3 5 x VDA VIAL Y HEE [6) OXYS+1, ZDCA FEDB(2)	Purging Flow Rate Did well de-wate Time 247 2:49	Volume (gal.)	рн 8.03 7.94	Conda	tryes; Time:	F 7.9 1.6	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
TPH-D	Purging Flow Rate Did well de-wate Time 247 2:49 2:51	Volume (gal.) 2	PH 8.03 7.94 7.80	Condination of the condination o	tatory inform	F 7.9 1.6 1.6	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
" I Amber To NONE	Purging Flow Rate Did well de-wate Time 247 2:51	Volume (gal.) 2 G CONT	PH 8.03 7.94 7.80	Condination of the condination o	tatory inform	F 7.9 1.6 1.6	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
	Purging Flow Rate Did well de-wate Time 247 2:51	Volume (gal.) 2 G CONT	PH 8.03 7.94 7.80	Condination of the condination o	tatory informations in the second section of the second se	ATION LABOR	D.O. (mg/L)	ANAL	Alkalinity (ppm)
	Purging Flow Rate Did well de-wate Time 247 2: 19 2:51 SAMPLE ID 4-3	Volume (gal.) 2 G (#) - CONT 5 × VDA	PH 8.03 7.94 7.80 AINER	Condinative 10.	tatory informations in the second section of the second se	ATION LABOR	D.O. (mg/L)	ANAL	Alkalinity (ppm)
	Purging Flow Rate Did well de-wate Time 247 2: 19 2:51 SAMPLE ID 4-3	Volume (gal.) 2 G (#) - CONT 5 × VDA	PH 8.03 7.94 7.80 AINER	Condinative 10.	tatory informations in the second section of the second se	ATION LABOR	D.O. (mg/L)	ANAL	Alkalinity (ppm)

ddress: 78.	50 # 7176 50 Amador Val blin, Ca.	leg Rd	500#	13/0/ 14/0/	•	
Well ID	_ MW-4	Well Condition	ok			
ell Diameter		Hydrocarbon Thickness:		Amount Bai		(gal.)
otal Depth	25.40 m	Volume Factor (VF)	2" = 0.17 6" = 1.5	3" = 0.38 0	12" = 5.80	- 0.66
epth to Water	15.46 m 9.94_xx	reit -1.68	X 3 (case volume) = i	Estimated Pur	ge Volume:	5. S (gal.)
Purge quipment:	Disposable Bailer Bailer Stack Suction Grundfos Other:	Sa	mpling uipment: Dis Bail Pre	osable Bai	ler	
Annies Times	4:05	Weather	Conditions:	den		
tarting Time: Sampling Time:	4:23	Water Co	dor: ST	 	Odor:	
=	te:	o. Sedimen	t Description:	W/F	<u> </u>	4
Did well de-wate	517 <u>no</u>	if yes;	Time:	Volum	e:	lgel.
Time	Volume pH (gal.)	Conductivity	Temperature	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
4:07	2 7.47	983	69.8			
4:09	7.41	1011	<u>69.2</u>			
7:11 -	5.5 7.39					-
		LABORATORY	NFORMATION			•
SAMPLE ID	(#) - CONTAINER	REFRIG. PRESER	V. TYPE: LABO	RATORY	ANAL	
Mw-4	5 x VDA VIAL	Y HC	SEQU	HOIA (TPHG BTE	
				(6)0445+42DI	MTEDS(
11	1 Auber	~ NOI	VE	•	15 75-15	
	<u> </u>					
COMMENTS: .						
				•	•	

