

# GETTLER-RYAN INC.

## TRANSMITTAL

AUG 0 7 2002

July 22, 2002 G-R #180203

TO:

Mr. David B. De Witt Phillips 66 Company

2000 Crow Canyon Place, Suite 400

San Ramon, California 94583

FROM:

Deanna L. Harding

Project Coordinator Gettler-Ryan Inc.

6747 Sierra Court, Suite J Dublin, California 94568 CC: Mr. Paul Blank

ERI, Inc.

73 Digital Drive, Suite 100 Novato, California 94949

RE: Former Tosco 76 Service Station

#0843

1629 Webster Street Alameda, California

#### WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1 .	July 18, 2002	Groundwater Monitoring and Sampling Report Second Quarter - Event of June 7, 2002

#### 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 *August 2, 2002*, this report will be distributed to the following:

cc: Ms. Eva Chu, Alameda County Dept., of Environmental Health, 1131 Harbor Bay Parkway, Alameda, CA 94502

Enclosure



July 18, 2002 G-R Job #180203

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

RE: Second Quarter Event of June 7, 2002

Groundwater Monitoring & Sampling Report Former Tosco 76 Service Station #0843 1629 Webster Street Alameda, California

Dear Mr. De Witt:

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

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

Groundwater samples were collected from the monitoring wells and submitted to a state certified laboratory for analyses. The field data sheets for this event are attached. Analytical results are presented in the table(s) listed below. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical report are also attached.

Sincerely,

Project Coordinator

Hagop Kevork P.E. No. C55734

Figure 1:

Potentiometric Map

Figure 2:

Concentration Map

Table 1:

Groundwater Monitoring Data and Analytical Results

Table 2: Attachments: Groundwater Analytical Results - Oxygenate Compounds Standard Operating Procedure - Groundwater Sampling

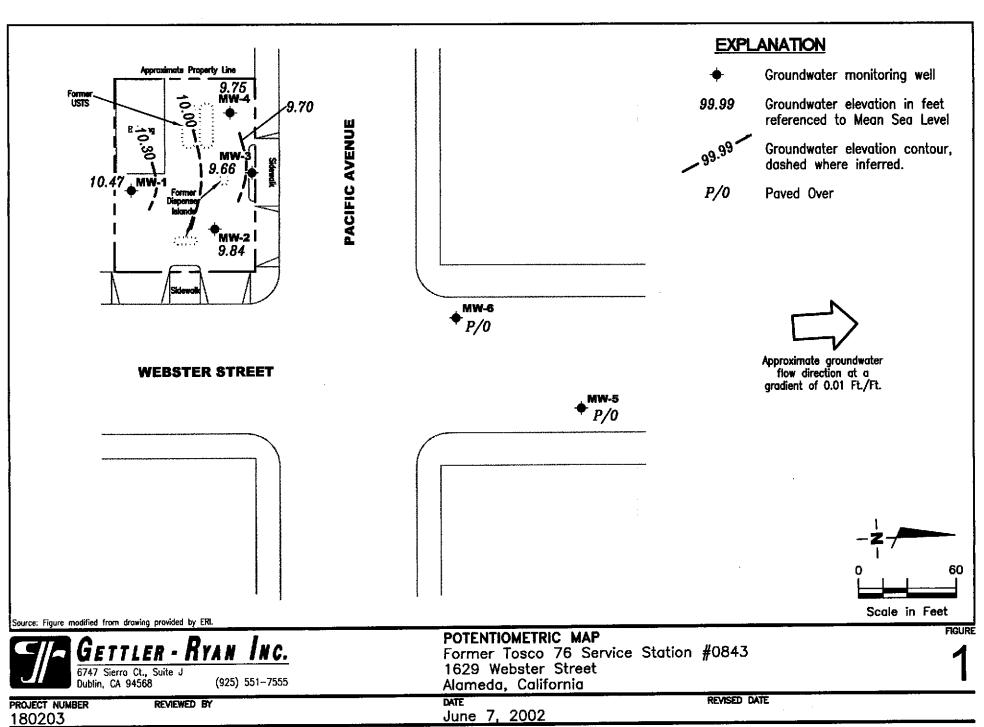
1. Bladen

Field Data Sheets

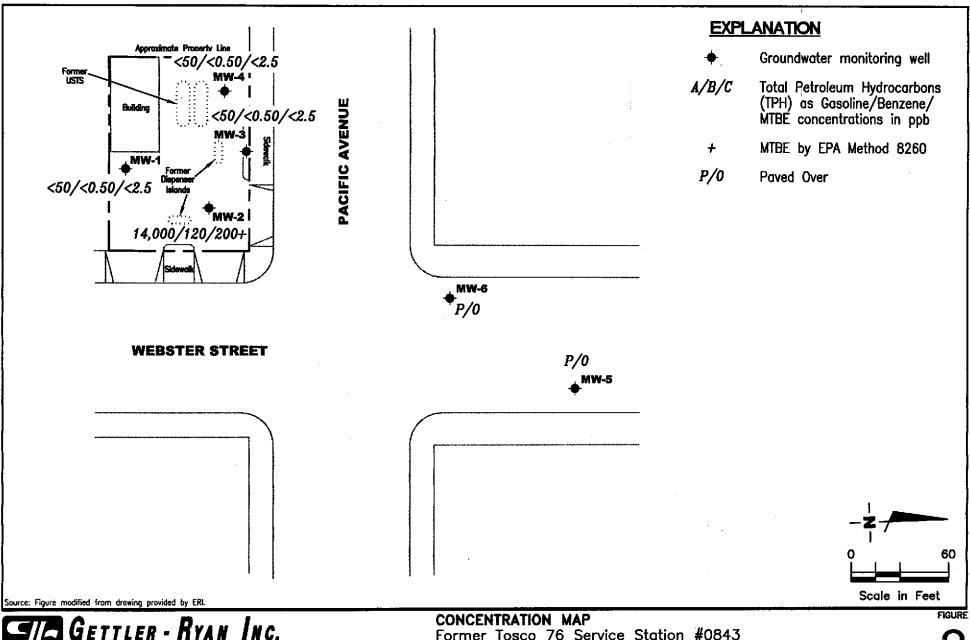
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Chain of Custody Document and Laboratory Analytical Reports

