

GETTLER-RYAN INC.

MAY 1 6 2001

TRANSMITTAL

April 30, 2001 G-R #: 180181

TO:

Mr. David B. De Witt

Tosco Marketing Company

2000 Crow Canyon Place, Suite 4000

San Ramon, California 94583

CC: 1

Mr. David Vossler

Gettler-Ryan Inc.

Petaluma, California

FROM:

Deanna L. Harding

Project Coordinator Gettler-Ryan Inc.

6747 Sierra Court, Suite J Dublin, California 94568 RE:

Tosco (Unocal) SS #4186

1771 First Street

Livermore, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
.1	April 24, 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 11, 2001, this report will be distributed to the following:

c: Ms. Eva Chu, Alameda County Health Care Services, 1131 Harbor Bay Pkwy., Alameda CA 94502

Enclosure

trans/4186.dbd



April 24, 2001 G-R Job #180181

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 #4186

1771 First Street Livermore, California

Dear Mr. De Witt:

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

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

Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Groundwater Sampling (attached). The field data sheets are also attached. The samples were analyzed by Sequoia Analytical. Analytical results are summarized in Tables 1 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

Hagop Kevork P.E. No. C55734

Figure 1:

Potentiometric Map

Figure 2:

Concentration Map

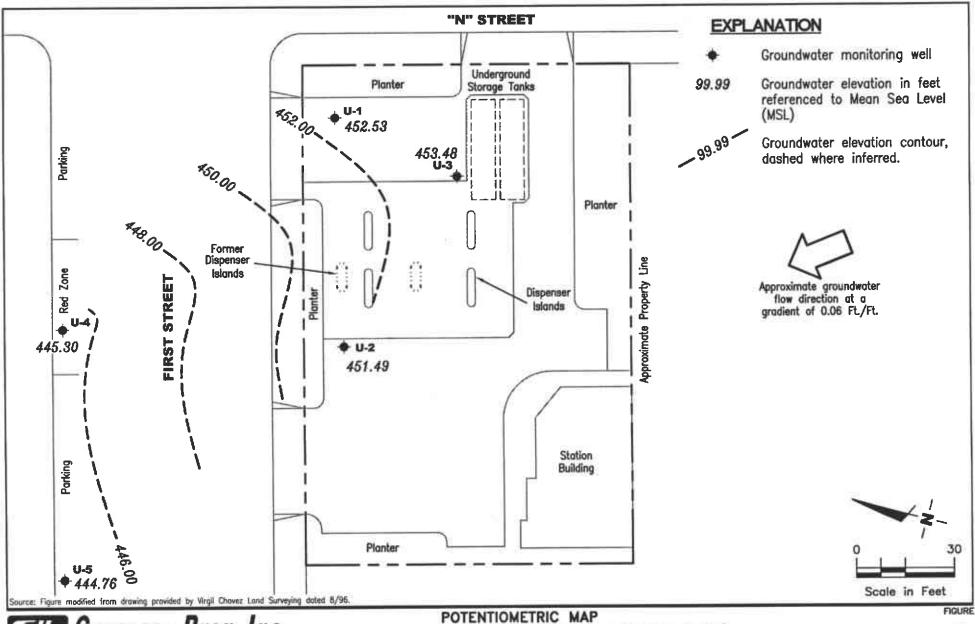
Table 1: Table 2: Groundwater Monitoring Data and Analytical Results Groundwater Analytical Results - Oxygenate Compounds Standard Operating Procedure - Groundwater Sampling

Attachments:

Field Data Sheets

4186 gml

Chain of Custody Document and Laboratory Analytical Reports





Tosco (Unocal) Service Station #4186 1771 First Street Livermore, California

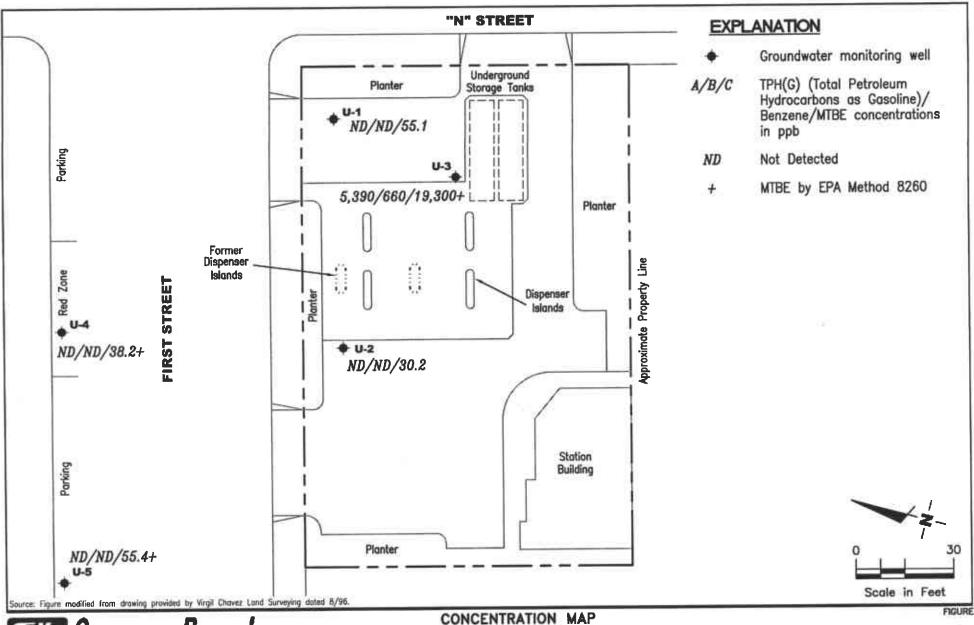
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PROJECT NUMBER 180181 REVIEWED BY

April 3, 2001

REVISED DATE

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

REVIEWED BY

Tosco (Unocal) Service Station #4186 1771 First Street Livermore, California

April 3, 2001

REVISED DATE

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PROJECT NUMBER

Table 1
Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #4186 1771 First Street Livermore, California

