

6 2002

April 26, 2002 G-R #180203

TO:

Mr. David B. De Witt

Phillips 66 Company

2000 Crow Canyon Place, Suite 400

San Ramon, California 94583

CC: Mr. Paul Blank

ERI, Inc.

73 Digital Drive, Suite 100 Novato, California 94949

FROM:

Deanna L. Harding

Project Coordinator Gettler-Ryan Inc.

6747 Sierra Court, Suite J Dublin, California 94568 RE: Former Tosco 76 Service Station

#0843

1629 Webster Street Alameda, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1 .	April 22, 2002	Groundwater Monitoring and Sampling Report First Quarter - Event of March 11, 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 *May 10, 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



April 22, 2002 G-R Job #180203

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

RE: First Quarter Event of March 11, 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 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.

No. 6882

Sincerely,

Deanna L. Harding

Project Coordinator

Douglas JaLee

Senior Geologist, R.G. No. 6882

Figure 1:

Potentiometric Map

Figure 2:

Concentration Map

Table 1:

Groundwater Monitoring Data and Analytical Results

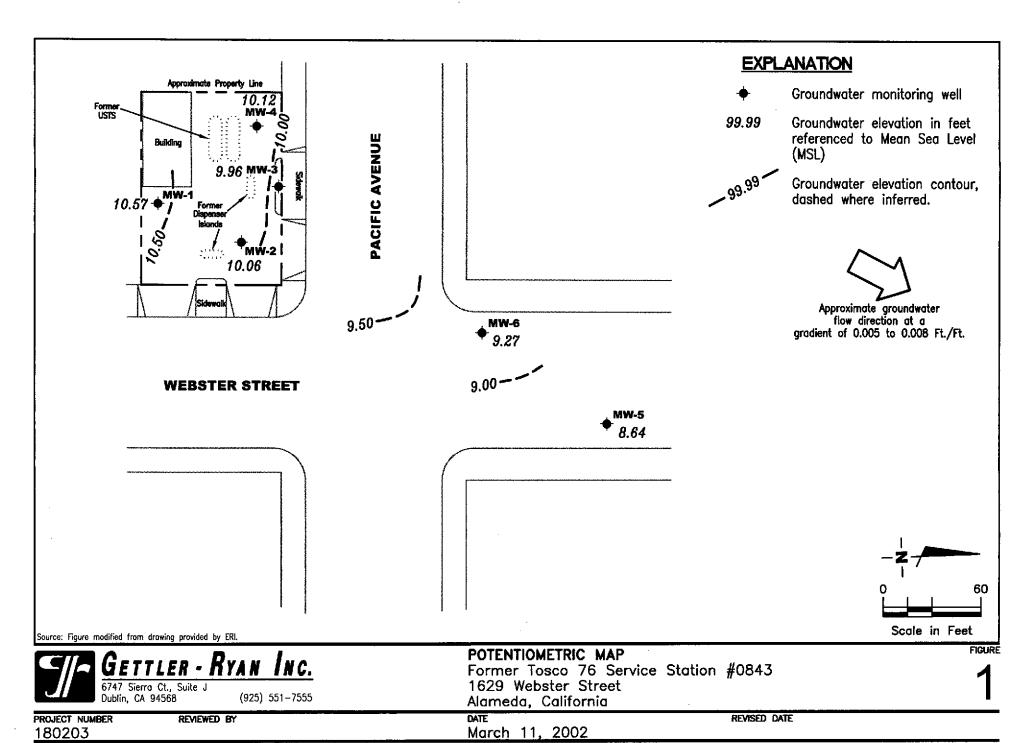
1. Harden

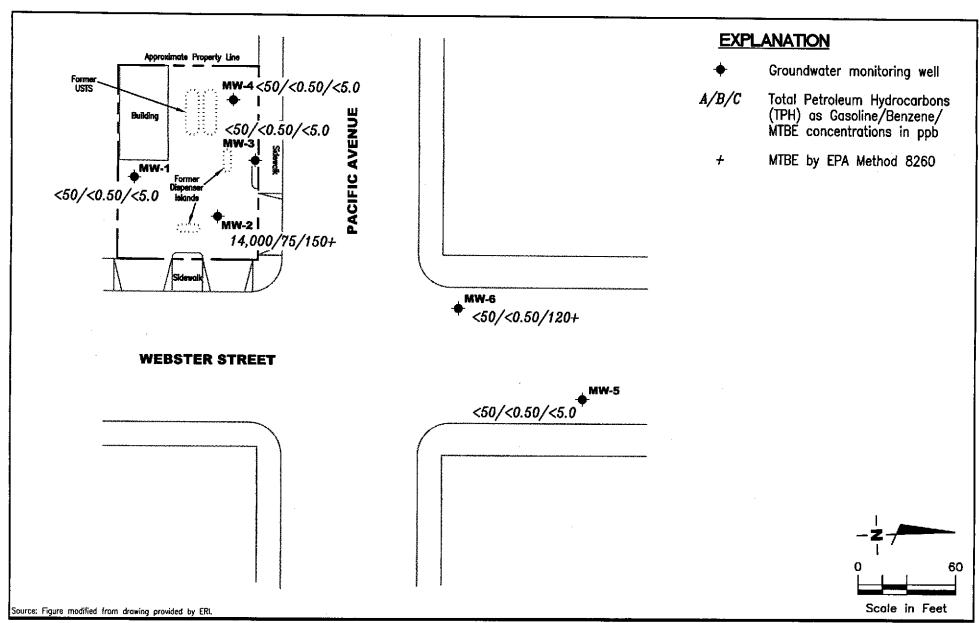
Table 2: Attachments: Groundwater Analytical Results - Oxygenate Compounds Standard Operating Procedure - Groundwater Sampling