No. C 55734



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

REVIEWED BY

Former Tosco 76 Service Station #0843 1629 Webster Street

Alameda, California

DATE REVISED DATE
June 7, 2002

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PROJECT NUMBER

180203

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Table 1
Groundwater Monitoring Data and Analytical Results
Former Tosco 76 Service Station #0843

former Tosco 76 Service Station 1629 Webster Street Alameda, California

WELL ID/	DATE	DTW	GWE	TPH-G	В	T	E	X	МТВЕ
TOC*(A.)	DALB	(ft.)	(msl)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
MW-1									
16.18	03/05/991			86.6 <sup>3</sup>	ND	2.04	ND	4.06	23.9 <sup>2</sup>
	06/03/99	6.24	9.94	. ND	ND	ND	ND	ND	ND/ND <sup>2</sup>
	09/02/99	7.19	8.99	ND	ND	ND	ND ~	ND	ND/ND <sup>2</sup>
	12/14/99	8.07	8.11	ND	ND	ND	ND	ND	ND
	03/14/00	5.47	10.71	ND	ND	ND	ND	ND	ND
	05/31/00	6.22	9.96	ND	ND	ND	ND	ND	ND
	08/29/00	6.82	9.36	ND	ND	ND	ND	ND	ND
	12/01/00	7.54	8.64	ND	ND	ND	ND	ND	· ND
	03/17/01	5.73	10.45	ND	ND	ND	ND	ND	ND
	05/23/01	6.43	9.75	ND	ND	ND	ND	ND	ND
	09/24/01	7.12	9.06	<50	< 0.50	< 0.50	<0.50	<0.50	<5.0
	12/10/01	6.89	9.29	<50	< 0.50	<0.50	<0.50	<0.50	<5.0
	03/11/02	5.61	10.57	<50	< 0.50	< 0.50	<0.50	<0.50	<5.0
	06/07/02	5.71	10.47	<50	< 0.50	< 0.50	< 0.50	<0.50	<2.5
2001.4	03/05/99¹			34,400	2,070	7,710	2,340	8,240	8,460 <sup>2</sup>
MW-2			9.61	51,200 <sup>4</sup>	1,820	7,570	2,510	7,320	$6,460/8,800^2$
15.57	06/03/99	5.96		17,000 <sup>5</sup>	1,000	3,100	1,400	3,700	4,000/3,720 <sup>2</sup>
	09/02/99	6.85	8.72	83,000 <sup>5</sup>	3,000	22,000	4,500	17,000	9,100/11,000 <sup>2</sup>
	12/14/99	7.65	7.92	31,000 <sup>5</sup>	1,600	4,600	2,300	7,300	5,700/8,700 <sup>2</sup>
	03/14/00	5.26	10.31	9,970 <sup>5</sup>	598	1,030	487	2,060	2,500/1,670 <sup>2</sup>
	05/31/00	5.60	9.97	7,900 <sup>5</sup>	390	1,500	280	1,900	1,800/1,300 <sup>2</sup>
	08/29/00	6.35	9.22	7,500 87,500 <sup>5</sup>	1,860	17,400	5,590	19,400	6,220/3,790 <sup>2</sup>
	12/01/00	7.06	8.51	4,310 <sup>5</sup>	371	59.0	280	682	321/433 <sup>2</sup>
	03/17/01	5.98	9.59	4,310 45,400 <sup>5</sup>	374	4,490	2,790	10,900	<sup>7</sup> ND/406 <sup>2</sup>
	05/23/01	6.97	8.60	45,400 76,000 <sup>3</sup>	430	13,000	4,700	18,000	<2,000/480 <sup>2</sup>
:	09/24/01	7.56	8.01			9,100	4,400	16,000	$<2,500/270^2$
ı	12/10/01	6.52	9.05	82,000 <sup>3</sup>	320	1,400	1,100	3,600	<250/150 <sup>2</sup>
	03/11/02	5.51	10.06	14,000 <sup>3</sup>	75 120		1,100 1,400	4,700	540/200 <sup>2</sup>
	06/07/02	5.73	9.84	14,000	120	1,200	1,400	7,700	

Table 1
Groundwater Monitoring Data and Analytical Results
Former Tosco 76 Service Station #0843

1629 Webster Street Alameda, California

WELL ID/	DATE	DTW	GWE	TPH-G	Camornia B	T			Vicini di America de Maria de Caracteria de Caracteria de Caracteria de Caracteria de Caracteria de Caracteria
TOC*(ft.)		(fi.)	(msl)	(ppb)	(ppb)	1 (ppb)	E (ppb)	X / 13	MTBE
						Abs)	Ψρυ	(ppb)	(ppb)
MW-3	03/05/99 <sup>1</sup>			135 <sup>3</sup>	ND	ND	ND	4.84	2.46 <sup>2</sup>
15.11	06/03/99	5.57	9.54	ND	ND	ND	ND		5.23/12.7 <sup>2</sup>
	09/02/99	6.50	8.61	ND	ND	ND	ND	ND	
	12/14/99	7.28	7.83	ND	ND	ND	ND ND	ND	13/11.0 <sup>2</sup>
	03/14/00	4.87	10.24	ND	ND	ND	ND	ND	ND
	05/31/00	5.58	9.53	ND	ND	ND	ND	ND	7.2/6.3 <sup>2</sup>
	08/29/00	6.06	9.05	ND	ND	ND	ND	ND ND	ND
	12/01/00	6.76	8.35	ND	ND	ND	ND	ND ND	ND
	03/17/01	5.09	10.02	ND	ND	ND	ND	ND ND	ND
	05/23/01	5.72	9.39	ND ·	ND	ND	ND	ND	ND
	09/24/01	6.34	8.77	<50	<0.50	<0.50	<0.50	<0.50	ND <5.0
	12/10/01	6.31	8.80	<50	<0.50	<0.50	<0.50	<0.50	<5.0 <5.0
	03/11/02	5.15	9.96	<50	<0.50	<0.50	< 0.50	<0.50	<5.0
	06/07/02	5.45	9.66	<50	<0.50	<0.50	<0.50	<0.50	<2.5
MW-4	03/05/99¹	<b></b>		ND	MD				
5.17	06/03/99	5.45	 9.72		ND	ND	ND	2.44	25.2 <sup>2</sup>
	09/02/99	6.48		ND	ND	ND	ND	ND	ND/3.96 <sup>2</sup>
•	12/14/99	7.27	8.69	ND	ND	ND	ND	ND	23/27.0 <sup>2</sup>
	03/14/00	4.67	7.90	ND	ND	ND	ND	ND	200/270 <sup>2</sup>
	05/31/00	4.67 5.48	10.50	ND .	ND	ND	ND	ND	46/49 <sup>2</sup>
	08/29/00	6.10	9.69	ND	ND	ND	ND	ND	ND
	12/01/00		9.07	ND	ND	ND	ND	ND	6.1/3.2 <sup>2</sup>
		6.79	8.38	ND	ND	ND	ND	ND	152/101 <sup>2</sup>
	03/17/01 05/23/01	5.01	10.16	ND	ND	ND	ND	ND	ND
	09/24/01	5.78	9.39	ND .50	ND	ND	ND	ND	ND
	12/10/01	6.42	8.75	<50 -50	<0.50	<0.50	<0.50	<0.50	<5.0
	03/11/02	6.41 5.05	8.76	<50	<0.50	<0.50	<0.50	<0.50	1,700/1,300 <sup>2</sup>
		5.05	10.12	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	06/07/02	5.42	9.75	<50	<0.50	<0.50	< 0.50	< 0.50	<2.5