WELL ID/	DATE	DTW	S.I.	GWE	TPH-G	В	T	E	X	MTBE
roc*		(ft,)	(ft. bgs)	(msl)	(ppb)	(pph)	(pph)	(pph)	(ppb)	(ppb)

U-1	07/12/00	22.20	140.240	454.99	ND	ND	ND	ND	ND	ND
478.27	07/13/98	23.28	14.0-34.0	454.99	ND ND	ND	ND	ND	ND	ND
	10/07/98	26.43			ND	ND ND	ND	ND	1.1	7.3
	01/15/99	30.42		447.85				ND	ND	160
	04/14/99	24.21		454.06	ND	ND	ND		ND ND	92
	07/19/99	27.10		451.17	ND	ND	ND	ND		
	10/12/99	29.40		448.87	ND	ND	ND	ND	ND	37
	01/24/00	27.90		450.37	ND	ND	ND	ND	ND	28
	04/10/00	26.16		452.11	ND	ND	0.930	ND	ND	ND
	07/17/00	28.04		450.23	ND	ND	ND	ND	ND	160
	10/02/00	28.41		449.86	ND	ND	ND	ND	ND	120
	01/08/01	28.68		449.59	ND	ND	ND	ND	ND	103
	04/03/01	25.74		452.53	ND	ND	ND	ND	ND	55.1
U-2										
477.44	07/13/98	23.52	13.0-33.0	453.92	1,200	130	12	62	180	1,100
	10/07/98	25.31		452.13	ND	ND	ND	ND	ND	160
	01/15/99	30.22		447.22	ND	ND	ND	ND	ND	280
	04/14/99	24.50		452.94	ND	ND	ND	ND	ND	460
	07/19/99	28.54		448.90	ND	ND	ND	ND	ND	220
	10/12/99	30.48		446.96	ND	ND	ND	ND	ND	160
	01/24/00	24.52		452.92	ND	ND	ND	ND	ND	150
	04/10/00	23.68		453.76	ND	ND	ND	ND	ND	177
	07/17/00	28.35		449.09	ND	ND	ND	ND	ND	62.7
	10/02/00	28.72		448.72	ND	ND	ND	ND	ND	52
	01/08/01	29.11		448.33	ND	ND	ND	ND	ND	57.3
	04/03/01	25.95		451.49	ND	ND	ND	ND	ND	30.2

Table 1
Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #4186

1771 First Street

Livermore, California

WELL ID/	DATE	DTW	S.I.	GWE	ТРН-G	В	T	E	Х	MTBE
TOC*		(ft.)	(ft. bgs)	(msl)	(ppb)	(pph)	(ppb)	(ppb)	(ppb)	(ррь)
		· ·								
U-3						2.100	5.500	2.700	16,000	7,500
478.46	07/13/98	23.82	14.0-34.0	454.64	70,000	3,100	5,500	2,700 3,100	14,000	6,100
	10/07/98	25.64		452.82	54,000	5,000	1,100 ND ²		3,800	15,000
	01/15/99	30.92		447.54	41,000 ¹	3,100		1,800	7,800	39,000
	04/14/99	24.48		453.98	33,000	. 86	290	2,200		12,000/16,000 ³
	07/19/99	28.46		450.00	48,000	3,900	2,500	3,600	14,000	22,000/8,300 ⁵
	10/12/99	30.39	•	448.07	35,000 ⁴	4,200	ND^2	2,300	1,800	,
	01/24/00	23.43		455.03	13,0004	260	ND^2	770	3,200	53,000/42,000 ³
	04/10/00	23.31		455.15	$35,200^4$	1,070	241	2,820	8,850	35,600/40,900 ³
	07/17/00	27.53		450.93	$29,000^4$	3,570	525	3,180	5,660	22,500/21,000 ³
	10/02/00	28.19		450.27	11,000 ⁴	2,100	31	2,000	780	25,000/28,000 ^{3,6}
	01/08/01	29.85		448.61	$33,600^4$	3,060	427	3,040	4,190	24,700/30,900 ³
	04/03/01	24.98		453.48	5,390 ⁴	660	10.8	304	356	15, 200/19,300⁵
U-4 476.93	04/03/01 ⁷	31.63	35.0-45.0	445.30	ND	ND	ND	ND	ND	37.8/38.2 ³
U-5 476.51	04/03/01 ⁷	31.75	37.0-47.0	444.76	ND	ND	0.728	ND	0.993	54.8/55.4 ³
TRIP BLANK										
	07/13/98				ND	ND	ND	ND	ND	ND
	10/07/98				ND	ND	ND	ND	ND	ND
	01/15/99				ND	ND	ND	ND	ND	ND
	04/14/99				ND	ND	ND	ND	ND	ND
	07/19/99				ND	ND	ND	ND	ND	ND
	10/12/99				ND	ND	ND	ND	ND	ND

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #4186

1771 First Street

Livermore, California

WELL ID/	DATE	DTW	S.L.	GWE	TPH-G	B	T (mph)	E	X (ppb)	MTBE (ppb)
TOC*		(ft.)	(ft. bgs)	(msl)	(ppb)	(ppb)	(ppb)	(ppb)	(μρο)	(PPO)
TB-LB	01/24/00				ND	ND	ND	ND	ND	ND
(cont)	04/10/00				ND	ND	ND	ND	ND	ND
(2011)	07/17/00				ND	ND	ND	ND	ND	ND
	10/02/00				ND	ND	ND	ND	ND	ND
	01/08/01	- <u>-</u> -			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 #4186 1771 First Street Livermore, California

EXPLANATIONS:

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

(ft. bgs) = Feet Below Ground Surface

A = Aylelles

MTBE = Methyl tertiary butyl ether

GWE = Groundwater Elevation

(msl) = Mean sea level

TPH-G = Total Petroleum Hydrocarbons as Gasoline

- TOC elevations are relative to msl in feet. The benchmark used was a City of Livermore survey monument at First & "Q" Streets, (Benchmark Elevation = 469.246 feet, msl).
- Laboratory report indicates gasoline and unidentified hydrocarbons C6-C12.
- Detection limit raised. Refer to analytical reports.
- 3 MTBE by EPA Method 8260.
- 4 Laboratory report indicates gasoline C6-C12.
- 5 MTBE by EPA Method 8260 analyzed past EPA recommended holding time.
- Laboratory report indicates the sample was analyzed within holding time. Re-analysis for confirmation or dilution was performed past the recommend holding time.
- Well development performed.