Field Data Sheets

0843.qml

Chain of Custody Document and Laboratory Analytical Reports







REVIEWED BY

CONCENTRATION MAP

Former Tosco 76 Service Station #0843 1629 Webster Street

Alameda, California

REVISED DATE March 11, 2002

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PROJECT NUMBER

FIGURE

Table 1
Groundwater Monitoring Data and Analytical Results

				Alaineua,	Camorna				
WELL ID/	DATE	DTW	GWE	TPH-G	В	Т	E	X	MTBE
TOC*(fl.)		(ft.)	(msl)	(ррБ)	(ppb)	(ppb)	(pph)	(ppb)	(ppb)
MW-1									
16.18	03/05/99 ¹	**		86.6 ³	ND	2.04	ND	4.06	23.9^{2}
	06/03/99	6.24	9.94	ND	ND	ND	ND	ND	ND/ND²
	09/02/99	7.19	8.99	ND	ND	ND	ND	ND	ND/ND²
	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
MW-2	03/05/99 ¹			34,400	2,070	7,710	2,340	8,240	8,460 ²
15.57	06/03/99	5.96	9.61	51,200 ⁴	1,820	7,570	2,510	7,320	6,460/8,800 ²
	09/02/99	6.85	8.72	17,000 ⁵	1,000	3,100	1,400	3,700	4,000/3,720 ²
	12/14/99	7.65	7.92	83,000 ⁵	3,000	22,000	4,500	17,000	9,100/11,000 ²
	03/14/00	5.26	10.31	31,000 ⁵	1,600	4,600	2,300	7,300	5,700/8,700 ²
	05/31/00	5.60	9.97	9,970 ⁵	598	1,030	487	2,060	2,500/1,670 ²
	08/29/00	6.35	9.22	7,900 ⁵	390	1,500	280	1,900	1,800/1,300 ²
	12/01/00	7.06	8.51	87,500 ⁵	1,860	17,400	5,590	19,400	6,220/3,790 ²
	03/17/01	5.98	9.59	4,310 ⁵	371	59.0	280	682	321/433 ²
	05/23/01	6.97	8.60	45,400 ⁵	374	4,490	2,790	10,900	⁷ ND/406 ²
	09/24/01	7.56	8.01	76,000 ³	430	13,000	4,700	18,000	<2,000/480 ²
	12/10/01	6.52	9.05	82,000 ³	320	9,100	4,400	16,000	<2,500/270 ²
	03/11/02	5.51	10.06	14,000 ³	75	1,400	1,100	3,600	$<250/150^2$

Table 1
Groundwater Monitoring Data and Analytical Results

WELL ID/	DATE	DTW	GWE	TPH-G	В	T	E	X	MTBE
TOC*(fL)		(ft.)	(msl)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
MW-3	03/05/99 ¹			135 ³	ND	ND .	ND	4.84	2.46^{2}
15.11	06/03/99	5.57	9.54	ND	ND	ND	ND	ND	5.23/12.7 ²
	09/02/99	6.50	8.61	ND	ND	ND	ND	ND	13/11.0 ²
	12/14/99	7.28	7.83	ND	ND	ND	ND	ND	ND
	03/14/00	4.87	10.24	ND	ND	ND	ND	ND	7.2/6.3 ²
	05/31/00	5.58	9.53	ND	ND	ND	ND	ND	ND
	08/29/00	6.06	9.05	ND	ND	ND	ND	ND	ND
	12/01/00	6.76	8.35	ND	ND	ND	ND	ND	ND
	03/17/01	5.09	10.02	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	<5.0
	12/10/01	6.31	8.80	<50	< 0.50	< 0.50	< 0.50	< 0.50	<5.0
	03/11/02	5.15	9.96	<50	<0.50	<0.50	<0.50	<0.50	<5.0
MW-4	03/05/99 ¹		_*	ND	ND	ND	ND	2.44	25.2^{2}
15.17	06/03/99	5.45	9.72	ND	ND	ND	ND	ND	ND/3.96 ²
20127	09/02/99	6.48	8.69	ND	ND	ND	ND	ND	$23/27.0^2$
	12/14/99	7.27	7.90	ND	ND	ND	ND	ND	200/270 ²
	03/14/00	4.67	10.50	ND	ND	ND	ND	ND	46/49 ²
	05/31/00	5.48	9.69	ND	ND	ND	ND	ND	ND
	08/29/00	6.10	9.07	ND	ND	ND	ND	ND	$6.1/3.2^2$
•	12/01/00	6.79	8.38	ND	ND	ND	ND	ND	152/101 ²
	03/17/01	5.01	10.16	ND	ND	ND	ND	ND	ND
	05/23/01	5.78	9.39	ND	ND	ND	ND	ND	ND
	09/24/01	6.42	8.75	<50	<0.50	<0.50	< 0.50	< 0.50	<5.0
	12/10/01	6.41	8.76	<50	< 0.50	<0.50	<0.50	< 0.50	1,700/1,300 ²
	03/11/02	5.05	10.12	<50	<0.50	<0.50	< 0.50	< 0.50	<5.0

Table 1Groundwater Monitoring Data and Analytical Results

WELL ID/	DATE	DTW	GWE	TPH-G	В	T	R	X	МТВЕ
TOC*(ft.)		(ft.)	(msl)	(ppb)	(ppb)	(ppb)	(ррв)	(ppb)	(ppb)
MW-5	12/14/99	6.45	6.89	ND	ND	ND	ND	ND	3.5/3.8 ²
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
	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
MW-6	12/14/99	6.64	7.44	ND	ND	ND	ND	ND	11,000/18,000²
14.08	03/14/00	4.72	9.36	ND ⁷	ND ⁷	ND ⁷	ND ⁷	ND ⁷	19,000/21,000 ^{2,6}
14.00	05/31/00	5.28	9.30 8.80	ND ⁷	ND ⁷	ND ⁷	ND ⁷	ND ⁷	13,200
	08/29/00	5.39	8.69	ND	ND	ND	ND	ND	270/400 ²
	12/01/00	6.11	7.97	ND	ND	ND ND	ND	ND ND	6,330/3,640 ²
	03/17/01	6.02	8.06	18,700 ⁵	2,950	989	1,040	3,000	10,200/11,500 ²
	05/23/01	5.82	8.06 8.26	ND ⁷	ND ⁷	ND ⁷	ND ⁷	ND ⁷	4,6608
	09/24/01 ¹⁰	6.59	7. 49	<50	<0.50	<0.50	<0.50	<0.50	160/190 ⁹
	12/10/01	6.50	7.49	<50	<0.50	<0.50	<0.50	<0.50	$3,200/2,400^2$
	03/11/02	4.81	9.27	<50	<0.50	<0.50	<0.50	<0.50	92/120 ²
	0,011102	4.01	7.2 7	420	10.00	10.00			
Trip Blank	03/05/99 ¹		**	ND	ND	ND	ND	ND	ND^2
TB-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			NĎ	ND	ND	ND	ND	ND
	05/31/00		·	ND	ND	ND	ND	ND	ND
	08/29/00		_	ND	ND	ND	ND	ND	ND
	12/01/00		·	ND	ND	ND	ND	ND	ND