Table 1
Groundwater Monitoring Data and Analytical Results
Former Tosco 76 Service Station #0843

Former Tosco 76 Service Station : 1629 Webster Street Alameda, California

				riancua,	- Garitotina				
WELL ID/	DATE	DTW	GWE	TPH-G	В	Ť	E	X	MTBE
ГОС*( <u>Л.)</u>		(ft.)	(msl)	(pph)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
MW-5	12/14/99	6.45	6.89	ND	ND	ND	ND	ND	3.5/3.8 <sup>2</sup>
13.34	03/14/00	4.46	8.88	ND	ND	ND	ND	ND	ND
	05/31/00	5.18	8.16	ND	ND	ND	ND	ND	ND
	08/29/00	5.46	7.88	ND	ND	ND	ND	ND	ND
	12/01/00	5.95	7.39	ND	ND	ND	ND	ND	ND
	03/17/01	5.36	7.98	ND	ND	ND	ND	ND	ND ND
	05/23/01	5.09	8.25	ND	ND	ND	ND	ND	ND
	09/24/01	5.58	7.76	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	12/10/01	5.51	7.83	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	03/11/02	4.70	8.64	<50	<0.50	< 0.50	<0.50	< 0.50	<5.0
	06/07/02	INACCESSIBLE				**		••	
MW-6 4.08	12/14/99 03/14/00 05/31/00 08/29/00 12/01/00 03/17/01 05/23/01 09/24/01 <sup>10</sup> 12/10/01	6.64 4.72 5.28 5.39 6.11 6.02 5.82 6.59	7.44 9.36 8.80 8.69 7.97 8.06 8.26 7.49 7.58	ND ND <sup>7</sup> ND ND ND ND ND 18,700 <sup>5</sup> ND <sup>7</sup> <50 <50	ND ND <sup>7</sup> ND ND ND ND ND 2,950 ND <sup>7</sup> <0.50	ND ND <sup>7</sup> ND ND ND ND 989 ND <sup>7</sup> <0.50	ND ND <sup>7</sup> ND ND ND ND 1,040 ND <sup>7</sup> <0.50 <0.50	ND ND <sup>7</sup> ND ND ND ND 3,000 ND * <0.50 <0.50	11,000/18,000 19,000/21,000° 13,200 270/400° 6,330/3,640° 10,200/11,500 4,660° 160/190° 3,200/2,400°
	03/11/02	4.81	9.27	<50	<0.50	<0.50	<0.50	<0.50	92/120 <sup>2</sup>
	06/07/02	INACCESSIBLE	- PAVED OVE	t				••	
rip Blank	03/05/99¹	••	<del></del>	ND	ND	ND	ND	ND	ND²
B-LB	06/03/99			ND	ND	ND	ND	ND	ND
_	09/02/99		*	ND	ND	ND	ND	ND	ND
	12/14/99			. ND	ND	ND	ND	ND	ND
	03/14/00			ND	ND	ND	ND	ND	ND
	05/31/00			ND	ND	ND	ND	ND	ND

Table 1
Groundwater Monitoring Data and Analytical Results
Former Tosco 76 Service Station #0843

1629 Webster Street Alameda, California

WELL ID/	DATE	DTW	GWE	TPH-G	В	Т	E	X	МТВЕ
TOC*(fl.)		(ft.)	(msl)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
TB-LB	08/29/00			ND	ND	ND	ND	ND	ND
(cont)	12/01/00			ND	ND	ND	ND	ND	ND
	03/17/01	<del></del>		ND	ND	ND	ND	ND	ND
	05/23/01			ND	ND	ND	ND	ND	ND
	09/24/01			<50	<0.50	<0.50	<0.50	<0.50	<5.0
	12/10/01			<50	<0.50	< 0.50	<0.50	< 0.50	<5.0
	03/11/02			<50	< 0.50	< 0.50	<0.50	< 0.50	<5.0
	06/07/02		••	<50	< 0.50	<0.50	< 0.50	< 0.50	<2.5

#### Table 1

### **Groundwater Monitoring Data and Analytical Results**

Former Tosco 76 Service Station #0843 1629 Webster Street Alameda, California

#### **EXPLANATIONS:**

Groundwater monitoring data and laboratory analytical results prior to June 3, 1999, were compiled from reports prepared by ERI, Inc.

TOC = Top of Casing

B = Benzene

(ft.) = Feet

T = Toluene

DTW = Depth to Water

E = Ethylbenzene

GWE = Groundwater Elevation

X = Xylenes

(msl) = Mean sea level

MTBE = Methyl tertiary butyl ether

TPH-G = Total Petroleum Hydrocarbons as Gasoline

- \* TOC elevations are based on USC&GS Benchmark WEB PAC 1947 R 1951; (Elevation = 14.054 feet).
- B,T,E,X by EPA Method 8260,
- <sup>2</sup> MTBE by EPA Method 8260.
- <sup>3</sup> Laboratory report indicates weathered gasoline C6-C12.
- Laboratory report indicates chromatogram pattern C6-C12.
- <sup>5</sup> Laboratory report indicates gasoline C6-C12.
- Laboratory report indicates sample was analyzed 03/28/00 but required reanalysis at a dilution. The dilution was analyzed outside of the EPA recommended holding time.
- Detection limit raised. Refer to analytical reports.
- Laboratory did not perform analysis for MTBE by EPA Method 8260 as requested on the Chain of Custody for 8020 MTBE hits.
- 9 MTBE by EPA Method 8260 was analyzed past the EPA recommended holding time.
- Due to laboratory error, MW-6 was not analyzed within the EPA recommended holding time.