Table 2
Groundwater Analytical Results - Oxygenate Compounds

Tosco (Unocal) Service Station #4186

1771 First Street

Livermore, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	EDB (ppb)	1,2-DCA (ppb)
U-1	10/02/00		ND						
0-1	10/02/00		- 1-						
U-2	10/02/00		ND						
U-3	07/19/99			16,000					
	10/12/99			8,300		 .			
	01/24/00			42,000					
	04/10/00			40,900					
	07/17/00			21,000					
	10/02/00		63,000	28,000			 .	 1	 1
	01/08/01	ND^1	49,300	30,900	ND^1	ND^1	ND	ND ¹	ND ¹
	04/03/012	ND ¹	22,200	19,300	ND¹	ND ¹	ND^1	ND¹	ND¹
U-4	04/03/01	ND	ND	38.2	ND	ND	ND	ND	ND
U-5	04/03/01	ND	ND	55.4	ND	ND	ND	ND	ND

Table 2

Groundwater Analytical Results - Oxygenate Compounds

Tosco (Unocal) Service Station #4186 1771 First Street Livermore, California

EXPLANATIONS:

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

TBA = Tertiary butyl alcohol

MTBE = Methyl tertiary butyl ether

DIPE = Di-isopropyl ether

ETBE = Ethyl tertiary butyl ether

TAME = Tertiary amyl methyl ether

EDB = 1,2-Dibromoethane

1,2-DCA = 1,2-Dichloroethane

(ppb) = Parts per billion

ND = Not Detected

-- = Not Analyzed

Detection limit raised. Refer to analytical reports.

Laboratory report indicates this sample was analyzed outside of the EPA recommended holding time.

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 well development, each well is monitored for the presence of free-phase hydrocarbons and the depth to water is recorded. Wells are then developed by alternately surging the well with the bailer, then purging the well with a pump to remove accumulated sediments and draw groundwater into the well. Development continues until the groundwater parameters (temperature, pH, and conductivity) have stabilized.

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

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COMMENTS	·							
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WELL MONITORING/SAMPLING FIELD DATA SHEET

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WELL MONITORING/SAMPLING FIELD DATA SHEET

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Sampling Time: Purging Flow Rate Did well de-wate	Grundfos Other:	135 1 gpm pH 7.82	Condu	later Coldediment fres; Ti	onditions: or: Descriptions: Tempera F 68.	dirayi	Volume D.O.	:	Alkalinity
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Sampling Time: Purging Flow Rate Did well de-wate Time 12:72 12:73 17:725	Grundfos Other: 12 12 12 12 te: 97? Volume (gal.) 1.) 3	135 1 open pH 7.82 7,67 7.63	Condumnts 69	ATORY I	onditions: or: Descriptions: ime: F-68. 68. 68. NFORMA	dero-yī	Volume D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
Sampling Time: Purging Flow Rate Did well de-wate Time 12:72 12:73 17:725	Grundfos Other: 12 12 12 12 te: 97? Volume (gal.) 1.) 3	135 1 open pH 7.82 7,67 7.63	Condumnts 69	ATORY I	onditions: or: Descriptions: ime: F-68. 68. 68. NFORMA	dero-yī	Volume D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
Sampling Time: Purging Flow Rate Did well de-wate Time 12:72 12:73 17:725	Grundfos Other: 12 12 12 12 te: 97? Volume (gal.) 1.) 3	135 1 open pH 7.82 7,67 7.63	Condumnts 69	ATORY I	onditions: or: Descriptions: ime: F-68. 68. 68. NFORMA	dero-yī	Volume D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