Table 1 Groundwater Monitoring Data and Analytical Results

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
TB-LB	03/17/01			ND	ND	ND	ND	ND	ND
(cont)	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

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

(ppb) = Parts per billion

(ft.) = Feet

T = Toluene

ND = Not Detected

DTW = Depth to Water

E = Ethylbenzene

-- = Not Measured/Not Analyzed

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.
- ² MTBE by EPA Method 8260.
- Laboratory report indicates weathered gasoline C6-C12.
- Laboratory report indicates chromatogram pattern C6-C12.
- 5 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.
- 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.

Table 2
Groundwater Analytical Results - Oxygenate Compounds

WELL ID	DATE	ETHANOL (ppb)	TRA (ppb)	MTRE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
MW-1	09/02/99	ND	ND	ND	ND	ND	ND		
MW-2	09/02/99	ND ¹	ND ¹	3,720	ND ¹	ND ¹	ND ¹		
	12/14/99	ND ¹	ND^1	11,000	ND^1	ND^1	ND^1	\mathbf{ND}^1	ND^1
	03/14/00	${ m ND}^1$	1,300	8,700	ND^1	ND^1	ND^1	ND^1	ND^1
	05/31/00	ND ¹	ND^1	1,670	ND^1	ND ¹	ND ¹	\mathbf{ND}^1	\mathbf{ND}^1
	08/29/00	ND	250	1,300	ND	ND	ND	ND	ND
	12/01/00	ND^1	ND^1	3,790	ND^1	ND ¹	ND ^I	ND^1	ND^1
	03/17/01	ND^1	ND ¹	433	14.8	ND ¹	ND ^t	ND^1	ND^1
	05/23/01	ND^1	ND ⁱ	406	ND^1	ND	ND^1	ND^1	ND^1
	09/24/01	<50,000	<5,000	480	<100	<100	<100	<100	<100
	12/10/01	<12,000	<500	270	<25	<25	<25	<25	<25
	03/11/02	<5,000	<1,000	150	<20	<20	<20	<20	<20
MW-3	09/02/99	ND	ND	11.0	ND	ND	ND		
11217-20	03/14/00			6.3			. 		
MW-4	09/02/99	· ND	ND	27.0	ND	ND	ND		
14144	12/14/99			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					

Table 2 Groundwater Analytical Results - Oxygenate Compounds

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
		Αργα	ургоз	N 2/12/	(PP+)				
MW-6	12/14/99			18,000					
	03/14/00			$21,000^2$					
	08/29/00			400					
	03/17/01	ND ¹	ND ¹	11,500	ND ⁱ	ND ¹	ND ¹	219	ND ¹
	05/23/01 ³	 .					••		
	09/24/01 ⁴	<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

Table 2

Groundwater Analytical Results - Oxygenate Compounds

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

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 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.

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.

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.

Client/ Facility # <u>98</u>	43		Job#	: 18020	73
Address: 16	29 Webster	st.	Date	: <u>3-11-</u>	02
	lamedu, c		Sam	oler: <u>Toe</u>	
Well ID	_mw-1		il Condition:	0.k	•
Well Diameter	2 _{in}	. Hyd	drocarbon e	Amount in (product/	
Total Depth	20.05 #	'	ckness:		.38 4" = 0.66
Depth to Water	5.61	I	nctor (VF)	6" = 1.50	12" = 5.80
	14.44	x vf <u>0.1</u>	7 = 2.45 × 3 (case	., volume) = Estimated	Purge Volume: 7. (gal.)
Purge Equipment:	Disposable Baile Bailer Stack Suction Grundfos Other:	r 	Sampling Equipmen	t: Disposable Bailer Pressure Ba Grab Samp Other:	siler le
=	// 2:070·m/	(1207)	Sediment Descri	clear	Odor: NONK
Time	Volume pH (gal.)	Cor		perature D.O C (mg/L	ORP Alkalinity
11:54	2.5 7.5	$\frac{7}{2}$ $\frac{12}{2}$.69 <u>7</u>	2.6	
11:58	7.5 7.6	$\frac{1}{2}$.52 7	3.0 2.5	
		LABO	RATORY INFORM	ATION	
SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-1	3 VO A	Y	HCL	Seq.	TPHG, BTEX, MTSE
COMMENTS:					

Client/ Facility # <u>08</u>	43		Jo	ь#: <u>Д</u>	80203	•	
Address: 162	9 Webster	st.	Da	ite: <u>3</u>	- 11-0	<u> </u>	
	lamedu, cl		Sa	mpler:	Toe		
Well ID	mw-2	We	II Condition:		/c ·		·
Well Diameter		•	irocarbon ckness:	O in	Amount Ba		
Total Depth	20.24 #			= 0.17	3" = 0.38	4"	= 0.66
Depth to Water	<u>5.5)</u>	Fa	aor (VF)	6" = 1	50	12" = 5.80	
Purge Equipment:	Disposable Bailer Bailer Stack Suction Grundfos Other:	. =	2 = <u>2.50</u> x 3 (Sampli Equipm	ng ent: Di Ba Pr G	sposable Ba siler essure Baile rab Sample	iler	8 (gai.)
	2:50 3:108.m (1) te:	<u>510)</u>	Weather Cond Water Color: Sediment Des If yes; Time	cription: _		Odor: 4	
Time	Volume pH (gal.)	Con µп	ductivity WT hos/cm /	emperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
2:57 2:59 3:02	3 7.26 5 7.31 8 7.32		40 46 51	72.2			
CANDIS ID	(#) - CONTAINER	LABOI REFRIG.	RATORY INFO		ORATORY	ANA	LYSES
SAMPLE ID	3VOA	Y	HCL.		seq.	ψ~- · · · · · · · · · · · · · · · · · · ·	FK, MTSE
100	2 VO A	ĉ t	(1		10	(3)0xy	
-							
COMMENTS: _	one padlo	داد					

3/97-fleidet.fm

cility #_ <u>08#</u>	3		Job#:	180203		-
ddress: 162	q Webster	st.	Date:	3-11-0		
	lamedu, cl		Sample	r: Joe		
Well ID	MW-3	Well Cond	ition:	0.K.		
ell Diameter	2 in	Hydrocarb Thickness		Amount Ba		(علمو)
otal Depth	19.91	Volume	2" = 0.17		-	0.66
epth to Water	5.15 #	Factor (VF) ————	6" = 1.50	12" = 5.80	
	14.76 x	VF 0.17 = 2:	∑ X 3 (case voi	lume) = Estimated Pu	irge Volume:	(gai.)
Purge	Disposable Bailer Bailer	*	Sampling Equipment:	Disposable Ba	mer)	×
quipment:	Stack			Bailer Pressure Baile		
	Suction Grundfos		•	Grab Sample ther:		
	Other:			uier.		
Starting Time: Sampling Time: Purging Flow Rat	12:318·m(1)	Wate	her Conditions or Color: ment Description	<u>clear</u>	Odor: ^	
Did well de-wate	r7	If yes	s; Time:	Volur	ne:	Igal
Time	Volume pH (gal.)	Conductivi µmhos/दर्	ty Temper	ature D.O. (mg/L)	ORP (mV)	Alkalinit (ppm)
12:25	3 7.67	11.23	<u> 73.</u>			
	5 7.70	$-\frac{11.31}{11.2}$	72			
12:28 -	2 7.//		ი უ2			
12:30 -	8 7.65		7 _ 73			
12:30 -	7.65		2 <u>73</u> — ——			
12:30 =	7.65		2 <u>73</u> — ——			
12:30	7.65	LABORATO	RY INFORMAT	rion	ANAL	rses
12 130	(#) - CONTAINER	LABORATO REFRIG. PRE	RY INFORMAT	TION LABORATORY	ANAL) TPHG, BTG	
12:30 2:30 SAMPLE ID MW-7	(#) - CONTAINER 3 V O A	LABORATO	RY INFORMAT	rion		
		LABORATO REFRIG. PRE	RY INFORMAT	TION LABORATORY		
		LABORATO REFRIG. PRE	RY INFORMAT	TION LABORATORY		

acility # 08	43		Job#:	1807	103	
Address: 162	g Webster	st.	Date:	3-11-	02	
City:A	lamedu, Cl	<u> </u>	Samp	ler: <u>Toe</u>		· · · · · · · · · · · · · · · · · · ·
Well ID	_mw.4	Wel	l Condition:	o.k		
Well Diameter	$\frac{\nu_{in}}{10-2}$	•	rocarbon	•'	nt Bailed	(gal.)
Total Depth	19.78		lume 2" = 0.		· ·	= 0.66
Depth to Water	5.05	Fa	ctor (VF)	6" = 1.50	12" = 5.80	
	1473 x	VF <u>0.17</u>	= <u>25/</u> x 3 (case	: volume) = Estima	ted Purge Volume: _	g) (gal.)
Purge Equipment:	Disposable Bailer Bailer		Sampling Equipment:	Disposab	le Baller	Z
Equipment.	Stack	•	, .	Bailer Pressure		
	Suction Grundfos	•		Grab Sar		
	Other:			Other:		
Starting Time: Sampling Time: Purging Flow Rat	2:428.m(1.	442)	Weather Conditio Water Color: Sediment Descrip	clear		IONR
Did well de-wate	er?		If yes; Time:	\	/olume:	
	· ••	Con	ductivity of STemp		O.O. ORP	
Time	Volume pH (gal.)	μπ	hos/cm X	(m	.g/L) (mV)	Alkalinity (ppm)
7:26		μm - <u> </u>	hos/cm × 7		.g/L) (mV)	•
	(gal.) 3 7.// 5 7./8	— — — — — — — — — — — — — — — — — — —	$\frac{96}{08} = \frac{73}{73}$	<u>/</u>	g/L) (mV)	•
2:26		— — — — — — — — — — — — — — — — — — —	hos/cm × 7	<u>/</u>	g/L) (mV)	•
2:26	(gal.) 3 7.// 5 7./8	— — — — — — — — — — — — — — — — — — —	$\frac{96}{08} = \frac{73}{73}$	<u>/</u>	g/L) (mV)	•
2:26	(gal.) 3 7.// 5 7./8	7. 8. 8	hos/cm X 4 96 73 08 73	3. 2	g/L) (mV)	•
2:26	(gal.) 3 7.// 5 7./8	7. 8. 8	$\frac{96}{08} = \frac{73}{73}$	TION LABORATOR	RY ANA	(ppm)
2:26 2:28 2:31	(gal.) 7 7.// 7 7./8 7 7.2/	LABOI	hos/cm X 96 73 08 73 73 RATORY INFORMA	/ 3. z 3. z	RY ANA	(ppm)
2:26 2:28 2:31	(gal.) 7. // 7. // 7. // 7. // 7. // 7. // 7. // (#) - CONTAINER	LABOI REFRIG.	RATORY INFORMA PRESERV. TYPE	TION LABORATOR	RY ANA	(ppm)
2:26 2:28 2:31	(gal.) 7. // 7. // 7. // 7. // 7. // 7. // 7. // (#) - CONTAINER	LABOI REFRIG.	RATORY INFORMA PRESERV. TYPE	TION LABORATOR	RY ANA	(ppm)
2:26 2:28 2:31	(#) - CONTAINER	LABOI REFRIG.	RATORY INFORMA PRESERV. TYPE	TION LABORATOR	RY ANA	(ppm)

9/97-Heldet.im

Client/ Facility # <u> </u>	<i>‡3</i>		Job#	18020	3	
Address: 162	9 Webster	st.	Date:	3-11-0	2	
	lamedu, ci		Samp	oler: <u>Toe</u>		
Well ID	_mw-s	We	Il Condition:	0.k.		
Well Diameter	$2_{ m in}$	Hyd	irocarbon 4	Amount B		
Total Depth	20.23 #	v	ckness:	in (product/wa .17 3" = 0.34 6" = 1.50		= 0.66
Depth to Water	4.70 "	I.	cor (vr)	0 - 120		
Purge Equipment:	Disposable Bailer Bailer Stack Suction Grundfos Other:	•	2 = 264 x 3 (case Sampling Equipment	volume) = Estimated P Disposable 8: Bailer Pressure Bail Grab Sample Other:	aller	(gal.)
	f:08p.m(te:/	ibm-	Sediment Descrip	otion: Volum		
Time 2 53	Volume pH (gal.) 3 7.53 5.5 7.57 9 7.58		10.33 Tempolarity (**)	c (mg/L) 2./	ORP (mV)	Alkalinity (ppm)
	(40 CONTAINED	LABO REFRIG.	RATORY INFORM.	ATION LABORATORY	ANAI	
SAMPLE ID	(#) - CONTAINER	Y	HCL	Seq.		FK, MTSE
COMMENTS: _						
		· · · · · · · · · · · · · · · · · · ·				3/37-fielder.#

Client/ Facility # <u>08</u>	43		Job#:	18020	3	
Address: 167	g Webster	st.	Date:	3-11-0	2	
_	lamedu, cl		Sampl	er: <u>Toe</u>		
Well ID	_mw-6	Well Cond	ition:	0.k.		
Well Diameter		Hydrocarb Thickness:		Amount B		(nal.)
Total Depth	20.16 #	Volume	2" = 0.1			= 0.66
Depth to Water	4.81 "	Factor (VF)	6" = 1.50	12" = 5.80	
	15.35 x	VF 0.17 -20	X 3 (case v	rolume) = Estimated P	urge Volume: _	(gal.)
Purge Equipment:	Disposable Bailer Bailer Stack Suction		Sampling Equipment:	Disposable Bailer Bailer Pressure Bail		,
	Grundfos Other:	_	(-Grab Sample Other:		
	1:30 1:558m (135 te:	Water	ner Condition r Color:	ě	Odor: И	
•	er?		; Time:	Volur	ne:	
	Volume pH (gal.)	Conductivit µmhos/cm		(mg/L)	ORP (mV)	Alkalinity (ppm)
1:40 -	3 7.36 5 7.33	<u> 6:18</u>	$-\frac{72}{72}$	<u>.5</u> -5		
1:45	8 7.34	6.24		24		-
		LABORATOR	Y INFORMA	TION		
SAMPLE ID	(#) - CONTAINER		ERV. TYPE	LABORATORY		LYSES
mw-0	3V0A	Y	H Ci_	Seq.	TPHG, BTO	FK, MTSE
CONANGENTS:	J		<u>_</u>			
COMMENTS: _						
		•				

9/97-fleidet.fm

<u>Chain-of-Custody-Record</u> Fuelly Number TOSCO (Former) SS #0843 Contact (Hame) NR. Dave DeWitt Foothly Address 1629 Webster Street, Alameda, CA (Phone) 925-277-2384 Consultant Project Number 180203.85 Laboratory Hame, Sequois Analytical TOSCO Consultant Home Gettler-Ryan Inc. (G-R Inc.) Laboratory Release Humber.... 6747 SIERRA COURT, SUITE J. DUBLIN. CA 44568 Torce Marketing Company 2000 Cram Empery PL, Sta, Act But Kanner, California (1922) Somples Collected by (Norms) SOE A JEMIAN Project Contont (Name) Deanna L. Harding. Collection Date 3-11-02 (PhoneX 925) \$51÷7555 (Fax Humber, 925=551-7899 Signature ____ Afr Charteod DO NOT BILL 26.854 TB-LB ANALYSIS Purqueble Aramothe (8020) Expectable Organics (8270) Purpedile Organica (82.40) 1 1 المع (المع مد الاه) <υ OR and Creams (5520) 8 Oxy's – MTOK, TBA, OPE, KTBE 194 Okes (8015) 900 TAMB, 1,2DCA Ĕ ROB, Ethanot TB-LB Oί G-#CC volt $\sqrt{\omega}$ 400 01 1207 KUN 8 OXY'S BY 8 mw.2 8260 ON ALL 8020 1510 1 MTRICITTS. MW.3 √°/-123/ 1 . mw.4 1412 4 MW-S , 1 1308 4 4 15W-6 1355 . 1 Relinquished by (Signature) Date/Time 1850 Dale/Time 1841) Received, By (Signalyes) Organization Turn Around Time (Circle Chojes) Organization 3/102 G-R Inc. 3-11-02 24 Hrs. Reliaguished By_(Signature) Dole/Time Organization Dota/fime Organization 48 Hrs. Received By (Signature) 6 Days 10-000 Relinquished By (Signature) Dale/Time Organization Date/Time Reclared For Loboratory by (Signature)





25 March, 2002

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

SETTLEK-KYAN INC.

RE: Tosco(1)

Sequoia Report: L203044

Enclosed are the results of analyses for samples received by the laboratory on 03/11/02 18:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Richard G. Yee For Wayne Stevenson

Project Manager

CA ELAP Certificate #2360



1551 Industrial Road San Carlos CA 94070 (650) 232-9600 FAX (650) 232-9612 www.sequoialabs.com

Gettler-Ryan/Geostrategies(1)

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

Project Number: Tosco (Former) SS#0843, Alameda

Project Manager: Deanna Harding

Reported: 03/25/02 15:15

ANALYTICAL REPORT FOR SAMPLES

Laboratory ID	Matrix	Date Sampled	Date Received
L203044-01	Water	03/11/02 00:00	03/11/02 18:50
L203044-02	Water	03/11/02 12:07	03/11/02 18:50
L203044-03	Water	03/11/02 15:10	03/11/02 18:50
L203044-04	Water	03/11/02 12:31	03/11/02 18:50
L203044-05	Water	03/11/02 14:42	03/11/02 18:50
L203044-06	Water	03/11/02 13:08	03/11/02 18:50
L203044-07	Water	03/11/02 13:55	03/11/02 18:50
	L203044-01 L203044-02 L203044-03 L203044-04 L203044-05 L203044-06	L203044-01 Water L203044-02 Water L203044-03 Water L203044-04 Water L203044-05 Water L203044-06 Water	L203044-01 Water 03/11/02 00:00 L203044-02 Water 03/11/02 12:07 L203044-03 Water 03/11/02 15:10 L203044-04 Water 03/11/02 12:31 L203044-05 Water 03/11/02 14:42 L203044-06 Water 03/11/02 13:08

Sequoia Analytical - San Carlos

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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.



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

Project Number: Tosco (Former) SS#0843, Alameda

Project Manager: Deanna Harding

Reported: 03/25/02 15:15

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

· · · · · · · · · · · · · · · · · · ·		94014 1111							
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TB-LB (L203044-01) Water Sar	npled: 03/11/02 00:00	Received:	03/11/02	18:50					
Purgeable Hydrocarbons as Gasolin	ie ND	50	ug/l	1	2030065	03/23/02	03/23/02	EPA 8021B	
Benzene	ND	0.50	н	и	n	11	11	w .	
Toluene	ND	0.50	н	н	n	16	11	*	
Ethylbenzene	ND	0.50	II	II	19	н	п	•	
Xylenes (total)	ND	0.50	н	'n	n	R	н	Ħ	
Methyl tert-butyl ether	ND	5.0	19	H	h	н	n	•	
Surrogate: a,a,a-Trifluorotoluene		94.2 %	70-	-130	n	. "	"	"	
MW-1 (L203044-02) Water Sam	pled: 03/11/02 12:07	Received: 0	3/11/02	18:50					
Purgeable Hydrocarbons as Gasolin	e ND	50	ug/l	1	2030064	03/23/02	03/23/02	EPA 8021B	<u></u>
Benzene	ND	0.50	**	н	н	10	•	н	
Toluene	ND	0.50		п	ч	Ħ	n	н	
Ethylbenzene	ND	0.50	#	н	"	Ħ	n	11	
Xylenes (total)	ND	0.50	•	n		77	n		
Methyl tert-butyl ether	ND	5.0	**	n	H		tt	•	
Surrogate: a,a,a-Trifluorotoluene		102 %	70-	-130	Ħ	"	,,	rr .	
MW-2 (L203044-03) Water Sam	pled: 03/11/02 15:10	Received: 0	3/11/02	18:50					
Purgeable Hydrocarbons as Gasol	line 14000	2500	ug/l	50	2030064	03/23/02	03/23/02	EPA 8021B	P-02
Benzene	75	25	ц	n	U	и	И		
Toluene	1400	25	н	"	*	н	n		
Ethylbenzene	1100	25	*1	**	ħ	Ħ	**	11	
Xylenes (total)	3600	25	н	н	W	11	Ħ	11	
Methyl tert-butyl ether	ND	250	н	н	*		**	н	
Surrogate: a,a,a-Trifluorotoluene		123 %	70-	-130	#	п	"	n	



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Gettler-Ryan/Geostrategies(1)

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

Project Number: Tosco (Former) SS#0843, Alameda

Project Manager: Deanna Harding

Reported: 03/25/02 15:15

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

		quoia min		i ban c					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (L203044-04) Water	Sampled: 03/11/02 12:31	Received: 0	3/11/02	18:50					
Purgeable Hydrocarbons as Ga	soline ND	50	ug/l	1	2030064	03/23/02	03/23/02	EPA 8021B	
Benzene	ND	0.50		H	**	n	O	11	
Toluene	ND	0.50		U	**	Ħ	н	h	
Ethylbenzene	ND	0.50	11	H	W	II .	II	n	
Xylenes (total)	ND	0.50	II.	н	17	π	Ħ	H	
Methyl tert-butyl ether	ND	5.0	н	Ħ	17	•	**	it	
Surrogate: a,a,a-Trifluorotolue	ne	99.0 %	70	-130	"	Ħ	Ħ	FF	
MW-4 (L203044-05) Water	Sampled: 03/11/02 14:42	Received: 0	3/11/02	18:50					
Purgeable Hydrocarbons as Gas	soline ND	50	ug/l	1	2030065	03/23/02	03/23/02	EPA 8021B	
Benzene	ND	0.50	н	N	н	н	H	11	
Toluene	ND	0.50	h	н	н	н	п	н	
Ethylbenzene	ND	0.50	н		II.		H	н	
Xylenes (total)	ND	0.50	н	**	и.	**	#	n	
Methyl tert-butyl ether	ND	5.0	h	H	n	11		• 10	
Surrogate: a,a,a-Trifluorotolue	ne	94.9 %	70-	-130	"	"	n	n	
MW-5 (L203044-06) Water	Sampled: 03/11/02 13:08	Received: 0	3/11/02	18:50					
Purgeable Hydrocarbons as Gas	soline ND	50	ug/l	1	2030065	03/23/02	03/23/02	EPA 8021B	
Benzene	ND	0.50	11	**	n	11	**	11	
Toluene	ND	0.50	10	**	n	H	n	n	
Ethylbenzene	ND	0.50	**	H	U	н	н	н	
Xylenes (total)	ND	0.50	**	**	10	H	11	н	
Methyl tert-butyl ether	ND	5.0	"	π	н	**			
Surrogate: a,a,a-Trifluorotolue	ne	97.3 %	70-	-130	*1	rr	77	Ħ	





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

Project Number: Tosco (Former) SS#0843, Alameda

Project Manager: Deanna Harding

Reported: 03/25/02 15:15

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-6 (L203044-07) Water Sampled	: 03/11/02 13:55	Received: 0	3/11/02	18:50					
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	2030065	03/23/02	03/23/02	EPA 8021B	
Benzene	ND	0.50	**	11	Ħ	н	H		
Toluene	ND	0.50	D	19	N	H	н	Ħ	
Ethylbenzene	ND	0.50		н	It	п	N	**	
Xylenes (total)	ND	0.50	Ħ	н	*1	**		**	
Methyl tert-butyl ether	92	5.0	n	II	w	11		· #	
Surrogate: a,a,a-Trifluorotoluene		90.0 %	70	-130	Ħ	"	"	н	



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

Project Number: Tosco (Former) SS#0843, Alameda

Project Manager: Deanna Harding

Reported: 03/25/02 15:15

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (L203044-03) Water	Sampled: 03/11/02 15:10	Received: 0	3/11/02 1	8:50					
Ethanol	ND	5000	ug/l	10	2030028	03/13/02	03/13/02	EPA 8260B	
1,2-Dibromoethane	ND	20	11		R	4	H	*	
1,2-Dichloroethane	ND	20	Ħ	n	**	n	Ħ	*	
Di-isopropyl ether	ND	20	Ħ	ıı	п		n	n	
Ethyl tert-butyl ether	ND	20		T	H	**	#	11	
Methyl tert-butyl ether	150	20	Ħ	11	"	n	U	n	
Tert-amyl methyl ether	ND	20	W	н	ч	N	Ħ	н	
Tert-butyl alcohol	ND	1000	*	н	11	u u	н	Ħ	
Surrogate: 1,2-Dichloroethane	e-d4	103 %	70-	130	"	rt .	n	"	
Surrogate: Toluene-d8		102 %	70-	130	"	"	r	"	
MW-6 (L203044-07) Water	Sampled: 03/11/02 13:55	Received: 0	3/11/02 1	18:50					
Ethanol	ND	500	ug/l	1	2030058	03/25/02	03/25/02	EPA 8260B	
1,2-Dibromoethane	ND	2.0	11	**	H	II	н	*	
1,2-Dichloroethane	ND	2.0	11	₩	И	**	h	.*9	
Di-isopropyl ether	ND	2.0	ti	Ħ	T	n	D	•	
Ethyl tert-butyl ether	ND	2.0	н	**	n	11	*	Ħ	
Methyl tert-butyl ether	. 120	2.0	н	, u	*	н	tr	п	
Tert-amyl methyl ether	, ND	2.0	h	•		н	"	M	
Tert-butyl alcohol	ND	100	н	11	19		n	**	
Surrogate: 1,2-Dichloroethane	e-d4	114 %	70-	130	n	tr	n	tr	
Surrogate: Toluene-d8		99.2 %	70-	130	n	"	"	"	



Project: Tosco(1)

6747 Sierra Court, Suite J Dublin CA, 94568 Project Number: Tosco (Former) SS#0843, Alameda Project Manager: Deanna Harding Reported: 03/25/02 15:15

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

Sequoia Analytical - San Carlos Reporting Spike Source %REC RPD

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes		
Batch 2030064 - EPA 5030B (P/T)												
Blank (2030064-BLK1)				Prepared	& Analyze	ed: 03/23/0)2					
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l									
Benzene	ND	0.50										
Toluene	ND	0.50	*									
Ethylbenzene	ND	0.50	*									
Xylenes (total)	ND	0.50	"									
Methyl tert-butyl ether	ND	5.0	e									
Surrogate: a,a,a-Trifluorotoluene	10.6		н	10.0		106	70-130					
LCS (2030064-BS1)		Prepared & Analyzed: 03/23/02										
Benzene	9.79	0.50	ug/l	10,0		97.9	70-130					
Toluene	10.6	0.50	"	10.0		106	70-130					
Ethylbenzene	11.3	0.50	H '	10.0		113	70-130					
Xylenes (total)	34.5	0.50	Ħ	30.0		115	70-130					
Surrogate: a,a,a-Trifluorotoluene	11.3		#	10.0		113	70-130					
LCS (2030064-BS2)				Prepared -	& Analyz	ed: 03/23/	02					
Purgeable Hydrocarbons as Gasoline	275	50	ug/l	250		110	70-130					
Surrogate: a,a,a-Trifluorotoluene	13.0		"	10.0		130	70-130					
Matrix Spike (2030064-MS1)	Sour	ce: L20304	4-02	Prepared	& Analyz	ed: 03/23/	02					
Purgeable Hydrocarbons as Gasoline	250	50	ug/I	250	ND	100	60-140					
Surrogate: a,a,a-Trifluorotoluene	12.0		"	10.0		120	70-130					
Matrix Spike Dup (2030064-MSD1)	Sour	ce: L20304	4-02	Prepared	& Analyz	ed: 03/23/	02					
Purgeable Hydrocarbons as Gasoline	262	50	ug/l	250	ND	105	60-140	4.69	25			
Surrogate: a,a,a-Trifluorotoluene	10.9		п	10.0		109	70-130					



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Gettler-Ryan/Geostrategies(1)

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

Project Number: Tosco (Former) SS#0843, Alameda

Project Manager: Deanna Harding

Reported: 03/25/02 15:15

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2030065 - EPA 5030B (P/T)										
Blank (2030065-BLK1)				Prepared	& Analyzo	d: 03/23/0	02			_
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l							
Benzene	ND	0.50	11							
Toluene	ND	0.50	,,							
Ethylbenzene	ND	0.50	**							-
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	5.0	n							
Surrogate: a,a,a-Trifluorotoluene	9.56		Ħ	10.0		95.6	70-130			
LCS (2030065-BS1)				Prepared	& Analyze	ed: 03/23/	02			
Benzene	7.48	0.50	ug/l	10.0	·	74.8	70-130	-		
Toluene	7.48	0.50	-	10.0		74.8	70-130			
Ethylbenzene	8.03	0.50	н	10.0		80.3	70-130			
Xylenes (total)	24.5	0.50	*	30.0		81.7	70-130			
Surrogate: a,a,a-Trifluorotoluene	9.87		11	10.0		98.7	70-130		-	
LCS (2030065-BS2)				Prepared	& Analyz	ed: 03/23/	02			
Purgeable Hydrocarbons as Gasoline	255	50	ug/l	250		102	70-130			
Surrogate: a,a,a-Trifluorotoluene	8.59		ėt	10.0		85.9	70-130			
Matrix Spike (2030065-MS1)	Sou	urce: L20305	3-01	Prepared	& Analyz	ed: 03/23/	02			
Purgeable Hydrocarbons as Gasoline	253	50	ug/l	250	ND	101	60-140			
Surrogate: a,a,a-Trifluorotoluene	10.6		11	10.0		106	70-130			
Matrix Spike Dup (2030065-MSD1)	Sou	urce: L20305	3-01	Prepared	& Analyz	ed: 03/23/	02			
Purgeable Hydrocarbons as Gasoline	259	50	ug/l	250	ND	104	60-140	2.34	25	
Surrogate: a,a,a-Trifluorotoluene	10.0		"	10.0		100	70-130			