(ppb) = Parts per billion

ND = Not Detected

-- = Not Measured/Not Analyzed

Table 2
Groundwater Analytical Results - Oxygenate Compounds

Former Tosco 76 Service Station #0843 1629 Webster Street Alameda, California

WELL ID	DATE	ETHANOL	TBA	МТВЕ	DIPE	ETBE	TAME	1,2-DCA	EDB
		(ppb)	(ppb)	(ррв)	(ррь)	(ppb)	(ppb)	(ppb)	(ppb)
MW-1	09/02/99	ND	ND ·	ND	ND	ND	ND		
MW-2	09/02/99	ND <sup>1</sup>	ND¹	3,720	ND <sup>1</sup>	$ND^{\mathfrak{l}}$	1		
	12/14/99	ND	ND <sup>1</sup>	3,720 11, <b>0</b> 00	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	!	
	03/14/00	ND <sup>1</sup>	1,300	8,700	ND <sup>1</sup>	ND <sup>1</sup>	ND¹ ND¹	ND <sup>t</sup>	ND <sup>1</sup>
	05/31/00	ND¹	ND <sup>1</sup>	1,670	ND <sup>I</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
	08/29/00	ND	250	1,300	ND	ND		ND <sup>1</sup>	ND <sup>1</sup>
	12/01/00	ND <sup>1</sup>	ND <sup>I</sup>	3,790	ND <sup>1</sup>	ND <sup>1</sup>	ND ND <sup>1</sup>	ND ND	ND vol
	03/17/01	ND <sup>1</sup>	ND <sup>1</sup>	433	14.8	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
	05/23/01	ND <sup>1</sup>	ND <sup>1</sup>	<del>4</del> 95 406	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>I</sup>	ND <sup>I</sup>
	09/24/01	<50,000	<5,000	480	<100	<100	<100	<100	
	12/10/01	<12,000	<500	270	<25	<25	<25	<25	<100 <25
	03/11/02	<5,000	<1,000	150	<20	<20	<20	<20	<20
	06/07/02	<2,000	<1,000	200	<25	<25	<25	<25	<25
MW-3	09/02/99	ND	ND	11.0	ND	ND	ND	· ,	
	03/14/00	•=		6.3					
MW-4	09/02/99	ND	ND	27.0	ND	ND	ND	, <b></b>	
	12/14/99	<b>*-</b>		270					
	03/14/00	•		49					
	08/29/00			3.2					
	12/10/01	<7,100	<290	1,300	<14	<14	<14	<14	<14
MW-5	12/14/99			3.8				<del>*-</del>	

# Table 2 Groundwater Analytical Results - Oxygenate Compounds Former Tosco 76 Service Station #0843

Tosco 76 Service Station #0 1629 Webster Street Alameda, California

WELL ID	DATE	ETHANOL	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB
		(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
MW-6	12/14/99			18,000		<b></b> .		••-	
	03/14/00			$21,000^2$					
	08/29/00	-		400					
	03/17/01	. ND <sup>1</sup>	NDi	11,500	ND¹	$ND^1$	ND¹	219	$ND_1$
	05/23/01 <sup>3</sup>								<b>D</b>
	09/24/014	<1,000	<100	190	<2.0	<2.0	<2.0	<2.0	<2.0
	12/10/01	<12,000	<500	2,400	<25	<25	<25	<25	<25
	03/11/02	<500	<100	120	<2.0	<2.0	<2.0	<2.0	<2.0
	03/11/02	<b>\300</b>	<100	120	<b>42.0</b>	<b>C2.0</b>	<b>V2.0</b>	₹2.0	<b>\Z</b>

### Table 2

### Groundwater Analytical Results - Oxygenate Compounds

Former Tosco 76 Service Station #0843 1629 Webster Street Alameda, 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-Dibromoethane

(ppb) = Parts per billion

-- = Not Analyzed

ND = Not Detected

Detection limit raised. Refer to analytical reports.

Laboratory did not perform analyzsis for oxygenates as requested on the Chain of Custody, on all 8020 MTBE hits.

Laboratory report indicates sample was analyzed past the EPA recommended holding time.

#### **ANALYTICAL METHOD:**

EPA Method 8260 for Oxygenate Compounds

Laboratory report indicates sample was analyzed 03/28/00 but required reanalysis at a dilution. The dilution 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 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 Phillips 66 Company, the purge water and decontamination water generated during sampling activities is transported to Phillips 66 - San Francisco Refinery, located in Rodeo, California.

Address: 1629 Webster St. Date: 6-7-02  City: Alameda Ct. Sampler: Joe  Well ID MW-  Well Condition: O. K.  Well Diameter 2 in Hydrocarbon Amount Bailed (productivester): Joe  Total Depth 20.05 ft. Volume	Client/ Facility #_084	3	· 	Job#:	180203	3	· ·
Well ID  Well Diarneter  Well Diarneter  Well Diarneter  Total Depth  Depth to Water  Disposable Bailer Stack Starting Time:  Sampling Time:  Sampling Time:  Amount Bailed (productivester):  Well Diarneter  Thickness:  In  Well Condition:  Well Condition:  Disposable Bailer Starting Time:  Starting Time:  Amount Bailed (productivester):  If your T = 0.17	Address:163	29 Websters	<u>;</u>	Date:		<u></u>	·
Well ID  Well Diarneter  Total Depth  20.05 ft  Volume  Thickness:  It = 0.17	Δi			Sampl	er: Joe		
Total Depth  20.05 ft  Volume	Well 1D		Well	Condition:	0. K.		.^.
Total Depth 20.05 ft. Volume T = 0.17 S = 0.38 S = 0.66  Depth to Water 5.7/ ft. Volume T = 0.17 S = 0.38 S = 0.66  Depth to Water 5.7/ ft. Volume T = 0.17 S = 0.38 S = 0.66  Depth to Water 5.7/ ft. Volume T = 0.17 S = 0.38 S = 0.66  Purge Disposable Bailer Sampling Equipment: Disposable Bailer Stack Pressure Bailer Grandfos Other: Other: Disposable Bailer Sample Other: Other: Sampling Time: 9116 Weather Conditions: Hold Sample Other: Other: Odor: Movie Sampling Time: Sediment Description: If yes; Time: Volume: Volume: If yes; Time: Volume: Volume: If yes; Time: Volume: If yes; Time: Volume: If yes; Time: Did well de-water? If yes; Time: Did well de-water? If yes; Time: Did yell (gal.) Pilosof	Well Diameter		_	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Purge Disposable Bailer Sampling Equipment: Bailer Stack Pressure Bailer Stack Pressure Bailer Grundfos Other: Oth	Total Depth	• •	Vo	ume 2° = 0.1			0.66
Purge Disposable Bailer Equipment: Disposable Bailer Stack Bailer Stack Pressure Bailer Grandfos Other: Oth	Depth to Water	<u>\$.7/</u>	130	201 (45)			
Equipment: Bailer Stack Bailer Stack Bailer Stack Pressure Bailer Grundfos Orther: Other: Other: Grab Sample Other: Other		14.34 x	آ ان م	2.44 x 3 (case )	volume) = Estimated Pu	rge Volume:	7.5
Stack Support Grundfos Other:  Starting Time:  Starting Time:  Sampling Time:  Sampling Time:  Sempling Time:  Sempling Time:  Sempling Time:  Sediment Description:  Sediment Description:  Sediment Description:  Time  Volume  (gal.)  10.10  73.6  132  7.20  10.10  73.6  10.72  74.1  10.72  74.1  SAMPLE ID  19 CONTAINER  REFRIG.  PRESERV. TYPE  LABORATORY  ANALYSES	-	•	•		Disposable Ba	Iler	-
Grundfos Other: Other: Other:  Starting Time:  Starting Time:  Starting Time:  A! A! A m (694!)  Water Color:  Clac Odor MoMe  Purging Flow Rate:  I gpon Sediment Description:  If yes; Time:  Volume:  Time Volume pH Conductivity 12 Temperature D.O. ORP Albeli (gal.)  A!30 Q. (7.20   0.10   73.6 (mg/L) (mV) (pp. 4)32 (mg/L) (mV) (pp. 4)32 (mg/L) (mV)  A!31 5 7.19   0.66   74.0 (mg/L) (mV)  Albeli (gal.)  9   24   7.5   7.19   0.66   74.0 (mg/L) (mV)  ANALYSES  LABORATORY INFORMATION  SAMPLE ID (5) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES	Ediahmeur.	Stack		• •	Bailer	Er	•.
Starting Time:  9:16  Weather Conditions: Hol  Sampling Time: Q'41 A m (6941) Water Color: Clear Odor: 10 M e  Purging Flow Rate:   gnon. Sediment Description:    Did well de-water?   If yes; Time:   Volume:    Time   Volume   pH   Conductivity   Temperature   D.O. ORP   Allest   pinhos/cm   F   (mg/L) (mV)   (print)    4:30   Q: 7.20   10.10   73.6     10.72   74.1      9:24   7:3   7:19   10.66   74.0      9:24   7:3   7:19   10.72   74.1      LABORATORY INFORMATION   ANALYSES		3		•	Grab Sample	•	•
Starting Time:  Sampling Time:  Old Mater Color:  Purging Flow Rate:  Did well de-water?  Time  Volume  PH  Conductivity   Temperature  (gal.)  ORP  Albeit  PH  Conductivity   Temperature  (gal.)  ORP  Albeit  ORP  ORP  Albeit  ORP  Albeit  ORP  ORP  Albeit  ORP  Albeit  ORP  Albeit  ORP  ORP  Albeit  ORP  Albeit  ORP  Albeit  ORP  ORP  Albeit  ORP  ORP  Albeit  ORP  Albeit  ORP  Albeit  ORP  Albeit  ORP  ORP  ORP  ORP  ORP  Albeit  ORP  ORP  ORP  ORP  ORP  ORP  ORP  OR		Other:	<del></del>		Other	<b>-</b>	
4130 2.5 7.20 10.10 73.6  4131 5 7.19 10.66 74.0  9134 7.5 7.15 10.72 74.1  LABORATORY INFORMATION  SAMPLE ID 19 - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES	Purging Flow Rat	te:1_ <del>or</del>		Sediment Descrip	etion:		
10.72 74.1  10.72 74.1  10.72 74.1  SAMPLE ID 19- CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES	Time		Con par	ductivity   ( <sup>2)</sup> . Temp thos/em (	crature D.O.		Alkalinity (ppm)
1 ABORATORY INFORMATION  SAMPLE ID (4) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES	9:30	2.5 7.20				<del></del>	·
LABORATORY INFORMATION  SAMPLE ID (4) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES		5 7.19 7.5			4.0		<u> </u>
SAMPLE ID (#) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES	9 (4						
SAMPLE ID (#) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES	· · · ·			· · · · · · · · · · · · · · · · · · ·		<u> </u>	•
SAMPLE DE TOTAL CONTROL OF THE PROPERTY OF THE		<del></del>	LABO				
MW-1 3VOL Y HCL SET THIS, BIECK						<del></del>	
	mw-1	3404	Y	HUL	364	IF NG. B	1CX/H 1DC
					1		
COMMENTS:	COMPAGE CO.		·.	·	·	· · · · · · · · · · · · · · · · · · ·	