WELL MONITORING/DEVELOPMENT FIELD DATA SHEET

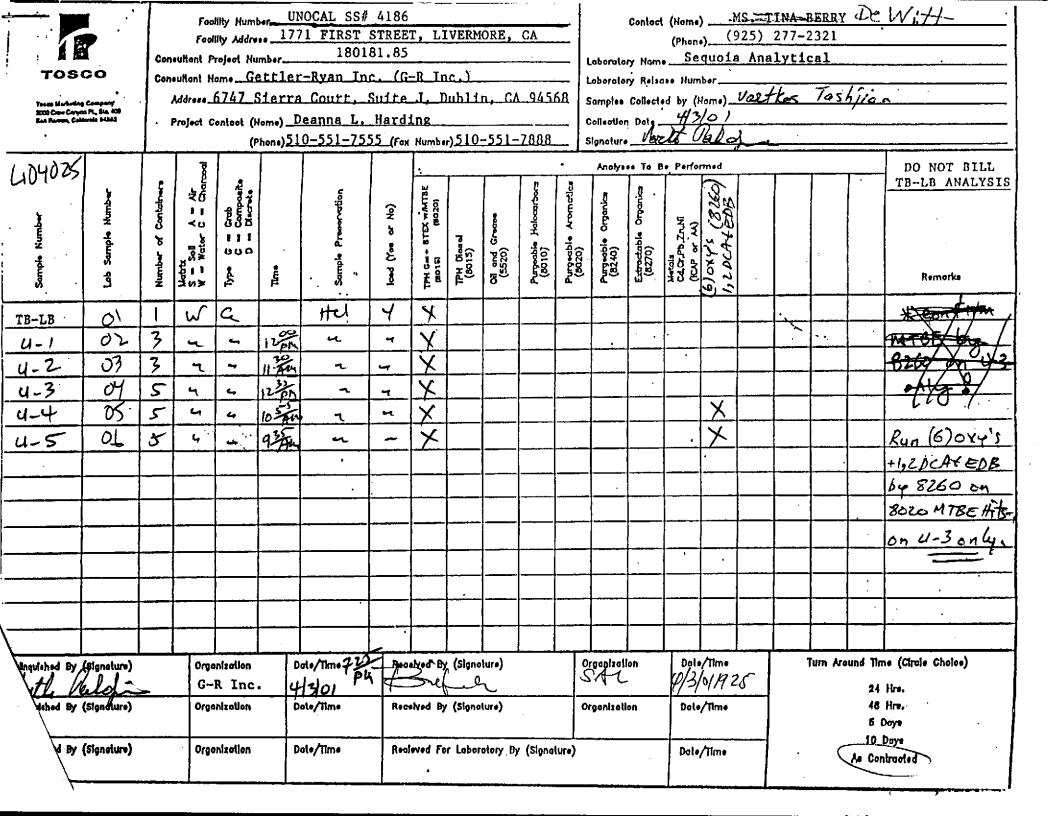
011			LIEFD DWIN				
Client/ Facility <u>To</u>	SCD #	4186		Job#:	80181)	
Address: <u>/</u>		- 1		Date:	1/3/0)		
				·		,	
City:	Livern	wore, (<u> </u>	Sampler:	Jan 16	5	
Well ID		u-4_	Well Condition	n: 0K			
Well Diamete	r	Z in.	Hydrocarbon	~ ~~~	Amount Ba		> · (gal.)
Total Depth		46.30 ft.	Thickness:	2" = 0.17	3" = 0.38		4" = 0.66
Depth to Wat	ter	31.63 11.	Factor (VF)	6" = 1.	50	12" = 5.80	
	<u></u> .	13.62 x v	1F 0.17 = 2.32	/∂ XoB (case volume) =	Estimated Pu	rge Volume:	23, a (gal.)
Purge	-	sable Bail er		mpling	posable Ba	ila	• • • • • • • • • • • • • • • • • • • •
Equipment:	Baile: Stacl		Eq	uipment: <u>Dis</u> Bai		IIIer	
	Sucti	on			ssure Baile	F	
	Gruff				ab Sample		
		r:				·	
Starting Time	<u></u>	9:55	Weather	Conditions:	clier		
Sampling Tim		10-5-5		lor: <u>bze.</u>		Odor: nl)
Purging Flow	- 	i		Description:			
Did well de-w	vater?	4	If yes; T	Time: <u>(0;)/</u>	Volu	me: <u>/6</u>	(gal.)
Time	Volume (gal.)	рН	Conductivity µmhos/cm	Temperature	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
9:57	2.5	7.89	708	<u> 684 </u>			
خصہ د 🗅							 _
9:59	5	7.80	731	69.3	very	Turbid	calater (made
10:02	7.5	7.80	731	69.3			colster (mud)
10:05	7.5	7.78 7.73	731 740 749	69.3 69.5 69.7	verg		colater (made
10:05	7.5	7.78 7.73 7.70	731 740 749 755	69.3 69.7 69.8	cheer	4	
10:07 10:05 10:08 10:10	7.5 10 12.6 15	7.73 7.70 7.71	731 740 749 755 761	69.3 69.5 69.7 69.8 69.9	cheer		
10:02 10:05 10:08 10:10	7.5 10 12.6 15 17.5	7.73 7.70 7.71 7.68	731 740 749 755 761 760	69.3 69.7 69.8 69.9 20.1	- clear Tucki	d egain	
10:02 10:05 10:08 10:10	7.5 10 12.6 15 17.5 10	7.73 7.70 7.71	731 740 749 755 761 760 768	69.3 69.5 69.7 69.8 69.9 20.1	cheer	d egain	
10:02 10:05 10:08 10:10 10:29 10:32 10:34	7.5 10 12.6 15 17.5	7.73 7.70 7.71 7.68	731 740 749 755 761 760	69.3 69.7 69.8 69.9 20.1	- clear Tucki	d egain	
10:02 10:05 10:08 10:10 10:29 10:32 10:34	7.5 10 12.6 15 17.5 20 22	7.73 7.70 7.71 7.68	731 740 749 755 761 760 768 766	69.3 69.7 69.8 69.9 20.1 69.3 69.5	- clear Tucki	d egain	
10:02 10:08 10:10 10:32 10:34 10:35	7.5 10 12.6 15 17.5 20 22 23	7+8 7.73 7.70 7.71 768 7.57 7.57 7.55	731 740 749 755 761 760 768 766 770	69.3 69.4 69.4 69.9 20.1 69.3 69.5 63.7	Clear Tucki Clear Clear	degain	(SETP)
10:07 10:08 10:10 10:32 10:34 10:35	7.5 10 12.6 15 17.5 20 22 23	7.78 7.70 7.70 7.51 7.68 7.57 7.57 7.55	73/ 749 755 761 760 768 766 770 LABORATORY IN	69.3 69.4 69.8 69.9 20.1 69.3 69.5 63.7	Clear Turbi Clear Clear	ad egoin	(SET +)
10:02 10:05 10:08 10:10 10:32 10:34 10:35	7.5 10 12.6 15 17.5 20 22 23	7+8 7.73 7.70 7.71 768 7.57 7.57 7.55	731 740 749 755 761 760 768 766 770	69.3 69.4 69.4 69.9 20.1 69.3 69.5 63.7	Clear Tucki Clear Clear	ANAL TAHE/BIE	(SET +)

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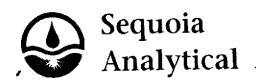
WELL MONITORING/DEVELOPMENT FIELD DATA SHEET