•		FIELD DATA				
lient/ acility # <u>Tos</u>	co # 7176		Job#:	180022		
ddress: 789	O Amader Valle	r Rd.	Date:			
ity:	blin, Co.		Sample	: Nastles		
	HW_5	Well Condition	on:	k		
Vell Diameter	2_ in.	Hydrocarbor Thickness:		Amount Bai	xt):	<u>(Jed.)</u>
Total Depth	24.88 4	Volume Factor (VF)	2" = 0.17	3" = 0.38 6" = 1.50	4" = 1 12" = 5.80	0.66
Depth to Water	19.4 (**	ا 	X 3 (cese vo	lume) = Estimated Pu	rge Volume: 5.	S (get)
Purge Equipment:	Disposable Bailer Bailer	· .	Samplin g Equipment:	Disposable Bal	iler	
	Stack Suction Grundfos Other:	• ·	c	Pressure Bailer Grab Sample Other:		·
Starting Time:	3:28	Weath	er Condition	s dian	Odor: 00	
Sampling Time:	3;45	_ Water	Color:	ion: <u>SF/</u>		<u></u>
Purging Flow Ra	rer?	_ if yes	; Time:	Volum	ne:	
Time	Volume pH (gal.)	Conductivit	Tempe	rature D.O. (mg/L)	ORP (mV)	Alicalimity (ppm)
3:30	2 7.65 7 7.53	951	_ <u> </u>	<u> </u>		
3:34	5.5 7.57	970	69			
-				·		
SAMPLE ID	(#) - CONTAINER	REFRIG. PRE	RY INFORMA	LABORATORY SEQUOIA	ANALY TPHG BTEX	
Mw-5	5 x VDA VIAL	<u> </u>	466	JEQUETA	16)0495+4ZDC	AYEDB(
	1 Auber	/	IONE		TP#-D	
				l		

TOSO Total Marketing 6 2000 Conyon East Reseas, Collec	tonyany B. So. 601	Cone	Facili witant Pr witant Ha witane _f	ty Addressing Addressi	nber ttler 1errs ame)_[NOCAL SS# 50 Amador 180023Ryan Ind Court Seanna L. 0-551-75	Vall 2.85 c. (G Suite Hard	ey B1 -R In .I. D	c.)_ ubl11	. CA	9456	ia :	Laborator Loborator Samples Collection Signature	y Name y Releas Collecte Date	• Num1 d by (H) <u>uoia</u> 	(92 Ana	5)_2 1ytic	77-23 :al	384	
Semple Number 1070	Lob Sample Number	Number of Contohers	Metric S = Sal A = Ar W = Weber C = Cherronal	Type 6 - Grab C - Composite D - Discrete	Thre	. Sample Preservation	load (Yee or No)	TPH Gas STEX WANTE	TPH Diesel (8015)	Off and Greater (5520)	Purpeoble Holocarbors (8010)	Purgeable Aromatics (8020)	Organica	table Organica 0)	CACT-PO-Zo-Vii 9-3 (CCVP or AA)	(2023 3.47)					DO NOT BILL TB-LB ANALYSIS Remerks
TB-LB	01	1	7	d		Hel	7	X										٠.		_	RUN Silies Gel
4-1	02	6	મ	٤	53km		4	X	X			 	<u> </u>			*				-	Diesel hites
4-2	03	6	u	-	COL	<u> </u>	4	X	X.					 		X	<u> </u>	ļ	 	├	Diesel kisks
4-3	04	6	<u> </u>	<u> </u>	300	~	4	X	X			 		-		X	-	-		-	
4W-4	05	6	4	. =-	422	<u> </u>	-	X	X	 	 			 		×		 	\vdash	 	
MV-F	06	6	.~	٠٠٠	3/50	4 4	4	X	X	ļ		-	_	_	 	-		 	 		
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			 -		-	 	} -	 	-	 		 	 		 						
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\			_	-	-		 	-	1		1	\Box	1								·
X Ob	(Signature)		G-	onization R Inc		Date/Time 72 4/3/01			<u>. (</u>	<u> </u>			Organiza SAC			•/Ilm• 254	1/3/01		Turn A	2	ime (Circle Choice) 4 Hre. 3 Hre.
and By	(Signature)		Org	noUssins	-	Dale/Ilms	A	colyed E	ly (Sign	alur»)			Organiza	uon	Date	•/Tlm•				5	Daye
	(Signature)		Org	on!zal on		Date/Time	Re	oaleved f	or Labo	pralory 1	Ny (Sign	ature)			Date	•/Tim•			(/	ontrooted





April 18, 2001

Deanna Harding Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568 RE: Tosco(1) / L104026

Enclosed are the results of analyses for samples received by the laboratory on 04/03/01. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Latonya Pelt Project Manager

CA ELAP Certificate Number 2360

tonya K. Pult

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

Project: Tosco(1)

Project Number: Unocal SS#7176 Project Manager: Deanna Harding Reported: 04/18/01 15:21

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	L104026-01	Water	04/03/01 00:00	04/03/01 19:25
U-1	L104026-02	Water	04/03/01 17:35	04/03/01 19:25
U-2	L104026-03	Water	04/03/01 17:00	04/03/01 19:25
U-3	L104026-04	Water	04/03/01 15:00	04/03/01 19:25
MW-4	L104026-05	Water	04/03/01 16:23	04/03/01 19:25
MW-5	L104026-06	Water	04/03/01 15:45	04/03/01 19:25

6747 Sierra Court, Suite J

Dublin CA, 94568

Project: Tosco(1)

Project Number: Unocal SS#7176

Project Manager: Deanna Harding

Reported: 04/18/01 15:21

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

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TB-LB (L104026-01) Water Sample	d: 04/03/01 00:00	Received: 0	4/03/01	19:25					
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l	1	1040049	04/13/01	04/13/01	DHS LUFT	
Benzene	ND	0.500	и	Ħ	Ħ	11	17	**	
Toluene	ND	0.500	**	Ħ	n	#	*	n	
Ethylbenzene	ND	0.500	**	H	н .	*	Ħ	**	
Xylenes (total)	ND	0.500	71	n		**	#	n	
Methyl tert-butyl ether	ND	5.00	n	•	11	n .	н		
Surrogate: a,a,a-Trifluorotoluene		99.4 %	70-	130	"	**	"	π	
U-1 (L104026-02) Water Sampled:	04/03/01 17:35 R	eceived: 04/0	3/01 19:	25					
Purgeable Hydrocarbons as Gasoline	3330	500	ug/l	10	1040049	04/13/01	04/13/01	DHS LUFT	P-02
Benzene	15.8	5.00	"	H			*	ч	
Toluene	5.96	5.00	m		**	**	**	#	
Ethylbenzene	74.8	5.00		*	**	"	*	Ħ	
Xylenes (total)	7.06	5.00	**	Ħ	**	Ħ	#	Ħ	
Methyl tert-butyl ether	ND	50.0	"	**	п	#	11		
Surrogate: a,a,a-Trifluorotoluene		90.2 %	70-	-130		Ħ	*	Ħ	
U-2 (L104026-03) Water Sampled:	04/03/01 17:00 R	leceived: 04/6	3/01 19:	25			· 		
Purgeable Hydrocarbons as Gasoline	4290	500	ug/l	10	1040049	04/13/01	04/13/01	DHS LUFT	P-02
Benzene	32.4	5.00	Ħ	Ħ	11 .	Ħ	•	•	
Toluene	9.91	5.00	'n	#	n	Ħ	•	n	
Ethylbenzene	20.1	5.00	H	. "		#	Ħ	•	
Xylenes (total)	· ND	5.00		W	**	•	11	Ħ	
Methyl tert-butyl ether	66.6	50.0	•		#	# 		#	
Surrogate: a,a,a-Trifluorotoluene	,	108 %	70	-130	*	"	n	"	

Project: Tosco(1)

6747 Sierra Court, Suite J

Project Number: Unocal SS#7176

Reported: 04/18/01 15:21

Dublin CA, 94568

Project Manager: Deanna Harding

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-3 (L104026-04) Water Sampled: 04/03	3/01 15:00 R	eceived: 04/0	3/01 19:	25					
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l	1	1040048	04/13/01	04/13/01	DHS LUFT	
Benzene	ND	0.500	#	**	H	17	H	ч	
Toluene	ND	0.500	**	**	P	H	#	11	
Ethylbenzene	ND	0.500	Ħ	Ħ		Ħ	**	11	
Xylenes (total)	ND	0.500	**	н		н	π	Ħ	
Methyl tert-butyl ether	ND	5.00	**	#	₩	11	*	#	
Surrogate: a,a,a-Trifluorotoluene		74.3 %	70-	130	Ħ	"	n	н	
MW-4 (L104026-05) Water Sampled: 04	4/03/01 16:23	Received: 0	4/03/01	19:25				· · ·	
Purgeable Hydrocarbons as Gasoline	575	100	ug/l	2	1040048	04/13/01	04/13/01	DHS LUFT	P-03
Benzene	ND	1.00	*		H	tr	**	•	
Toluene	ND	1.00	=	**	**	H	**	#	
Ethylbenzene	ND	1.00	Ħ	#		H	41	#	
Xylenes (total)	ND	1.00	#	**	n		Ħ	*	
Methyl tert-butyl ether	14.0	10.0	и	#	*	#1	Ħ	**	
Surrogate: a,a,a-Trifluorotoluene		84.7 %	70-	-130	r#	*	n	*	
MW-5 (L104026-06) Water Sampled: 0	4/03/01 15:45	Received: 0	4/03/01	19:25					
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l	1	1040049	04/13/01	04/13/01	DHS LUFT	
Benzene	ND	0.500	•		*		Ħ	n	
Toluene	ND	0.500	**		Ħ	*	*	**	
Ethylbenzene	ND	0.500	11	*	и	n	**	H	
Xylenes (total)	ND	0.500	**		n	**	n	Ħ	
Methyl tert-butyl ether	ND	5.00	77	#	P		**		
Surrogate: a,a,a-Trifluorotoluene		88.9 %	70	-130	н	u	n	r	

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

Dublin CA, 94568

Project: Tosco(1)

Project Number: Unocal SS#7176 Project Manager: Deanna Harding Reported: 04/18/01 15:21

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (L104026-02) Water	Sampled: 04/03/01 17:35	Received: 04/0	3/01 19:	25					
Ethanol	ND	2000	ug/l	2	1040012	04/04/01	04/04/01	EPA 8260B	
1,2-Dibromoethane	ND	4.00	Ħ	n	•	Ħ	n	n	
1,2-Dichloroethane	ND	4.00	Ħ		11	-	#	n	
Di-isopropyl ether	ND	4.00	"		•	**	**	H	
Ethyl tert-butyl ether	ND	4.00		Ħ	n	H		*	
Methyl tert-butyl ether	13.3	4.00	*	н	n	н	**		
Tert-amyl methyl ether	ND	4.00		"	11	*	#	**	
Tert-butyl alcohol	ND ND	200		Ħ	H			n	
Surrogate: 1,2-Dichloroeth	nane-d4	91.0 %	76	-114	n	•	N	#	
Surrogate: Toluene-d8		103 %	88	-110	Ħ	*	"		
U-2 (L104026-03) Water	Sampled: 04/03/01 17:00	Received: 04/0	3/01 19:	25					
Ethanol	ND	1000	ug/l	1	1040012	04/04/01	04/05/01	EPA 8260B	
1,2-Dibromoethane	ND		'n	**	#	Ħ		*	
1,2-Dichloroethane	ND	2.00	n	.,	n	"	*		
Di-isopropyl ether	ND	2.00	a	н	н	m	7	•	
Ethyl tert-butyl ether	ND	2.00	п		ir	*	#	•	
Methyl tert-butyl ether	18.1	2.00	n	,,		**	**	*	
Tert-amyl methyl ether	ND	2.00			Ħ	Ħ	**	**	
Tert-butyl alcohol	ND	100	Р.	**		Ħ	n 	#	
Surrogate: 1,2-Dichloroeti	hane-d4	95.4 %	76	-114	*	"	"	"	
Surrogate: Toluene-d8		100 %	88	-110	n	n	*	n	
U-3 (L104026-04) Water	Sampled: 04/03/01 15:00	Received: 04/	03/01 19	:25					•=
Ethanol	ND	1000	ug/l	1	1040012	04/04/01	04/05/01	EPA 8260B	
1,2-Dibromoethane	ND		#	Ħ	**	Ħ	ir	н	
1,2-Dichloroethane	ND		*	н	Ħ	н	H	#	
Di-isopropyl ether	ND	2.00	Ħ	#1	и		*	n	
Ethyl tert-butyl ether	ND		H	n	H	•	11	W	
Methyl tert-butyl ether	ND	2.00		n	-	•	Ħ		
Tert-amyl methyl ether	ND	2.00		**	**	н	#	•	
Tert-butyl alcohol	ND	100	•		"		***	**	
Surrogate: 1,2-Dichloroet	hane-d4	93.8 %	76	5-114	n	"	π	#	
Surrogate: Toluene-d8		97.2 %		3-110		"	**	#	

6747 Sierra Court, Suite J Dublin CA, 94568 Project: Tosco(1)

Project Number: Unocal SS#7176 Project Manager: Deanna Harding Reported: 04/18/01 15:21

Volatile Organic 8 Oxyganated Compounds by EPA Method 8260B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-4 (L104026-05) Water	Sampled: 04/03/01 16:23	Received: (04/03/01 19	:25					
Ethanol	ND	1000	ug/l	1	1040012	04/04/01	04/05/01	EPA 8260B	
1,2-Dibromoethane	ND	2.00	n	H		•	Ħ	•	
1,2-Dichloroethane	ND	2.00	*	H		e e	Ħ	n	
Di-isopropyl ether	ND	2.00	π	n		Ħ	Ħ	•	
Ethyl tert-butyl ether	ND	2.00	#	17	*	Ħ	Ħ	•	
Methyl tert-butyl ether	11.6	2.00	11	**	#	11	н .	и	
Tert-amyl methyl ether	ND	2.00	"	*	н	п	"	n	
Tert-butyl alcohol	ND	100	Ħ	**		H	"	el	
Surrogate: 1,2-Dichloroethane	?-d4	92.8 %	76-1.	14	" "	"	п	**	
Surrogate: Toluene-d8		101 %	88-1	10	"	"	п		
MW-5 (L104026-06) Water	Sampled: 04/03/01 15:45	Received: (04/03/01 19	:25					
Ethanol	ND	1000	ug/l	1	1040012	04/04/01	04/05/01	EPA 8260B	
1,2-Dibromoethane	ND	2.00	Ħ	11	n		**	н	
1,2-Dichloroethane	ND	2.00		71	H		#	Ħ	
Di-isopropyl ether	ND	2.00	•	Ħ	n	n	41	er	
Ethyl tert-butyl ether	ND	2.00	#	н	н		11	n	
Methyl tert-butyl ether	ND	2.00	Ħ	н	*	**	Ħ	n	
Tert-amyl methyl ether	ND	2.00	n	m	*	-	#	-	
Tert-butyl alcohol	ND	100	11	н			17	n	
Surrogate: 1,2-Dichloroethane	-d4	99.6 %	76-1	14		"	tr	n	
Surrogate: Toluene-d8		99.8 %	88-1	10	"	H	,,	#	

6747 Sierra Court, Suite J

Dublin CA, 94568

Project: Tosco(1)

Project Number: Unocal SS#7176

Project Manager: Deanna Harding

Reported: 04/18/01 15:21

Diesel Hydrocarbons (C9-C24) by DHS LUFT

Sequoia Analytical - Walnut Creek

Analyte Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (L104026-02) Water Sampled: 04/03/01 17:35	Received: 04/0	3/01 19:2	25					,
Diesel Range Hydrocarbons 1500	50	ug/l	1	1D12014	04/12/01	04/12/01	EPA 8015M	D-11
Surrogate: n-Pentacosane	74.2 %	<i>50</i>	150	*	"	"	"	
U-2 (L104026-03) Water Sampled: 04/03/01 17:00	Received: 04/0	03/01 19:2	25				·	
Diesel Range Hydrocarbons 1500	50	ug/l	1	1D12014	04/12/01	04/12/01	EPA 8015M	D-11
Surrogate: n-Pentacosane	72.1 %	50-	150	"	"	<i>m</i>	n	
U-3 (L104026-04) Water Sampled: 04/03/01 15:00	Received: 04/0	03/01 19:2	25					
Diesel Range Hydrocarbons ND	50	ug/l	1	1D12014	04/12/01	04/12/01	EPA 8015M	
Surrogate: n-Pentacosane	62.2 %	50-	150	"	N	*	r	
MW-4 (L104026-05) Water Sampled: 04/03/01 16:	23 Received: (04/03/01 1	9:25				•	
Diesel Range Hydrocarbons 180	50	ug/l	1	1D12014	04/12/01	04/13/01	EPA 8015M	D-11
Surrogate: n-Pentacosane	51.1 %	50-	150	,,,	,,	"	Ħ	
MW-5 (L104026-06) Water Sampled: 04/03/01 15:	45 Received: (04/03/01 1	19:25					
Diesel Range Hydrocarbons ND	50	ug/l	1	1D12014	04/12/01	04/13/01	EPA 8015M	
Surrogate: n-Pentacosane	63.1 %	50-	150	•	н	u	π	

Project: Tosco(1)

6747 Sierra Court, Suite J

Project Number: Unocal SS#7176

Reported: 04/18/01 15:21

Dublin CA, 94568

Project Manager: Deanna Harding

Diesel Hydrocarbons (C9-C24) with Silica Gel Cleanup by DHS LUFT Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (L104026-02) Water Samp	oled: 04/03/01 17:35	Received: 04/0	3/01 19:2	5					
Diesel Range Hydrocarbons	830	50	ug/l	1	1D12014	04/12/01	04/17/01	EPA 8015M	D-11
Surrogate: n-Pentacosane		54.1 %	50-1	50	*	*	*	*	
U-2 (L104026-03) Water Samp	oled: 04/03/01 17:00	Received: 04/0	3/01 19:2	5					
Diesel Range Hydrocarbons	830	50	ug/l	1	1D12014	04/12/01	04/17/01	EPA 8015M	D-11
Surrogate: n-Pentacosane		51.1 %	50-1	50	".	11	"	н	
MW-4 (L104026-05) Water Sa	ampled: 04/03/01 16:2	3 Received: 0	4/03/01 1	9:25					
Diesel Range Hydrocarbons	ND	50	ug/l	1	1D12014	04/12/01	04/17/01	EPA 8015M	
Surrogate: n-Pentacosane	•	20.0 %	50-	50	,,	"	,,	"	S-03

6747 Sierra Court, Suite J Dublin CA, 94568 Project: Tosco(1)

Project Number: Unocal SS#7176 Project Manager: Deanna Harding Reported: 04/18/01 15:21

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

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1040048 - EPA 5030B (P/T)										
Blank (1040048-BLK1)				Prepared .	& Analyze	d: 04/13/0	01			
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l							
Benzene	ND	0.500	n						•	
l'oluene	ND	0.500	n							
Ethylbenzene	ND	0.500	*							
Xylenes (total)	ND	0.500	**							
Methyl tert-butyl ether	ND	5.00	n	_						
Surrogate: a,a,a-Trifluorotoluene	7.96		u	10.0		79.6	70-130			
LCS (1040048-BS1)				Prepared	& Analyz	ed: 04/13/	01			
Benzene	8.49	0.500	ug/l	10.0		84.9	70-130		-	
Toluene	8.65	0.500	*	10.0		86.5	70-130			
Ethylbenzene	8.49	0.500		10.0		84.9	70-130			
Xylenes (total)	25.8	0.500	*	30.0		86.0	70-130			
Surrogate: a,a,a-Trifluorotoluene	8.26			10.0	<u>-</u> -	82.6	70-130			
LCS (1040048-BS2)		•		Prepared	& Analyz	ed: 04/13/	01			
Purgeable Hydrocarbons as Gasoline	263	50.0	ug/l	250		105	70-130			
Surrogate: a,a,a-Trifluorotoluene	9.63		'n	10.0		96.3	70-130			
Matrix Spike (1040048-MS1)	So	urce: L1040	25-05	Prepared	& Analyz	ed: 04/13/	0 1			
Purgeable Hydrocarbons as Gasoline	229	50.0	ug/l	250	ND	91.6	60-140			
Surrogate: a,a,a-Trifluorotoluene	7.92			10.0		79.2	70-130			
Matrix Spike Dup (1040048-MSD1)	Sc	ource: L1040	25-05	Prepared	& Analyz	zed: 04/13	/01			
Purgeable Hydrocarbons as Gasoline	267	50.0	ug/l	250	ND	107	60-140	15.3	25	
Surrogate: a.a.a-Trifluorotoluene	9.18		"	10.0		91.8	70-130			

Project: Tosco(1)

6747 Sierra Court, Suite J

Project Number: Unocal SS#7176 Project Manager: Deanna Harding Reported: 04/18/01 15:21