lient/ acility # <u>084</u>	3	•	Job#:	18020	3
Address: 162	9 Webster	51.	Date:	6-7-0	<u>.                                    </u>
•	omeda, ch			ler: Joe	
Well 1D	mw-2	Well	Condition:	0.K.	
Vell Diameter	2 in	=	ocarbon 🥱	_ Amount B	
etal Depth	20.24	Vol	•	in (product/wa	8 4 = 0.66
epth to Water	£.73 m	Fac	tor (VF)	6 = 1.50	12" = 5,80
Purge	14.51 x	<i>لنه.</i> ۷۴	_2.47 <sub>x3 tess</sub>	volume) = Estimated F	urge Volume: 7.5. Igal )
t ugo Equipment:	Bailer Stack		Equipment	Disposable B Bailer Pressure Bail	
•	Grundfos Other:			Grab Sample Other:	
Starting Time: Sampling Time:	1037 [1:04A.m(1)	104.)	Weather Conditio	clear	Odor GOME
Purging Flow Rate Did well d <del>e w</del> ater	:		Sediment Description of the se	Voju	rge:
	pH gal.)  5 7.59  5 7.63  7.67	ind 	hocivity   2 Temp	C (mg/l)	ORP Alkalinity (mV) (ppm)
SAMPLE ID	(#) - CONTAINER	LABOR REFRIG.	RATORY INFORM PRESERV. TYPE	LABORATORY	ANALYSES
mw-2	3101	Υ	HCL	Seq.	TPHG. BTEX, MTBE
	2101		/ (	('	(8.) ONY'S by 820
COMMENTS: _			L		
	-				

acility # 084	3		Job#:	180207	3	
Address:	29 Webster	<u>sł</u>	Date:	6-7-07	<u></u>	<u> </u>
rine: Al	omede; ct.	•	Sampler:	Joe		
City.						
Well 10	Mw-3	Well Condit	ion:C	0. K.		
Well Diameter	2 <sub>in</sub>	Hydrocarbo		Amount Ba		
Total Depth	19.91 #	Thickness:		3" = 0.38		66 .
Depth to Water	5145	Factor (VF)	·	5* = 1.50	12" = 5,80	
	14.46 ×	VF .0.17 = 2.4	X 3 (case volu	nel = Estimated Pu	rge Volume: 7.	Liosi
Purge Equipment:	Disposable Bailer Bailer		Sampling Equipment:	Disposable Ba	iler	
	Stack Suction Grundfos Other:			Pressure Baile Grab Sample Per:		• • .
	9:07Am (09	om. Sedim	ent Description		Odor 110	
Did well de wate	er?	If yes	; Time:	Volun	Je: <del>`````</del>	fost \
		m - 1 - 4-34	Temperat	me D.O.	ORP .	Álkalinity
Time ?	Volume pH (gal.)	turpos/cm	4	(mg/r)	(mV)	(bbm)
8:53	(gal) 2.5 7.46	10.67	74.	(mg/r)		
	(gal.)	10.67	74. - 74.	(mg/1.)		
8:53	(gal) 2.5 7.46	10.67 0.63	74. - 74.	(mg/1.)		
8,58 8,58	(gal) 2.5 7.46	10.67 0.63	74. - 74.	(mg/1.)		
8:53	(gal) 2.5 7.46	10.67 10.63 10.63	74. 74. 74.5 74.	/ (mg/1) 2		
8,58 8,58	(gal) 2.5 7.46	10.67 10.63 10.63 10.63	74. - 74.	/ (mg/1) 2		(ppm)
8:53 8:55 8:58	(gal) 2 5 7.46 5 7.46 7.46	LABORATOF REFRIG. PRE	74. 74. 74. 74. 74. 74.	(mg/1.)  2  ON	(mV)	(ppm)
\$'.53 8155 8158	(gal.)  2	LABORATOF REFRIG. PRE	74. 74. 74. 74. 74. Y INFORMATI	ON LABORATORY	ANALYS	(ppm)
\$'.53 8155 8158	(gal.)  2	LABORATOF REFRIG. PRE	74. 74. 74. 74. 74. Y INFORMATI	ON LABORATORY	ANALYS	(ppm)
\$\\\\ \\\\ \\\\\\ \\\\\\\\\\\\\\\\\\\\	(gal.)  2	LABORATOF REFRIG. PRE	74. 74. 74. 74. 74. Y INFORMATI	ON LABORATORY	ANALYS	(ppm)
\$'.53 8155 8158	(gal.)  2	LABORATOF REFRIG. PRE	74. 74. 74. 74. 74. Y INFORMATI	ON LABORATORY	ANALYS	(ppm)