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

Project: Tosco(1)

Project Number: Tosco (Former) SS#0843, Alameda

Reported:

Dublin CA, 94568 Project Manager: Deanna Harding 03/25/02 15:15

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2030028 - EPA 5030B [P/T]										
Blank (2030028-BLK1)				Prepared of	& Analyzo	ed: 03/13/0	02			
Ethanol	ND	500	ug/l							
1,2-Dibromoethane	, ND	2.0	19							
1,2-Dichloroethane	ND	2.0	11							
Di-isopropyl ether	ND	2.0	н							
Ethyl tert-butyl ether	ND	2.0	n							
Methyl tert-butyl ether	ND	2.0	н							
Tert-amyl methyl ether	ND	2.0	н							
Tert-butyl alcohol	ND	100	n							
Surrogate: 1,2-Dichloroethane-d4	49.8		**	50.0		99.6	70-130			
Surrogate: Toluene-d8	50.9		**	50.0		102	70-130			
LCS (2030028-BS1)				Prepared	& Analyz	ed: 03/13/	02			
Methyl tert-butyl ether	52.5	2.0	ug/l	50.0		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	52,9		"	50.0		106	70-130			
Surrogate: Toluene-d8	49.3		21	50.0		98.6	70-130			
Matrix Spike (2030028-MS1)	So	urce: L20305	0-06	Prepared	& Analyz	ed: 03/13/	02			
Methyl tert-butyl ether	. 73.7	2.0	บย/ไ	50.0	22	103	60-140			
Surrogate: 1,2-Dichloroethane-d4	54,3		"	50.0		109	70-130			
Surrogate: Toluene-d8	51.0		н	50.0		102	70-130			
Matrix Spike Dup (2030028-MSD1)	So	urce: L20305	0-06	Prepared	& Analyz	ed: 03/13/	02			
Methyl tert-butyl ether	78.7	2.0	ug/l	50.0	22	113	60-140	6.56	25	
Surrogate: 1,2-Dichloroethane-d4	54.5		11	50.0		109	70-130			
Surrogate: Toluene-d8	49.6		11	50.0		99.2	70-130			
Batch 2030058 - EPA 5030B [P/T]										
Blank (2030058-BLK1)				Prepared	& Analyz	ed: 03/21/	′02			
Ethanol	ND	500	ug/i		<u> </u>					
1,2-Dibromoethane	ND	2.0	н							
1,2-Dichloroethane	ND	2.0	11							
Di-isopropyl ether	ND	2.0	n							
Ethyl tert-butyl ether	ND	2.0	н							
Methyl tert-butyl ether	ND	2.0	н							
Tert-amyl methyl ether	ND	2.0	и							
Tert-butyl alcohol	ND	100	11							
Surrogate: 1,2-Dichloroethane-d4	55.8		,,	50.0		112	70-130			•

Sequoia Analytical - San Carlos

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.



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

Project Number: Tosco (Former) SS#0843, Alameda

Project Manager: Deanna Harding

Reported: 03/25/02 15:15

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2030058 - EPA 5030B [P/T]										
Blank (2030058-BLK1)				Prepared	& Analyz	ed: 03/21/0	02			
Surrogate: Toluene-d8	51.2		ug/l	50.0		102	70-130	· ·		
Blank (2030058-BLK3)				Prepared	& Analyz	ed: 03/25/0	02			
Ethanol	ND	500	ug/l		٠					
1,2-Dibromoethane	NĎ	2.0	•							
1,2-Dichloroethane	ND	2.0	*							
Di-isopropyl ether	ND	2.0	**							
Ethyl tert-butyl ether	ND	2.0								
Methyl tert-butyl ether	ND	2.0	•							
Tert-amyl methyl ether	ND	2.0								
Tert-butyl alcohol	ND	100	п							
Surragate: 1,2-Dichloroethane-d4	53.1		В	50.0		106	70-130			
Surrogate: Toluene-d8	48.4		"	50.0		96.8	70-130			
LCS (2030058-BS1)				Prepared	& Analyz	ed: 03/21/	02			
Methyl tert-butyl ether	41.4	2.0	ug/l	50.0		82.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	55.5		,,	50.0		111	70-130	<u> </u>		
Surrogate: Toluene-d8	50.0		"	50.0		100	70-130			
LCS (2030058-BS3)				Prepared	& Analyz	ed: 03/25/	02			
Methyl tert-butyl ether	44.7	2.0	ug/i	50.0		89.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	54.7		"	50.0		109	70-130			
Surrogate: Toluene-d8	47.4		"	50.0		94.8	70-130			
Matrix Spike (2030058-MS1)	So	urce: L20308	2-04	Prepared	& Analyz	ed: 03/21/	02			
Methyl tert-butyl ether	44.7	2,0	ug/l	50.0	ND	89.4	60-140			
Surrogate: 1,2-Dichloroethane-d4	57.9		**	50.0		116	70-130			
Surrogate: Toluene-d8	50.5		Př	50.0		101	70-130			



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

Project Number: Tosco (Former) SS#0843, Alameda

Spike

Source

Project Manager: Deanna Harding

Reported: 03/25/02 15:15

RPD

%REC

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

Reporting

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 2030058 - EPA 5030B [P/T]										
Matrix Spike Dup (2030058-MSD1)	Sour	Source: L203082-04 Prepared & Analyzed: 03/21/02								
Methyl tert-butyl ether	43.9	2.0	ug/i	50.0	ND	87.8	60-140	1.81	25	
Surrogate: 1,2-Dichloroethane-d4	58.9		"	50.0		118	70-130			
Surrogate: Toluene-d8	50.0		n	50.0		100	70-130			



1551 Industrial Road San Carlos CA 94070 (650) 232-9600 FAX (650) 232-9612 www.sequoialabs.com

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Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco (Former) SS#0843, Alameda

Project Manager: Deanna Harding

Reported: 03/25/02 15:15

Notes and Definitions

P-02 Chromatogram Pattern: Weathered 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