Client/			•		-	/		
acility Tosc	0#418	6	<u> </u>	Job#:		<u>018/</u>		
Address: <u>/77/</u>	First	st	·	Date:				
City: Live	umore,	ea.		Sampl	ег: <i>_Va</i> _	rtkes		
Well ID	<u> </u>	5	Well Condit	ion:	OK_	·		· · · · · · · · · · · · · · · · · · ·
Well Diameter	2	in.	Hydrocarbo Thickness:			mount Ba		. (gai.)
Total Depth	47-	20 ft.	Volume		7	3* = 0.38		4" = 0.66
Depth to Water		5 ft.	Factor (VF)		6" = 1.50	<u> </u>	12" = 5.80	
	154	<u>15</u> .x vf	0.17 = 2.6	2 x 1 (case v	olume) = E	stimated Pu	rge Volume:	27.0 (aal.)
Purge Equipment:	Disposabl Bailer Stack Suction Grundfos Other:			Samplin g Equipment:	Baile Pres Grat	osable Ba er sure Baile o Sample		· · · · · · · · · · · · · · · · · · ·
Starting Time:	и.		1 <i>1</i> /2004h	er Candition	18:	سنده جاح		
Sampling Time: Purging Flow Ra Did well de-wate	ite: /_	35	Water Sedime If yes;	ent Descript Time:	brn . tion: <u>Si</u>	// Volu	Odor: <u>1v</u> me: <u>18</u>	
Sampling Time: Purging Flow Ra Did well de-wate	ite: /_	3 \$ //S	Water Sedime If yes; Conductivity μmhos/cm	Color:ent Descript Time:e	brn. tion: <u>Si</u>	D.O. (mg/L)	Odor: <u>18</u> me: <u>18</u> ORP (mV)	lgal.l Alkalinity (ppm)
Sampling Time: Purging Flow Ra Did well de-wate	volume (gal.)	рН 8.0 <u>6</u>	Water opm. Sedime If yes; Conductivity µmhos/cm 707	Color:ent Descript Time:e Tempe: 67	brn. tion: Si	D.O. (mg/L)	Odor: <u>18</u> me: <u>18</u> ORP (mV)	lgal.l Alkalinity
Sampling Time: Purging Flow Ra Did well de-wate Time \$\frac{\xi \cdot 7}{\xi \cdot 7} \frac{\cdot 7}{\xi \cdot 7}	volume (gal.)	рН 8.0 <u>6</u> 7.98	Water opm. Sedime If yes; Conductivity	Color:ent Descript Time:	brn. tion: Si	D.O. (mg/L)	Odor:n me:18 ORP (mV)	Alkalinity (ppm)
Sampling Time: Purging Flow Ra Did well de-wate Time \$:37 \$:39 \$:40	volume (gal.)	pH 8.06 7.98 7.87	Water opm. Sedime If yes; Conductivity µmhos/cm 707	Color: ent Descript Time: F 67 67 67	brn. tion: Si	D.O. (mg/L)	Odor: <u>18</u> me: <u>18</u> ORP (mV)	Alkalinity (ppm)
Sampling Time: Purging Flow Ra Did well de-wate Time \$:37 \$:39 \$:40 \$:42	volume (gal.)	рН 8.0 <u>6</u> 7.98	Water com. Sedime If yes; Conductivity μmhos/cm 707 721	Color: ent Descript Time: Tempe: 67 67 67 68	brn. tion: 5: 8:48 rature 5 - 7 - 7	D.O. (mg/L)	Odor:n me:18 ORP (mV)	Alkalinity (ppm)
Sampling Time: Purging Flow Ra Did well de-wate Time \$:37 \$:39 \$:40 \$:40 \$:40 \$:44	Volume (gal.) 2.5 7.5	pH 8.06 7.98 7.87 7.73	Water opm. Sedime If yes; Conductivity umhos/cm 707 721 731 736 750	Color:ent Descript Time: Temper 67 67 67 68 68 68	brn. tion: 5:48 rature	D.O. (mg/L)	Odor:n me:18 ORP (mV)	Alkalinity (ppm)
Sampling Time: Purging Flow Ra Did well de-wate Time \$:37 \$:39 \$:40 \$:40 \$:40 \$:40 \$:40 \$:40 \$:40	volume (gal.) 2.5 7.5 0 1.5	9.06 7.98 7.87 7.73 7.70	Water com. Sedime If yes; Conductivity μmhos/cm 707 731 736 736 750 756	Color: ent Descript Time: Temper 67 67 67 68 68 68	brn. tion: 5: 9:48 rature 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	D.O. (mg/L)	Odor:n me:18 ORP (mV)	Alkalinity (ppm)
Sampling Time: Purging Flow Ra Did well de-wate Time \$:37 \$:39 \$:40 \$:40 \$:40 \$:40 \$:40 \$:40 \$:40 \$:40 \$:40 \$:40 \$:40 \$:40 \$:40 \$:40 \$:40	volume (gal.) $\frac{2.5}{5}$ $\frac{0}{2.5}$	8.06 7.98 7.87 7.73 7.70 7.64 7.59 7.58	Water opm. Sedime If yes; Conductivity µmhos/cm 707 721 731 736 746 746 740	Color: ent Descript Time: Temper 67 67 68 68 68 68 69	brn. tion: 5: 9:48 rature 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	D.O. (mg/L)	Odor:n me:18 ORP (mV)	Alkalinity (ppm)
Sampling Time: Purging Flow Ra Did well de-wate Time \$:37 \$:39 \$:40	volume (gal.) 2.5 7.5 0 1.5	8.06 7.98 7.87 7.73 7.70 7.64 7.59 7.58 7.55	Water com. Sedime If yes; Conductivity μmhos/cm 707 731 736 736 750 756	Color: ent Descript Time: 67 62 68 68 68 68 69	brn. tion: 5:1	D.O. (mg/L)	Odor:n me:18 ORP (mV)	Alkalinity (ppm)
Sampling Time: Purging Flow Ra Did well de-wate Time \$:37 \$:39 \$:40 \$:40 \$:40 \$:40 \$:40 \$:40 \$:40 \$:40 \$:40 \$:40 \$:40 \$:40 \$:40 \$:40 \$:40	volume (gal.) 2.5 7.5 0 1.5	8.06 7.98 7.87 7.73 7.70 7.64 7.59 7.58	Water opm. Sedime If yes; Conductivity µmhos/cm 707 721 731 736 746 746 740	Color: ent Descript Time: Temper 67 67 68 68 68 68 69	brn. tion: 5:1	D.O. (mg/L)	Odor:n me:18 ORP (mV)	Alkalinity (ppm)
Sampling Time: Purging Flow Ra Did well de-wate Time \$:37 \$:37 \$:39 \$:40 \$:42 \$:42 \$:44 \$:44 \$:45 \$:47 9:05 9:10 9:12 2	Volume (gal.) 2.5 5 7.5 0 1.5 1.7.5	8.06 7.98 7.87 7.70 7.64 7.59 7.55 7.51	Water opm. Sedime If yes; Conductivity µmhos/cm 707 721 731 736 740 740 741 LABORATOR	Color: ent Descript Time: F 67 63 68 68 69 69 VINFORMA	brn. tion: 5:1 7:48	D.O. (mg/L) a Little	Odor:_n me: 18 ORP (mV) Turbic	Alkalinity (ppm)
Sampling Time: Purging Flow Ra Did well de-wate Time \$:37 \$:39 \$:40 \$:42 \$:42 \$:44 \$:46 \$:47 9:05 9:10 \$:47 2:08 9:10 \$:40	volume (gal.) 2.5 5 7.5 0 2.5 17.5 17.5 21	PH 8.06 7.98 7.87 7.70 7.64 7.58 7.55 7.51	Water GDM. Sedime If yes; Conductivity µmhos/cm 707 721 731 736 740 740 741 LABORATOR REFRIG. PRES	Color:ent Descript Time: Temper 67 67 68 68 68 68 69 69 Y INFORMA	tion: Single Property of the second s	D.O. (mg/L) a Little	Odor:n me: _18 ORP (mV) Turbio	Alkalinity (ppm)
Sampling Time: Purging Flow Ra Did well de-wate Time \$:37 \$:37 \$:39 \$:40 \$:42 \$:42 \$:44 \$:44 \$:45 \$:47 9:05 9:10 9:12 2	Volume (gal.) 2.5 5 7.5 0 1.5 1.7.5	PH 8.06 7.98 7.87 7.70 7.64 7.58 7.55 7.51	Water GDM. Sedime If yes; Conductivity µmhos/cm 707 721 731 736 740 740 741 LABORATOR REFRIG. PRES	Color: ent Descript Time: F 67 63 68 68 69 69 VINFORMA	brn. tion: 5:1 7:48	D.O. (mg/L) a Little	Odor: 18 ORP (mV) Turbic ANA TPHE/BIE	Alkalinity (ppm)

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April 18, 2001

Deanna Harding Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568 RE: Tosco(1) / L104025

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. Palt

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

Project Number: Unocal SS#4186 Project Manager: Deanna Harding Reported: 04/18/01 13:53

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	L104025-01	Water	04/03/01 00:00	04/03/01 19:25
U-1	L104025-02	Water	04/03/01 12:00	04/03/01 19:25
U-2	L104025-03	Water	04/03/01 11:30	04/03/01 19:25
U-3	L104025-04	Water	04/03/01 12:35	04/03/01 19:25
U-4	L104025-05	Water	04/03/01 10:55	04/03/01 19:25
U-5	L104025-06	Water	04/03/01 09:35	04/03/01 19:25

Project: Tosco(1)

6747 Sierra Court, Suite J

Project Number: Unocal SS#4186

Reported: 04/18/01 13:53

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
TB-LB (L104025-01) Water Sampled	1: 04/03/01 00:00	Received: 0	4/03/01 1	9:25					
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l	1	1040048	04/13/01	04/13/01	DHS LUFT	
Benzene	ND	0.500	*	п	H	*	Ħ	n	
Toluene	ND	0.500	H	**	**	"	*	- 11	
Ethylbenzene	ND	0.500	"	н	**	Ħ	"		
Xylenes (total)	ND	0.500	11	"	и	P	п	**	
Methyl tert-butyl ether	ND	5.00	Ħ		н	H		H	
Surrogate: a,a,a-Trifluorotoluene		76.3 %	70-	130		"	"	r	
U-1 (L104025-02) Water Sampled: 0	4/03/01 12:00 R	eceived: 04/0	3/01 19:2	:5					
	ND	50.0	ug/l	1	1040048	04/13/01	04/13/01	DHS LUFT	
Purgeable Hydrocarbons as Gasoline	ND ND	0.500	ug/i		"		n	H	
Benzene	ND ND	0.500	n	н	Ħ	*	Ħ	•	
Toluene		0.500	11	Ħ		п	n	u	
Ethylbenzene	ND	0.500	n	n	n	**	•	Ħ	
Xylenes (total)	ND	5.00	•	**	e	tt .	n	. "	
Methyl tert-butyl ether	55.1								
Surrogate: a,a,a-Trifluorotoluene		75.4 %	70-	130					
U-2 (L104025-03) Water Sampled:	04/03/01 11:30 R	eceived: 04/	03/01 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	n	n	**	n	H	n	
Toluene	ND	0.500		H	"	Ħ	#	41	
Ethylbenzene	ND	0.500	**	**	Ħ	11	11	*	
Xylenes (total)	ND	0.500	Ħ	n		π	n	H	
•	30.2	5.00		"	"	**	#	# 	
Methyl tert-butyl ether Surrogate: a,a,a-Trifluorotoluene	3012	78.7 %	70-	-130	п	"		H	

6747 Sierra Court, Suite J Dublin CA, 94568

Project: Tosco(1)

Project Number: Unocal SS#4186 Project Manager: Deanna Harding

Reported: 04/18/01 13:53

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 (L104025-04) Water Sampled	l: 04/03/01 12:35	Received: 04/0	3/01 19:	25					
Purgeable Hydrocarbons as Gasolii	ne 5390	500	ug/l	10	1040049	04/13/01	04/13/01	DHS LUFT	P-01
Benzene	660	5.00	11	*	IJ	11			
Toluene	10.8	5.00	**	Ħ		11	11		
Ethylbenzene	304	5.00		Ħ	**	п	W .	"	
Xylenes (total)	356	5.00	19	H	**		#	u	
Methyl tert-butyl ether	15200	500	n	100	Ħ	#		ft	M-04
Surrogate: a,a,a-Trifluorotoluene	86.3 %	70-	-130	11	#	n	at .		
U-4 (L104025-05) Water Samples	1: 04/03/01 10:55	Received: 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	11		Ħ	n	H	Ħ	
Toluene	ND	0.500	Ħ	77	H	Ħ	m	11	
Ethylbenzene	ND	0.500	**	n	"	n	H	Ħ	
Xylenes (total)	ND	0.500	"	"	*	IT	**	"	
Methyl tert-butyl ether	37.8	5.00	**	**	#		π 		
Surrogate: a,a,a-Trifluorotoluene		77.1 %	70	-130	"	"	H	*	
U-5 (L104025-06) Water Sample	d: 04/03/01 09:35	Received: 04/0	03/01 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		Ħ	#		41	#	
Toluene	0.728	0.500	Ħ	"	**	**	**	**	
Ethylbenzene	ND		11	π	Ħ	Ħ	Ħ	-	
Xylenes (total)	0.993	0.500		#	H	ıı	II.	Ħ	
Methyl tert-butyl ether	54.8		**	"	**	**	π	11	
Surrogate: a,a,a-Trifluorotoluene		80.2 %	70)-130	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	"	"	"	

6747 Sierra Court, Suite J

Dublin CA, 94568

Project: Tosco(1)

Project Number: Unocal SS#4186

Project Manager: Deanna Harding

Reported: 04/18/01 13:53

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-3 (L104025-04) Water	Sampled: 04/03/01 12:35 Received: 04/03/01 19:25								
Ethanol	ND	167000	ug/l	166.67	1040057	04/17/01	04/18/01	EPA 8260B	
1,2-Dibromoethane	ND	333	11	**	**	H	Ħ	P	
1,2-Dichloroethane	ND	333	*	11	**	н		11	
Di-isopropyl ether	ND	333	н	#1	11	•	**	11	
Ethyl tert-butyl ether	ND	333	н		n	ħ	**	"	
Methyl tert-butyl ether	19300	333	n	n	*	11	н	H	
Tert-amyl methyl ether	ND	333	**	н	n	n	H	•	
Tert-butyl alcohol	22200	16700	**	H	н	•			,
		95.6 %	76.	-114		"	#	er	
Surrogate: 1,2-Dichloroeth	ane-d4	95.0 % 105 %		-110	#	*	"	n	
Surrogate: Toluene-d8		103 %	00	-110					
U-4 (L104025-05) Water	Sampled: 04/03/01 10:55	Received: 04/0	3/01 19:	25					
Ethanol	ND		ug/l	ı	1040017	04/05/01	04/05/01	EPA 8260B	
1,2-Dibromoethane	ND		**	н	11	11		-	
1,2-Dichloroethane	ND		11		n	•	**	11	
Di-isopropyl ether	ND	2.00	Ħ	n	*	#	Ħ	#	
Ethyl tert-butyl ether	ND		**	Ħ	**	H	"	H	
Methyl tert-butyl ether	38.2		**		17	•	**	*	
Tert-amyl methyl ether	NE		Ħ			n	**	11	
Tert-butyl alcohol	ND		H	11	Ħ	n		# ************************************	
		92.4 %	76	-114	и	#	n	"	
Surrogate: 1,2-Dichloroeth	nane-a4	101 %		3-110	#	"	"	~	
Surrogate: Toluene-d8									
U-5 (L104025-06) Water	Sampled: 04/03/01 09:35						04/05/01	EPA 8260B	
Ethanol	NI		ug/l	ì	1040017	04/05/01	04/05/01	EFA 840VD	•
1,2-Dibromoethane	NI	2.00	**	н	Ħ			**	
1,2-Dichloroethane	NI	2.00	11	"	11				
Di-isopropyl ether	NI	2.00	H	**	**	,,	**	**	
Ethyl tert-butyl ether	NI	2.00	**	n	ff ff	и	n D		
Methyl tert-butyl ether	55.	4 2.00		н	u	*	"		
Tert-amyl methyl ether	NI		n	**	41	11		"	
Tert-butyl alcohol	N	="	Ħ	Ħ	#				
		91.8 %	7	6-114	п	"	н	**	
Surrogate: 1,2-Dichloroet Surrogate: Toluene-d8	nane-d4	98.0 %		8-110	#	Ħ	"	Ħ	

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

Project: Tosco(1)

Project Number: Unocal SS#4186 Project Manager: Deanna Harding

Reported: 04/18/01 13:53

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1040048 - EPA 5030B (P/T)	· · · · · · · · · · · · · · · · · · ·									
Blank (1040048-BLK1)				Prepared	& Analyz	ed: 04/13/	01			
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l							
Benzene	ND	0.500	n							
Toluene	ND	0.500	н							
Ethylbenzene	ND	0.500	11							
Xylenes (total)	ND	0.500	#							
Methyl tert-butyl ether	ND	5.00	н							
Surrogate: a,a,a-Trifluorotoluene	. 7.96		W	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	rt	10.0		86.5	70-130			
Ethylbenzene	8.49	0.500	10	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		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		π	10.0		96.3	70-130			
Matrix Spike (1040048-MS1)	So	urce: L10402	25-05	Prepared & Analyzed: 04/13/01						
Purgeable Hydrocarbons as Gasoline	229	50.0	ug/l	250	ND	91.6	60-140			
Surrogate: a,a,a-Trifluorotoluene	7.92		tt	10.0		79.2	70-130			
Matrix Spike Dup (1040048-MSD1)	So	urce: L1040	25-05	Prepared	& Analy2	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	···	n	10.0		91.8	70-130	-		

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

Project Number: Unocal SS#4186

Reported: 04/18/01 13:53

Dublin CA, 94568

Project Manager: Deanna Harding

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

	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Analyte	Result	,,,,,,,								
Batch 1040049 - EPA 5030B (P/T)										
Blank (1040049-BLK1)				Prepared a	& Analyz	ed: 04/13/0)1			
urgeable Hydrocarbons as Gasoline	ND	50.0	ug/l							
Benzene	ND	0.500	Ħ							
Coluene	ND	0.500	R							
Ethylbenzene	ND	0.500	"							
(ylenes (total)	ND	0.500	Ħ							
Methyl tert-butyl ether	ND	5.00	**							
Surrogate: a,a,a-Trifluorotolyene	10.3		"	10.0		103	70-130			
LCS (1040049-BS1)				Prepared	& A <u>naly</u> z	red: 04/13/	01			<u> </u>
Benzene	10.0	0.500	ug/l	10.0		100	70-130			
Toluene	9.91	0.500	н	10.0		99.1	70-130			
Ethylbenzene	10.1	0.500		10.0		101	70-130			
•	30.4	0.500	п	30.0		101	70-130			
Xylenes (total) Surrogate: a,a,a-Trifluorotoluene	10.4		n	10.0		104	70-130	•		
•				Prenared	& Analy	zed: 04/13/				
LCS (1040049-BS2)	226	50.0	ug/l	250		90.4	70-130			
Purgeable Hydrocarbons as Gasoline			- ug/1	10.0		114	70-130	<u></u>		
Surrogate: a,a,a-Trifluorotoluene	11.4		"							
Matrix Spike (1040049-MS1)	So	urce: L1040		Prepared & Analyzed: 04/13/01						-
Purgeable Hydrocarbons as Gasoline	255	50.0	ug/l	250	ND	102	60-140			
Surrogate: a,a,a-Trifluorotoluene	11.4		n	10.0		114	70–130			
Matrix Spike Dup (1040049-MSD1)	Se	ource: L1040	38-04	Prepared	& Analy	zed: 04/13	/01			
Purgeable Hydrocarbons as Gasoline	240	50.0		250	ND	96.0	60-140	6.06	25	
Surrogate: a,a,a-Trifluorotoluene	11.3			10.0		113	70-130			

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

Project: Tosco(1)

Project Number: Unocal SS#4186 Project Manager: Deanna Harding

Reported: 04/18/01 13:53

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 1040017 - EPA 5030B [P/T]										
Blank (1040017-BLK1)				Prepared	& Analyze	ed: 04/05/0	01			
Ethanol	ND	1000	ug/l							
1,2-Dibromoethane	ND	2.00	n							
1,2-Dichloroethane	ND	2.00	n							
Di-isopropyl ether	ND	2.00	n							
Ethyl tert-butyl ether	ND	2.00	n							
Methyl tert-butyl ether	ND	2.00	**							
Tert-amyl methyl ether	ND	2.00	Ħ							
Tert-butyl alcohol	ND	100	**							
Surrogate: 1,2-Dichloroethane-d4	48.0		"	50.0		96.0	76-114			
Surrogate: Toluene-d8	52.7		"	50.0		105	88-110			
LCS (1040017-BS1)				Prepared	& Analyz	ed: 04/05/	01			
Methyl tert-butyl ether	44.5	2.00	ug/l	50.0		89.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	45.8	·	-	50.0		91.6	76-114			
Surrogate: Toluene-d8	51.2		"	50.0		102	88-110			
Matrix Spike (1040017-MS1)	So	urce: L10402	5-05	Prepared	& Analyz	ed: 04/05/	01			
Methyl tert-butyl ether	80.0	2.00	ug/l	50.0	38.2	83.6	60-140			
Surrogate: 1,2-Dichloroethane-d4	47.0		. ш	50.0		94.0	76-114			
Surrogate: Toluene-d8	51.7		#	50.0		103	88-110			
Matrix Spike Dup (1040017-MSD1)	So	urce: L10402	25-05	Prepared	& Analyz	ed: 04/05/	'0 1			
Methyl tert-butyl ether	79.3	2.00	ug/l	50.0	38.2	82.2	60-140	0.879	25	
Surrogate: 1,2-Dichloroethane-d4	47.6		.,,	50.0		95.2	76-114		· · ·	
Surrogate: Toluene-d8	51.1		Ħ	50.0		102	88-110	•		
Batch 1040057 - EPA 5030B [P/T]										
Blank (1040057-BLK1)				Prepared	& Analyz	ed: 04/17	/01			
Ethanol	ND	1000	ug/l		····					
1,2-Dibromoethane	ND	2.00	"							
1,2-Dichloroethane	ND	2.00	н							
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	n							
Tert-butyl alcohol	ND	100	Ħ							

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

Project Number: Unocal SS#4186 Project Manager: Deanna Harding Reported: 04/18/01 13:53

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 1040057 - EPA 5030B [P/T]										
Blank (1040057-BLK1)				Prepared	& Analyz	ed: 04/17/	01			
Surrogate: 1,2-Dichloroethane-d4	48.8		ug/l	50.0		97.6	76-114			
Surrogate: Toluene-d8	50.7		Ħ	50.0		101	88-110			
LCS (1040057-BS1)				Prepared	& Analyz	ed: 04/17/	01			
Methyl tert-butyl ether	53.2	2.00	ug/l	50.0		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	48.2		"	50.0		96.4	76-114			
Surrogate: Toluene-d8	48.7		"	50.0		97.4	88-110			
Matrix Spike (1040057-MS1)	Soi	ırce: L10409	5-05	Prepared	& Analyz	ed: 04/17/				
Methyl tert-butyl ether	181	2.00	ug/l	50.0	119	124	60-140		· · · · · ·	
Surrogate: 1,2-Dichloroethane-d4	48.7		n	50.0	-	97.4	76-114			
Surrogate: Toluene-d8	50.9		r	50.0		102	88-110			
Matrix Spike Dup (1040057-MSD1)	Source: L104095-05			Prepared	& Analyz	zed: 04/17	/01			
Methyl tert-butyl ether	171	2.00	ug/l	50.0	119	104	60-140	5.68	25	
Surrogate: 1,2-Dichloroethane-d4	49.2		"	50.0		98.4	76-114			
Surrogate: Toluene-d8	49.9		"	50.0		99.8	88-110			

Gettler-Ryan/Geostrategies(1)	Project: Tosco(1)	
6747 Sierra Court, Suite J	Project Number: Unocal SS#4186	Reported:
Dublin CA, 94568	Project Manager: Deanna Harding	04/18/01 13:53

Notes and Definitions

I-02	This sample was analyzed outside of the EPA recommended holding time.
M-04	MTBE was reported from second analysis.
P-01	Chromatogram Pattern: Gasoline C6-C12
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis

RPD

Relative Percent Difference