acility # 084	3		Job#:	180203	3	· .
	29 Webster	<u>s}                                     </u>	Date:	6-7-07	<u></u>	·
ity: <u>Al</u>	ameda, ch.	· 	Sampl	er: Joe	· · · · · · · · · · · · · · · · · · ·	<del></del>
Well 10	mw-24	Well C	Condition:	0. K:		
/ell Diameter	2 in	•	carbon	Amount Ba		L-
otal Depth	19.78 #	Thickr		<u>in (product/wet</u> 7 3° = 0.38		= 0.66
epth to Water	5.42 4	Facto	r (VF)	6' = 1.50	12 = 5,80	
	14.36 x	vf .0.17 -	2:44 x 3 (case v	olume) = Estimated Pu	rrge Volume:	7. Signel
Purge iquipment:	Disposable Bailer Bailer Stack Suggen Grundfos Other:		Sampling Equipment:	Disposable Ba Bailer Pressure Baile Grab Sample		
Sampling Time:	8130Am (0	1830) v	Vater Color:	clear	Odor: 1	ONC
Purging Flow Ra	8   30 Am ( 0 te:	<del>.</del>	Sediment Descrip		· · · · · · · · · · · · · · · · · · ·	
Purging Flow Rate Did well de wate	te:er?	Conde	f yes; Time: scrivity   ** Temporary	tion: Volum	· · · · · · · · · · · · · · · · · · ·	
Purging Flow Rate  Time  \$\frac{10}{8!12}	te:er?	Condu	f yes; Time:	volun  Taure D.O. (mg/L)	Ge:	Álkalinity
Purging Flow Rate  Time  \$\frac{2\cdot 10}{8\cdot 12}  \frac{2\cdot 10}{8\cdot 12}	te:	Condu	f yes; Time:	volume D.O. (mg/L)	Ge:	Álkalinity
Purging Flow Rate  Time  \$\frac{10}{8!12}	te:	Condu	f yes; Time:	dion:  Volum  Volum  (mg/L)  4. 2  4. 2	Ge:	Álkalinity
Purging Flow Rate  Did well de-wate  Time  \$\frac{\frac{1}{10}}{8:12} = \frac{8:12}{1:14}	te:	Conduction of the Conduction o	Sediment Description of yes; Time:	Volume Volume D.O. (mg/L)  4. 1  4. 1  ATION LABORATORY	ORP (mV)	Alkalinity (ppm)
Purging Flow Rate  Time  \$\frac{10}{8:12}  \$\frac{114}{114}	te:	Conduction of the Conduction o	Sediment Description of yes; Time:	Tion:  Volume  D.O.  (mg/L)  4. 2  4. 1	ORP (mV)	Álkalinity (pym)
Purging Flow Rate  Did well de-wate  Time  \$\frac{\frac{1}{10}}{8:12} = \frac{8:12}{1:14}	te:	Conduction of the Conduction o	Sediment Description of yes; Time:	Volume Volume D.O. (mg/L)  4. 1  4. 1  ATION LABORATORY	ORP (mV)	Alkalinity (ppm)
Purging Flow Rate  Did well de-wate  Sime  \$1/0  \$1/12  \$1/4	te:	Conduction of the Conduction o	Sediment Description of yes; Time:	Volume Volume D.O. (mg/L)  4. 1  4. 1  ATION LABORATORY	ORP (mV)	Alkalinity (ppm)
Purging Flow Rate  Time  \$7/0  \$1/12  \$1/4  SAMPLE ID	te:	Conduction of the Conduction o	Sediment Description of yes; Time:	Volume Volume D.O. (mg/L)  4. 1  4. 1  ATION LABORATORY	ORP (mV)	Alkalinity (ppm)

Client/ Facility #_084	3	•	_ Job#:	18020	3	· · · · · · · · · · · · · · · · · · ·
Address: 16	29 Webster	st ·	_ Date:	6-7-0	2	··································
City: A1	omede, ch.		_ Samp	ler: <u>Joe</u>		
Well ID	mw-5	Well Co	ondition:	0.k		
Well Diameter	2 <sub>in</sub>	Hydroc	/	Amount E		inel.)
Total Depth	20.23.	Volum	c 2°=0.	17 3" = 0.3 6" = 1.50		
Depth to Water	ft_	Factor	(41)			
Purge Equipment:	Disposable Bailer Bailer Stack	vf <u>0:17</u> =	X 3 (cess Sampling Equipment	volume) = Estimated   Disposable F		los! \
	Suction Grundfas Other:			Pressure Bai Grab Sample Other		
Starting Time:	·	<del></del>	eather Conditio	. (	Odor	
Sampling Time:	<del></del>		/ater Color:			·····
· -	te:a	•	ediment Descrip Ves: Time: _	Volt	ıme:	
_	Volume pH (gal.)	Conduc	ctivity   4 <sup>7)</sup> Temp s/cm f	,	ORP	Alkalinity (ppm)
				<u> </u>		
<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	<del>/-</del>		/			
SAMPLE ID	(#) - CONTAINER	LABORA REFRIG.	TORY INFORM	ATION LABORATORY	ANAL	rses
mw/	3404	Y V	HCL	Seq.	TPHG. BT	
	<u> </u>					
COMMENTS:	pared	5Von.				

lient/ acility # <u>08</u>	43		Job#:	1802	-03
ddress 16	29 Welst	ec St.	Date:	6-7	-02
City:	Hameda,	<u>C4</u>	Sample	r. <u>50</u>	L
Well ID	mw-6	Well Condit	ion:		, , , , , , , , , , , , , , , , , , , ,
Vell Diameter		Hydrocarbo		Amount I	
otal Depth	20 1le .	Thickness: Volume	2 = 0.17		38 4°=0.66
Depth to Water	<del></del>	Factor (VF)		6" = 1.50	12" = 5,80
Purge Equipment:	Disposable Bailer Bailer Stack Suction Grundfos Other:		Sampling Equipment:	Disposable i Bailer Pressure Ba Grab Sampl	iler e
Did well de-wate	Volume #H	If yes;	Time:	ature D.O.	
	(Er)	jantios/cm.†		(mg/L	(mV) (pym)
	<del>/</del> =				_/ =
	<del></del>				
· · · · · · · · · · · · · · · / ·		LABORATOR	Y INFORMA	TION	
SAMPLE ID	(#) - CONTAINER		ERV. TYPE	LABORATORY	ANALYSES
	3404	YH	CL	Seq.	TPHG. BTEX, MTBE
1		- (			7
1					
- 1 <u></u> 1					
COMMENTS: _	Rowed	Ven .			