RPD

%REC

Dublin CA, 94568

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

Spike

Reporting

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1040049 - EPA 5030B (P/T)	·				·· =-					
Blank (1040049-BLK1)				Prepared	& Analyze	ed: 04/13/0	01	_		
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l							
Benzene	ND	0.500	Ħ							
Toluene Toluene	ND	0.500	n							
Ethylbenzene	ND	0.500	n							
Xylenes (total)	ND	0.500	н							
Methyl tert-butyl ether	ND	5.00	#							
Surrogate: a,a,a-Trifluorotoluene	10.3		п	10.0		. 103	70-130			
LCS (1040049-BS1)				Prepared	& Analyz	ed: 04/13/	D1			
Benzene	10.0	0.500	ug/l	10.0		100	70-130			
Toluene	9.91	0.500	Ħ	10.0		99 .1	70-130			
Ethylbenzene	10.1	0.500	**	10.0		101	70-130			
Xylenes (total)	30.4	0.500	"	30.0		101	70-130	_		
Surrogate: a,a,a-Trifluorotoluene	10.4		я	10.0		104	<i>70–130</i>			
LCS (1040049-BS2)				Prepared	& Analyz	ed: 04/13/	01			
Purgeable Hydrocarbons as Gasoline	226	50.0	ug/l	250		90.4	70-130			
Surrogate: a,a,a-Trifluorotoluene	11.4		#	10.0		114	70-130			
Matrix Spike (1040049-MS1)	Sour	rce: L10403	8-04	Prepared	& Analyz	ed: 04/13/	01			
Purgeable Hydrocarbons as Gasoline	255	50.0	ug/l	250	ND	102	60-140			
Surrogate: a,a,a-Trifluorotoluene	11.4		. "	10.0		114	70-130			
Matrix Spike Dup (1040049-MSD1)	Sour	rce: L10403	8-04	Prepared	& Analyz	ed: 04/13/				
Purgeable Hydrocarbons as Gasoline	240	50.0	ug/l	250	ND	96.0	60-140	6.06	25	
Surrogate: a,a,a-Trifluorotoluene	11.3		"	10.0		113	70-130			

6747 Sierra Court, Suite J **Dublin CA, 94568**

Project: Tosco(1)

Project Number: Unocal SS#7176 Project Manager: Deanna Harding

Reported: 04/18/01 15:21

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1040012 - EPA 5030B [P/T]										_
Blank (1040012-BLK1)				Prepared	& Analyza	ed: 04/03/()1			 .
Ethanol	ND	1000	ug/l							
1,2-Dibromoethane	ND	2.00	**							
1,2-Dichloroethane	ND	2.00	"							
Di-isopropyl ether	ND	2.00	, н							
Ethyl tert-butyl ether	ND	2.00	•							
Methyl tert-butyl ether	ND	2.00	"							
Tert-amyl methyl ether	ND	2.00	Ħ							
Tert-butyl alcohol	ND	100	n							
Surrogate: 1,2-Dichloroethane-d4	48.3		"	50.0		96.6	76-114			
Surrogate: Toluene-d8	46.1		"	50.0		<i>92.2</i>	88-110			
Blank (1040012-BLK2)				Prepared	& Analyz	ed: 04/04/	01			
Ethanol	ND	1000	ug/l							
1,2-Dibromoethane	ND	2.00	Ħ							
1,2-Dichloroethane	ND	2.00	#	•						
Di-isopropyl ether	ND	2.00								
Ethyl tert-butyl ether	ND	2.00	#							
Methyl tert-butyl ether	ND	2.00	#							
Tert-amyl methyl ether	ND	2.00	н							
Tert-butyl alcohol	ND	100	n							
Surrogate: 1,2-Dichloroethane-d4	46.4		,,	50.0		92.8	76-114			
Surrogate: Toluene-d8	52.1		77	50.0		104	88-110			
LCS (1040012-BS1)				Prepared	l & Analy	zed: 04/03	/01			
Methyl tert-butyl ether	48.8	2.00	ug/l	50.0		97.6	70-130			
	49.8		, m	50.0		99.6	76-114			
Surrogate: 1,2-Dichloroethane-d4 Surrogate: Toluene-d8	50.7		~	50.0		101	88-110			

6747 Sierra Court, Suite J Dublin CA, 94568 Project: Tosco(1)

Project Number: Unocal SS#7176 Project Manager: Deanna Harding Reported: 04/18/01 15:21

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1040012 - EPA 5030B [P/T]										
LCS (1040012-BS2)				Prepared	& Analyze	ed: 04/04/	01			
Methyl tert-butyl ether	39.8	2.00	ug/l	50.0		79.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	47.5		п	50.0		95.0	76-114			
Surrogate: Toluene-d8	51.5		**	50.0		103	88-110			
Matrix Spike (1040012-MS1)	Sor	urce: L10400	6-05	Prepared	& Analyz	ed: 04/03/	01			
Methyl tert-butyl ether	134	2.00	ug/l	50.0	87.3	93.4	60-140			
Surrogate: 1,2-Dichloroethane-d4	48.7		"	50.0		97.4	76-114			
Surrogate: Toluene-d8	48.8		n	50.0		97.6	88-110			
Matrix Spike Dup (1040012-MSD1)	Source: L104006-05		Prepared & Analyzed: 04/03/01							
Methyl tert-butyl ether	132	2.00	ug/l	50.0	87.3	89.4	60-140	1.50	25	
Surrogate: 1,2-Dichloroethane-d4	48.5		"	50.0	-	97.0	76-114	•		
Surrogate: Toluene-d8	53.7		*	50.0		107	88-110			

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

Project: Tosco(1)

Project Number: Unocal SS#7176 Project Manager: Deanna Harding

Reported: 04/18/01 15:21

Diesel Hydrocarbons (C9-C24) by DHS LUFT - Quality Control Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1D12014 - EPA 3510B										
Blank (1D12014-BLK1)				Prepared	& Analyz	ed: 04/12/	01			
Diesel Range Hydrocarbons	ND	50	ug/l			<u></u> .				
Surrogate: n-Pentacosane	24.7	· <u>·</u>	"	33.3		74.2	50-150			
LCS (1D12014-BS1)				Prepared	& Analyz	ed: 04/12/				
Diesel Range Hydrocarbons	463	50	ug/l	500		92.6	60-140		<u>. </u>	
Surrogate: n-Pentacosane	27.0		"	33.3		81.1	50-150			
LCS Dup (1D12014-BSD1)				Prepared	& Analyz	ed: 04/12/	01			
Diesel Range Hydrocarbons	232	50	ug/l	500	<u> </u>	46.4	60-140	66.5	50	Q-0
Surrogate: n-Pentacosane	20.3		n	33.3		61.0	50-150			

6747 Sierra Court, Suite J Dublin CA, 94568

Analyte

Project: Tosco(1)

Project Number: Unocal SS#7176 Project Manager: Deanna Harding Reported: 04/18/01 15:21

RPD

Limit

Notes

%REC

Limits

%REC

RPD

Source

Result

Level

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

Units

Reporting

Limit

Result

							-
Batch 1D12014 - EPA 3510B							· · · · · · · · · · · · · · · · · · ·
Blank (1D12014-BLK1)				Prepared: 04/12	2/01 Analyze	d: 04/18/01	
Diesel Range Hydrocarbons	ND	50	ug/l				
Surrogate: n-Pentacosane	22.0		"	33.3	66.1	50-150	
LCS (1D12014-BS1)				Prepared: 04/1	2/01 Analyze	d: 04/18/01	
Diesel Range Hydrocarbons	327	50	ug/l	500	65.4	50-125	
Surrogate: n-Pentacosane	21.3		IT	33.3	64.0	50-150	·

Gettler-Ryan/Geostrategies(1)	Project: Tosco(1)	
6747 Sierra Court, Suite J	Project Number: Unocal SS#7176	Reported:
Dublin CA, 94568	Project Manager: Deanna Harding	04/18/01 15:21

Notes and Definitions

D-1 1	Chromatogram Pattern: Unidentified Hydrocarbons < C16
P-02	Chromatogram Pattern: Weathered Gasoline C6-C12
P-03	Chromatogram Pattern: Unidentified Hydrocarbons C6-C12
Q-01	The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
S-03	The surrogate recovery for this sample is outside of established control limits. Review of associated QC indicates the recovery for this surrogate does not represent an out-of-control condition.
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