24 June, 2002

Deanna Harding Gettler Ryan/Geostrategies - Tosco/Unocal 6747 Sierra Ct, Suite J Dublin, CA 94568

RE: Tosco SS #0843, Alameda, Ca Sequoia Work Order: MLF0221 RECEIVA:

GETTLEK-KYAPY (2011)

Enclosed are the results of analyses for samples received by the laboratory on 06/07/02 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

James Hartley Project Manager

CA ELAP Certificate #1210



Gettler Ryan/Geostrategies - Tosco/Unocal

6747 Sierra Ct, Suite J Dublin CA, 94568 Project: Tosco SS #0843, Alameda, Ca

Project Number: #0843, Alameda, Ca Project Manager: Deanna Harding Reported: 06/24/02 09:17

#### ANALYTICAL REPORT FOR SAMPLES

Sample 1D	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	MLF0221-01	Water	06/07/02 00:00	06/07/02 16:30
MW-1	MLF0221-02	Water	06/07/02 09:41	06/07/02 16:30
MW-2	MLF0221-03	Water	06/07/02 11:04	06/07/02 16:30
MW-3	MLF0221-04	Water	06/07/02 09:07	06/07/02 16:30
MW-4	MLF0221-05	Water	06/07/02 08:30	06/07/02 16:30

Sequoia Analytical - Morgan Hill

James Hartlet

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 - Tosco/Unocal

6747 Sierra Ct, Suite J Dublin CA, 94568 Project: Tosco SS #0843, Alameda, Ca

Project Number: #0843, Alameda, Ca Project Manager: Deanna Harding Reported: 06/24/02 09:17

## Total Purgeable Hydrocarbons (C6-C10) by EPA 8015B modified, BTEXM by EPA 8021B Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TB-LB (MLF0221-01) Water S	ampled: 06/07/02 00:00	Received	: 06/07/0	2 16:30					<u>"</u>
Gasoline Range Organics (C6-C10	) ND	50	ug/l	1	2F17007	06/17/02	06/17/02	8015Bm/8021B	
Benzene	ND	0.50	Ħ		ti	n	н .	н	
Toluene	ND	0.50	Ħ	"	Ħ	•	H	Ħ	
Ethylbenzene	ND	0.50	11	n	Ħ	7	10	Ħ	
Xylenes (total)	ND	0.50	11		**	11		н	
Methyl tert-butyl ether	ND	2.5	Ħ	11	н	**		n	
Surrogate: a,a,a-Trifluorotoluene		94.7 %	70-	130	n	"	н	"	_
MW-1 (MLF0221-02) Water Sa	ampled: 06/07/02 09:41	Received:	06/07/02	16:30					
Gasoline Range Organics (C6-C10)	) ND	50	ug/l	j	2F17007	06/17/02	06/17/02	8015Bm/8021B	
Benzene	ND	0.50	#	**	**	II .	**		
Toluene	ND	0.50	*	•	#1	H	я	**	
Ethylbenz <b>en</b> e	ND	0.50	н	•	n	n	Ħ	#	
Xylenes (total)	ND	0.50	**	77	11	**	n	u '	
Methyl tert-butyl ether	ND	2.5	"	*	ti	Ħ	Ħ	и	
Surrogate: a,a,a-Trifluorotoluene		94.0 %	70-	-130	"		. "	"	
MW-2 (MLF0221-03) Water Sa	mpled: 06/07/02 11:04	Received:	06/07/02	16:30					
Gasoline Range Organics (C6-C1	0) 14000	2500	ug/l	50	2F17007	06/17/02	06/17/02	8015Bm/8021B	
Benzene	120	25	11	n	11	11	n	n	
Toluene	1200	25	•	**	#1	. H	n	n	
Ethylbenzene	1400	25	•	•	#	"	n	n	
Xylenes (total)	4700	25	Ħ	**	H	н	π	n	
Methyl tert-butyl ether	540	120	P	**	*	n	**	n	
Surrogate: a,a,a-Trifluorotoluene		96.9 %	70-	-130	"	17	"	н	



Gettler Ryan/Geostrategies - Tosco/Unocal

6747 Sierra Ct, Suite J

Dublin CA, 94568

Project: Tosco SS #0843, Alameda, Ca

Project Number: #0843, Alameda, Ca

Project Manager: Deanna Harding

Reported: 06/24/02 09:17

Total Purgeable Hydrocarbons (C6-C10) by EPA 8015B modified, BTEXM by EPA 8021B Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (MLF0221-04) Water S	ampled: 06/07/02 09:07	Received:	06/07/02	2 16:30					
Gasoline Range Organics (C6-C10	) ND	50	ug/l	1	2F17007	06/17/02	06/17/02	8015Bm/8021B	
Benzene	ND	0.50	11	"	**		11	#	-
Toluene	ND	0.50	It	n	#	7	H	н	
Ethylbenzene	ND	0.50	n	"	"		10	Ħ	
Xylenes (total)	ND	0.50	"		v	11	**	n	
Methyl tert-butyl ether	ND	2.5	n	4				"	
Surrogate: a,a,a-Trifluorotoluene		94.7 %	70	-130	"			r .	
MW-4 (MLF0221-05) Water S	ampled: 06/07/02 08:30	Received:	06/07/0	2 16:30					
Gasoline Range Organics (C6-C10	) ND	50	ug/l	1	2F17007	06/17/02	06/17/02	8015Bm/8021B	
Benzene	ND	0.50	"	#	n	"	Ħ	**	
Toluene	ND	0.50	Ħ	71	11	11	н	11	
Ethylbenzene	ND	0.50	R	*1	ч	**	b	Ħ	
Xylenes (total)	ND	0.50	н	11	11	11	**	"	
Methyl tert-butyl ether	ND	2.5	*	H		H	*1		
Surrogate: a,a,a-Trifluorotoluene		91.4%	70	-130	"	n	u	#	



Gettler Ryan/Geostrategies - Tosco/Unocal

6747 Sierra Ct, Suite J Dublin CA, 94568 Project: Tosco SS #0843, Alameda, Ca

Project Number: #0843, Alameda, Ca Project Manager: Deanna Harding Reported: 06/24/02 09:17

### Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (MLF0221-03) Water	Sampled: 06/07/02 11:04	Received:	06/07/02	16:30					
Ethanol	ND	2000	ug/l	50	2F20014	06/20/02	06/20/02	EPA 8260B	
tert-Butyl alcohol	ND	1000	π	"	H	*1	u	TT	
Methyl tert-butyl ether	200	25	Ħ	11	H	Н		n	
Di-isopropyl ether	ND	25	**	#1	**	H	**	11	
Ethyl tert-butyl ether	ND	25	**	71		n ;		11	
tert-Amyl methyl ether	ND	25		н		ii ,	н	11	
1,2-Dichloroethane	ND	25	**	н	#	tπ	11	11	
Ethylene dibromide	ND	25	. *	Ħ	#	**	11	Ħ	
Surrogate: 1,2-Dichloroethane-	d4	98.2 %	60-	140		rr rr	#	n	



Gettler Ryan/Geostrategies - Tosco/Unocal

6747 Sierra Ct, Suite J Dublin CA, 94568 Project: Tosco SS #0843, Alameda, Ca

Project Number: #0843, Alameda, Ca Project Manager: Deanna Harding Reported: 06/24/02 09:17

## Total Purgeable Hydrocarbons (C6-C10) by EPA 8015B modified, BTEXM by EPA 8021B - Quality Control Sequoia Analytical - Morgan Hill

	_	Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 2F17007 - EPA 5030B [P/T]										
Blank (2F17007-BLK1)				Prepared	& Analyz	ed: 06/17/	02			
Gasoline Range Organics (C6-C10)	ND	50	ug/l							
Benzene	ND	0.50	**							
<b>Foluene</b>	ND	0.50	n							
Ethylbenzene	ND	0.50	11							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	Ħ	•						
Surrogate: a,a,a-Trifluorotoluene	10.4		н —	10.0	<del></del>	104	70-130		, <u>, , , , , , , , , , , , , , , , , , </u>	
LCS (2F17007-BS1)				Prepared	& Analyz	ed: 06/17/	<b>'</b> 02			
Benzene	10.1	0.50	ug/l	10.0		101	70-130			
Toluene	10.2	0.50	**	10.0		102	70-130			
Ethylbenzene	9.76	0.50	**	10.0		97.6	70-130			
Xylenes (total)	30.8	0.50	11	30.0		103	70-130			
Surrogate: a,a,a-Trifluorotoluene	9.46		"	10.0	<del></del>	94.6	70-130			
LCS (2F17007-BS2)				Prepared	& Analyz	zed: 06/17	/02			
Gasoline Range Organics (C6-C10)	238	50	ug/l	250		95.2	70-130			
Surrogate: a,a,a-Trifluorotoluene	9.82		ıı	10.0		98.2	70-130			
Matrix Spike (2F17007-MS1)	So	urce: MLF0	221-04	Prepared	: 06/17/02	. Analyze	:d: 06/18/02	2		
Gasoline Range Organics (C6-C10)	485	50	ug/l	550	ND	88.2	60-140			
Benzene	9.25	0.50	w	6.60	ND	140	60-140			
Toluene	47.2	0.50	H	39.7	ND	119	60-140			
Ethylbenzene	11.4	0.50	<del>11</del>	9.20	ND	123	60-140			
Xylenes (total)	57.9	0.50	**	46.1	ND	126	60-140			
Surrogate: a,a,a-Trifluorotoluene	13.8		ħ	10.0		138	70-130			QM-0
Matrix Spike Dup (2F17007-MSD1)	So	urce: MLF0	221-04	Prepared	: 06/17/02	2 Analyze	ed: 06/18/0	2		
Gasoline Range Organics (C6-C10)	477	50	ug/l	550	ND	86.7	60-140	1.66	25	
Benzene	8.91	0.50	н	6.60	ND	135	60-140	3.74	25	



Gettler Ryan/Geostrategies - Tosco/Unocal

6747 Sierra Ct, Suite J Dublin CA, 94568 Project: Tosco SS #0843, Alameda, Ca

Project Number: #0843, Alameda, Ca Project Manager: Deanna Harding Reported: 06/24/02 09:17

## Total Purgeable Hydrocarbons (C6-C10) by EPA 8015B modified, BTEXM by EPA 8021B - Quality Control Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2F17007 - EPA 5030B [P/T]	·							<del></del>		
Matrix Spike Dup (2F17007-MSD1)	So	urce: MLF02	221-04	Prepared	: 06/17/02	Analyzed:	06/18/02			
Toluene	45.8	0.50	սջ/1	39.7	ND	115	60-140	3.01	25	
Ethylbenzene	11.3	0.50	11	9.20	ND	122	60-140	0.881	25	
Xylenes (total)	59.0	0.50	#	46.1	ND	128	60-140	1.88	25	
Surrogate: a,a,a-Trifluorotoluene	11.7		,	10.0		117	70-130			



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Reported: 06/24/02 09:17

### Volatile Organic Compounds by EPA Method 8260B - Quality Control Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2F20014 - EPA 5030B P/T						· .				
Blank (2F20014-BLK1)			•	Prepared	& Analyze	ed: 06/20/0	02			į.
Ethanol	ND	40	ug/l			-				
tert-Butyl alcohol	ND	20								
Methyl tert-butyl ether	ND	0.50	н							
Di-isopropyl ether	ND	0.50	17							
Ethyl tert-butyl ether	ND	0.50	n							
tert-Amyl methyl ether	ND	0.50	н							
1,2-Dichloroethane	ND	0.50	*1							
Ethylene dibromide	ND	0.50	н							
Surrogate: 1,2-Dichloroethane-d4	4.96		H	5.00		99.2	60-140			
LCS (2F20014-BS1)				Prepared	& Analyze	ed: 06/20/	02			
Methyl tert-butyl ether	10.0	0.50	ug/l	10.0		100	70-130	· · · · · · · · · · · · · · · · · · ·		
Surrogate: 1,2-Dichloroethane-d4	4.95		n	5.00		99.0	60-140		<del></del>	
LCS (2F20014-BS2)				Prepared	& Analyze	ed: 06/20/	02			
Methyl tert-butyl ether	8.23	0.50	ug/l	8.40		98.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	4.73	<u> </u>	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	5.00		94.6	60-140			



Gettler Ryan/Geostrategies - Tosco/Unocal

6747 Sierra Ct, Suite J

Dublin CA, 94568

Project: Tosco SS #0843, Alameda, Ca

Project Number: #0843, Alameda, Ca

Project Manager: Deanna Harding

Reported:

06/24/02 09:17

#### **Notes and Definitions**

QM-07 The spike recovery was outside control limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

recovery.

DET Analyte DETECTED

Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

ND

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference