



# GETTLER-RYAN INC.

SWI 6/02

## TRANSMITTAL

Alameda County

January 16, 2003

G-R #180203

FEB 06 2003

✓ ROY50

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

Environmental Health  
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	January 15, 2003	Groundwater Monitoring and Sampling Report Fourth Quarter - Event of December 12, 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 **January 31, 2003**, 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

trans/0843.dbd



# GETTLER-RYAN INC.

January 15, 2003  
G-R Job #180203

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

**RE: Fourth Quarter Event of December 12, 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,

Deanna L. Harding  
Project Coordinator

Robert C. Mallory  
Registered Geologist No. 7285

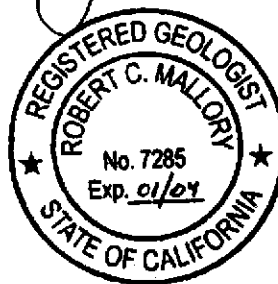
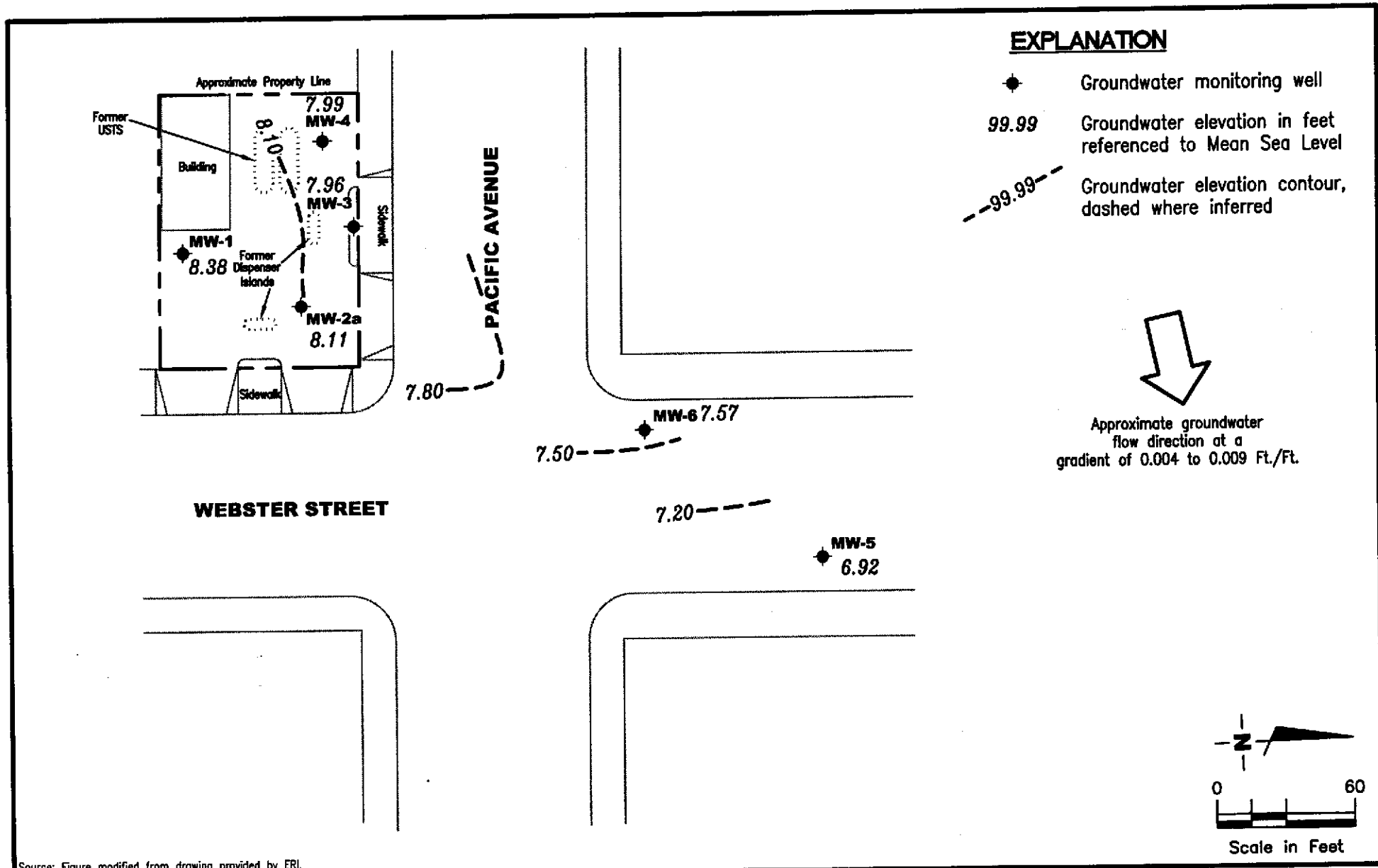


Figure 1: Potentiometric Map  
Figure 2: Concentration Map  
Table 1: Groundwater Monitoring Data and Analytical Results  
Table 2: Groundwater Analytical Results - Oxygenate Compounds  
Attachments: Standard Operating Procedure - Groundwater Sampling  
Field Data Sheets  
Chain of Custody Document and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

0843.qml



Source: Figure modified from drawing provided by ERI.

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

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

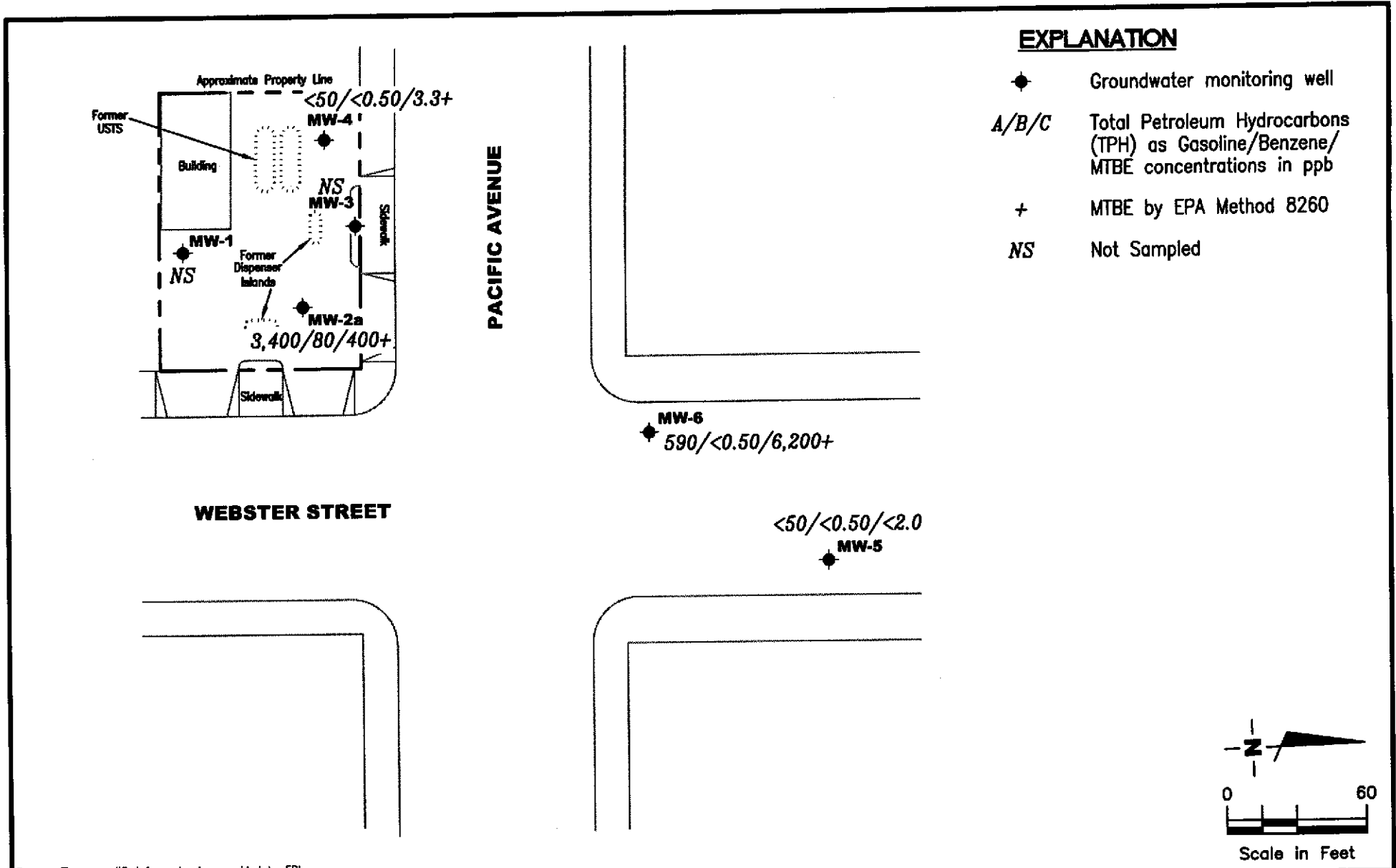
FIGURE  
**1**

PROJECT NUMBER  
**180203**

REVIEWED BY

DATE  
 December 12, 2002

REVISED DATE



Source: Figure modified from drawing provided by ERI.



**GETTLER - RYAN INC.**

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Dublin, CA 94568 (925) 551-7555

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

FIGURE

2

PROJECT NUMBER  
180203

REVIEWED BY

DATE  
December 12, 2002

REVISED DATE

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Tosco 76 Service Station #0843  
1629 Webster Street  
Alameda, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	
MW-1 16.18	03/05/99 <sup>1</sup>	--	4.5-20.5	--	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	<0.50	<5.0
	12/10/01	6.89		9.29	<50	<0.50	<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	<0.50	<5.0
	06/07/02	5.71		10.47	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5
	09/03/02	NOT MONITORED/SAMPLED				--	--	--	--	--	--
12/12/02	<b>7.80</b>			<b>8.38</b>	NO LONGER SAMPLED			--	--	--	
MW-2 15.57	03/05/99 <sup>1</sup>	--	4.5-20.5	--	34,400	2,070	7,710	2,340	8,240	8,460 <sup>2</sup>	
	06/03/99	5.96		9.61	51,200 <sup>4</sup>	1,820	7,570	2,510	7,320	6,460/8,800 <sup>2</sup>	
	09/02/99	6.85		8.72	17,000 <sup>5</sup>	1,000	3,100	1,400	3,700	4,000/3,720 <sup>2</sup>	
	12/14/99	7.65		7.92	83,000 <sup>5</sup>	3,000	22,000	4,500	17,000	9,100/11,000 <sup>2</sup>	
	03/14/00	5.26		10.31	31,000 <sup>5</sup>	1,600	4,600	2,300	7,300	5,700/8,700 <sup>2</sup>	
	05/31/00	5.60		9.97	9,970 <sup>5</sup>	598	1,030	487	2,060	2,500/1,670 <sup>2</sup>	
	08/29/00	6.35		9.22	7,900 <sup>5</sup>	390	1,500	280	1,900	1,800/1,300 <sup>2</sup>	
	12/01/00	7.06		8.51	87,500 <sup>5</sup>	1,860	17,400	5,590	19,400	6,220/3,790 <sup>2</sup>	
	03/17/01	5.98		9.59	4,310 <sup>5</sup>	371	59.0	280	682	321/433 <sup>2</sup>	
	05/23/01	6.97		8.60	45,400 <sup>5</sup>	374	4,490	2,790	10,900	<sup>7</sup> ND/406 <sup>2</sup>	
	09/24/01	7.56		8.01	76,000 <sup>3</sup>	430	13,000	4,700	18,000	<2,000/480 <sup>2</sup>	
	12/10/01	6.52		9.05	82,000 <sup>3</sup>	320	9,100	4,400	16,000	<2,500/270 <sup>2</sup>	

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Tosco 76 Service Station #0843  
1629 Webster Street  
Alameda, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	
MW-2 (cont)	03/11/02	5.51	4.5-20.5	10.06	14,000 <sup>3</sup>	75	1,400	1,100	3,600	<250/150 <sup>2</sup>	
	06/07/02	5.73		9.84	14,000	120	1,200	1,400	4,700	540/200 <sup>2</sup>	
	09/03/02	6.81		8.76	10,000 <sup>11</sup>	150	1,200	610	2,800	510/460 <sup>2</sup>	
<b>DESTROYED (This well has been replaced, new well ID MW-2a)</b>											
MW-2a 15.56	12/12/02	7.45	--	8.11	3,400	80	260	210	1,000	380/400 <sup>2</sup>	
MW-3 15.11	03/05/99 <sup>1</sup>	--	5.0-20.0	--	135 <sup>3</sup>	ND	ND	ND	4.84	2.46 <sup>2</sup>	
	06/03/99	5.57		9.54	ND	ND	ND	ND	ND	5.23/12.7 <sup>2</sup>	
	09/02/99	6.50		8.61	ND	ND	ND	ND	ND	13/11.0 <sup>2</sup>	
	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 <sup>2</sup>	
	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	<0.50	<5.0
	12/10/01	6.31		8.80	<50	<0.50	<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	<0.50	<5.0
	06/07/02	5.45		9.66	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5
	09/03/02	NOT MONITORED/SAMPLED				--	--	--	--	--	--
12/12/02	7.15		7.96	NO LONGER SAMPLED			--	--	--	--	
MW-4 15.17	03/05/99 <sup>1</sup>	--	5.0-20.5	--	ND	ND	ND	ND	2.44	25.2 <sup>2</sup>	
	06/03/99	5.45		9.72	ND	ND	ND	ND	ND	ND/3.96 <sup>2</sup>	
	09/02/99	6.48		8.69	ND	ND	ND	ND	ND	23/27.0 <sup>2</sup>	
	12/14/99	7.27		7.90	ND	ND	ND	ND	ND	200/270 <sup>2</sup>	

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Tosco 76 Service Station #0843  
1629 Webster Street  
Alameda, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	
MW-4 (cont)	03/14/00	4.67	5.0-20.5	10.50	ND	ND	ND	ND	ND	46/49 <sup>2</sup>	
	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 <sup>2</sup>	
	12/01/00	6.79		8.38	ND	ND	ND	ND	ND	152/101 <sup>2</sup>	
	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 <sup>2</sup>	
	03/11/02	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	
	09/03/02	6.50		8.67	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
	12/12/02	7.18		7.99	<50	<0.50	<0.50	<0.50	<0.50	2.9/3.3 <sup>2</sup>	
MW-5 13.34	12/14/99	6.45	--	6.89	ND	ND	ND	ND	ND	3.5/3.8 <sup>2</sup>	
	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	
	06/07/02	INACCESSIBLE - PAVED OVER			--	--	--	--	--	--	--
	09/03/02	INACCESSIBLE - PAVED OVER			--	--	--	--	--	--	--
12/12/02	6.42		6.92	<50	<0.50	<0.50	<0.50	<0.50	<2.0		
MW-6 14.08	12/14/99	6.64	--	7.44	ND	ND	ND	ND	ND	11,000/18,000 <sup>2</sup>	
	03/14/00	4.72		9.36	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	19,000/21,000 <sup>2,6</sup>	
	05/31/00	5.28		8.80	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	13,200	

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Tosco 76 Service Station #0843  
1629 Webster Street  
Alameda, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	
MW-6 (cont)	08/29/00	5.39	--	8.69	ND	ND	ND	ND	ND	270/400 <sup>2</sup>	
	12/01/00	6.11		7.97	ND	ND	ND	ND	ND	6,330/3,640 <sup>2</sup>	
	03/17/01	6.02		8.06	18,700 <sup>5</sup>	2,950	989	1,040	3,000	10,200/11,500 <sup>2</sup>	
	05/23/01	5.82		8.26	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	4,660 <sup>8</sup>	
	09/24/01 <sup>10</sup>	6.59		7.49	<50	<0.50	<0.50	<0.50	<0.50	160/190 <sup>9</sup>	
	12/10/01	6.50		7.58	<50	<0.50	<0.50	<0.50	<0.50	3,200/2,400 <sup>2</sup>	
	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 OVER				--	--	--	--	--	--
	09/03/02	INACCESSIBLE - PAVED OVER				--	--	--	--	--	--
	12/12/02	6.51		7.57	590 <sup>12</sup>	<0.50	<0.50	<0.50	<0.50	<0.50	1,500/6,200 <sup>2</sup>
Trip Blank TB-LB	03/05/99 <sup>1</sup>	--	--	--	ND	ND	ND	ND	ND	ND <sup>2</sup>	
	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	
	08/29/00	--		--	ND	ND	ND	ND	ND	ND	
	12/01/00	--		--	ND	ND	ND	ND	ND	ND	
	03/17/01	--		--	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	
QA	09/03/02	--		--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
	12/12/02	--		--	<50	<0.50	<0.50	<0.50	<0.50	<2.0	



**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

(ft.) = Feet

DTW = Depth to Water

S.I. = Screen Interval

(ft.bgs) = Feet Below Ground Surface

GWE = Groundwater Elevation

(msl) = Mean sea level

TPH-G = Total Petroleum Hydrocarbons as Gasoline

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylenes

MTBE = Methyl tertiary butyl ether

(ppb) = Parts per billion

ND = Not Detected

-- = Not Measured/Not Analyzed

QA = Quality Assurance/Trip Blank

\* TOC elevations are based on USC&GS Benchmark WEB PAC - 1947 - R 1951; (Elevation = 14.054 feet).

<sup>1</sup> 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.

<sup>4</sup> Laboratory report indicates chromatogram pattern C6-C12.

<sup>5</sup> Laboratory report indicates gasoline C6-C12.

<sup>6</sup> 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.

<sup>7</sup> Detection limit raised. Refer to analytical reports.

<sup>8</sup> Laboratory did not perform analysis for MTBE by EPA Method 8260 as requested on the Chain of Custody for 8020 MTBE hits.

<sup>9</sup> MTBE by EPA Method 8260 was analyzed past the EPA recommended holding time.

<sup>10</sup> Due to laboratory error, MW-6 was not analyzed within the EPA recommended holding time.

<sup>11</sup> Laboratory report indicates gasoline C6-C10.

<sup>12</sup> Laboratory report indicates discrete peak @ C5.

**Table 2**  
**Groundwater Analytical Results - Oxygenate Compounds**  
Former Tosco 76 Service Station #0843  
1629 Webster Street  
Alameda, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (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 <sup>1</sup>	ND <sup>1</sup>	3,720	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	--	--
	12/14/99	ND <sup>1</sup>	ND <sup>1</sup>	11,000	ND <sup>1</sup>	ND <sup>1</sup>	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>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
	05/31/00	ND <sup>1</sup>	ND <sup>1</sup>	1,670	ND <sup>1</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	ND	ND
	12/01/00	ND <sup>1</sup>	ND <sup>1</sup>	3,790	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
	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>	406	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
	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
	06/07/02	<2,000	<1,000	200	<25	<25	<25	<25	<25
	09/03/02	<5,000	<1,000	460	<20	<20	<20	<20	<20
	<b>DESTROYED</b>	<b>(This well has been replaced, new well ID MW-2a)</b>				--	--	--	--
MW-2a	12/12/02	<500	<100	400	<2.0	<2.0	<2.0	2.3	<2.0
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	--	--
	12/14/99	--	--	270	--	--	--	--	--
	03/14/00	--	--	49	--	--	--	--	--

**Table 2**  
**Groundwater Analytical Results - Oxygenate Compounds**  
Former Tosco 76 Service Station #0843  
1629 Webster Street  
Alameda, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
MW-4	08/29/00	--	--	3.2	--	--	--	--	--
(cont)	12/10/01	<7,100	<290	1,300	<14	<14	<14	<14	<14
	12/12/02	<500	<100	3.3	<2.0	<2.0	<2.0	<2.0	<2.0
MW-5	12/14/99	--	--	3.8	--	--	--	--	--
	12/12/02								
MW-6	12/14/99	--	--	18,000	--	--	--	--	--
	03/14/00	--	--	21,000 <sup>2</sup>	--	--	--	--	--
	08/29/00	--	--	400	--	--	--	--	--
	03/17/01	ND <sup>1</sup>	ND <sup>1</sup>	11,500	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	219	ND <sup>1</sup>
	05/23/01 <sup>3</sup>	--	--	--	--	--	--	--	--
	09/24/01 <sup>4</sup>	<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
	12/12/02	<50,000	<10,000	6,200	<200	<200	<200	<200	<200

**Table 2**  
**Groundwater Analytical Results - Oxygenate Compounds**  
Former Tosco 76 Service Station #0843  
1629 Webster Street  
Alameda, California

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**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

**ANALYTICAL METHOD:**

EPA Method 8260 for Oxygenate Compounds

- <sup>1</sup> Detection limit raised. Refer to analytical reports.
- <sup>2</sup> 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.
- <sup>3</sup> Laboratory did not perform analysis for oxygenates as requested on the Chain of Custody, on all 8020 MTBE hits.
- <sup>4</sup> 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, all depth to water level measurements are collected with a static water level indicator and are also recorded in the field notes, prior to purging and sampling any wells.

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 disposable 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 and is labeled as QA. 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.



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Tosco #0843 Job Number: 180203  
 Site Address: 1629 Webster Street Event Date: 12-12-02 (inclusive)  
 City: Alameda, CA Sampler: Joc

Well ID: MW-1 Date Monitored: 12-12-02 Well Condition: O.K.  
 Well Diameter: 2 in.  
 Total Depth: 20.05 ft.  
 Depth to Water: 7.80 ft.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

xVF \_\_\_\_\_ = \_\_\_\_\_ x3 (case volume) = Estimated Purge Volume: \_\_\_\_\_ gal.

### Purge Equipment:

Disposable Bailer \_\_\_\_\_  
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

### Sampling Equipment:

Disposable Bailer \_\_\_\_\_  
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: \_\_\_\_\_ (2400 hrs)  
 Time Bailed: \_\_\_\_\_ (2400 hrs)  
 Depth to Product: \_\_\_\_\_ ft  
 Depth to Water: \_\_\_\_\_ ft  
 Hydrocarbon Thickness: 0 ft  
 Visual Confirmation/Description: \_\_\_\_\_  
 Skimmer / Absorbant Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Product Transferred to: \_\_\_\_\_

Start Time (purge): \_\_\_\_\_ Weather Conditions: \_\_\_\_\_  
 Sample Time/Date: 1 Water Color: \_\_\_\_\_ Odor: \_\_\_\_\_  
 Purging Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-	x voa vial	YES	HCL	SEQUOIA	TPH-G(8015)/BTEX/MTBE(8021)/ 8 Oxy's(8260)

COMMENTS: W. O. A. J.

Add/Replaced Lock: \_\_\_\_\_ Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_



# GETTLER - RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Tosco #0843 Job Number: 180203  
 Site Address: 1629 Webster Street Event Date: 12-12-02 (inclusive)  
 City: Alameda, CA Sampler: See

Well ID: MW-2A Date Monitored: 12-12-02 Well Condition: OK  
 Well Diameter: 2 in.  
 Total Depth: 10.55 ft.  
 Depth to Water: 7.45 ft.  
 $3.10 \times VF \ 0.17 = 0.53 \times 3 \text{ (case volume)} = \text{Estimated Purge Volume: } 2 \text{ gal.}$

Volume	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
Factor (VF)	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

**Purge Equipment:**  
 Disposable Bailer   
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

**Sampling Equipment:**  
 Disposable Bailer   
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: \_\_\_\_\_ (2400 hrs)  
 Time Bailed: \_\_\_\_\_ (2400 hrs)  
 Depth to Product: \_\_\_\_\_ ft  
 Depth to Water: \_\_\_\_\_ ft  
 Hydrocarbon Thickness: 0 ft  
 Visual Confirmation/Description: \_\_\_\_\_  
 Skimmer / Absorbant Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Product Transferred to: \_\_\_\_\_

Start Time (purge): 1039 Weather Conditions: clear  
 Sample Time/Date: 1108 12-12-02 Water Color: clear Odor: mild  
 Purging Flow Rate: 0.26 gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
1050	0.5	7.56	7.64	62.5		
1052	1	7.29	5.83	62.6		
1055	2	7.38	5.92	62.7		

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-2	5 x vov vial	YES	HCL	SEQUOIA	TPH-G(8015)/BTEX/MTBE(8021)/ 8 Oxy's(8260)

COMMENTS: Note new well depth. Location of well shifted in the direction of Webster St. - at least 12-15' - huge pit area (now filled) visible.

Add/Replaced Lock: \_\_\_\_\_ Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Tosco #0843 Job Number: 180203  
 Site Address: 1629 Webster Street Event Date: 12-12-02 (inclusive)  
 City: Alameda, CA Sampler: Joc

Well ID: MW-3 Date Monitored: 12-12-02 Well Condition: OK  
 Well Diameter: 2 in.  
 Total Depth: 19.91 ft.  
 Depth to Water: 7.15 ft.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

xVF \_\_\_\_\_ = \_\_\_\_\_ x3 (case volume) = Estimated Purge Volume: \_\_\_\_\_ gal.

<b>Purge Equipment:</b>	<b>Sampling Equipment:</b>	<b>Time Started:</b> _____ (2400 hrs)
Disposable Bailer _____	Disposable Bailer _____	Time Bailed: _____ (2400 hrs)
Stainless Steel Bailer _____	Pressure Bailer _____	Depth to Product: _____ ft
Stack Pump _____	Discrete Bailer _____	Depth to Water: _____ ft
Suction Pump _____	Other: _____	Hydrocarbon Thickness: <u>0</u> ft
Grundfos _____		Visual Confirmation/Description: _____
Other: _____		Skimmer / Absorbant Sock (circle one)
		Amt Removed from Skimmer: _____ gal
		Amt Removed from Well: _____ gal
		Product Transferred to: _____

Start Time (purge): \_\_\_\_\_ Weather Conditions: \_\_\_\_\_  
 Sample Time/Date: 1 Water Color: \_\_\_\_\_ Odor: \_\_\_\_\_  
 Purging Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-	x voa vial	YES	HCL	SEQUOIA	TPH-G(8015)/BTEX/MTBE(8021)/ 8 Oxy's(8260)

COMMENTS: M.O.A. 1

Add/Replaced Lock: \_\_\_\_\_ Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_





# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Tosco #0843 Job Number: 180203  
 Site Address: 1629 Webster Street Event Date: 12-12-02 (inclusive)  
 City: Alameda, CA Sampler: JVC

Well ID: MW-4 Date Monitored: 12-12-02 Well Condition: o.k.

Well Diameter: 2 in.

Total Depth: 19.78 ft.

Depth to Water: 7.18 ft.

Volume	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
Factor (VF)	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

12.6 x VF 0.17 = 2.14 x3 (case volume) = Estimated Purge Volume: 6.5 gal.

### Purge Equipment:

Disposable Bailer \_\_\_\_\_  
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump   
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

### Sampling Equipment:

Disposable Bailer   
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: \_\_\_\_\_ (2400 hrs)  
 Time Bailed: \_\_\_\_\_ (2400 hrs)  
 Depth to Product: \_\_\_\_\_ ft  
 Depth to Water: \_\_\_\_\_ ft  
 Hydrocarbon Thickness: \_\_\_\_\_ ft  
 Visual Confirmation/Description: \_\_\_\_\_  
 Skimmer / Absorbant Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Product Transferred to: \_\_\_\_\_

Start Time (purge): 1000 Weather Conditions: clear  
 Sample Time/Date: 1030 12-12-02 Water Color: clear Odor: none  
 Purging Flow Rate: 1 gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (°C)	D.O. (mg/L)	ORP (mV)
<u>1008</u>	<u>2</u>	<u>7.67</u>	<u>5.55</u>	<u>79.3</u>		
<u>1010</u>	<u>4</u>	<u>7.62</u>	<u>4.21</u>	<u>79.6</u>		
<u>1012</u>	<u>6.5</u>	<u>7.66</u>	<u>4.26</u>	<u>79.4</u>		

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-4</u>	<u>3</u> x vov vial	<u>YES</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH-G(8015)/BTEX/MTBE(8021)/ 8 Oxy's(8260)</u>

### COMMENTS:

Add/Replaced Lock: \_\_\_\_\_

Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Tosco #0843  
 Site Address: 1629 Webster Street  
 City: Alameda, CA

Job Number: 180203  
 Event Date: 12-12-02 (inclusive)  
 Sampler: Joe

Well ID: MW-5  
 Well Diameter: 2 in.  
 Total Depth: 20.23 ft.  
 Depth to Water: 6.42 ft.  
13.81

Date Monitored: 12-12-02

Well Condition: o.k.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

13.81 xVF 0.17 = 2.35 x3 (case volume) = Estimated Purge Volume: 7.5 gal.

Purge Equipment:  
 Disposable Bailer \_\_\_\_\_  
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump  \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

Sampling Equipment:  
 Disposable Bailer  \_\_\_\_\_  
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: \_\_\_\_\_ (2400 hrs)  
 Time Bailed: \_\_\_\_\_ (2400 hrs)  
 Depth to Product: \_\_\_\_\_ ft  
 Depth to Water: \_\_\_\_\_ ft  
 Hydrocarbon Thickness: 0 ft  
 Visual Confirmation/Description: \_\_\_\_\_  
 Skimmer / Absorbant Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Product Transferred to: \_\_\_\_\_

Start Time (purge): 0842 Weather Conditions: clear  
 Sample Time/Date: 0905 12-12-02 Water Color: clear Odor: none  
 Purging Flow Rate: 1 gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (u mhos/cm) <sup>10</sup>	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
<u>0851</u>	<u>2.5</u>	<u>7.90</u>	<u>6.63</u>	<u>72.1</u>	_____	_____
<u>0853</u>	<u>5</u>	<u>7.81</u>	<u>5.85</u>	<u>72.1</u>	_____	_____
<u>0855</u>	<u>7.5</u>	<u>7.68</u>	<u>5.82</u>	<u>71.6</u>	_____	_____
_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-5</u>	<u>2</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH-G(8015)/BTEX/MTBE(8021)/</u> <u>8-Oxy's(8260)</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

COMMENTS: \_\_\_\_\_

Add/Replaced Lock: \_\_\_\_\_

Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Tosco #0843 Job Number: 180203  
 Site Address: 1629 Webster Street Event Date: 12-12-02 (inclusive)  
 City: Alameda, CA Sampler: 50c

Well ID: MW-6  
 Well Diameter: 2 in.  
 Total Depth: 20.16 ft.  
 Depth to Water: 6.51 ft.  
13.65 x VF 0.17 = 2.32 x3 (case volume) = Estimated Purge Volume: 7 gal.

Date Monitored: 12-12-02 Well Condition: OK

Volume	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
Factor (VF)	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Purge Equipment:  
 Disposable Bailer \_\_\_\_\_  
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump ✓  
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

Sampling Equipment:  
 Disposable Bailer ✓  
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: \_\_\_\_\_ (2400 hrs)  
 Time Bailed: \_\_\_\_\_ (2400 hrs)  
 Depth to Product: \_\_\_\_\_ ft  
 Depth to Water: \_\_\_\_\_ ft  
 Hydrocarbon Thickness: 0 ft  
 Visual Confirmation/Description: \_\_\_\_\_  
 Skimmer / Absorbant Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Product Transferred to: \_\_\_\_\_

Start Time (purge): 0921 Weather Conditions: clear  
 Sample Time/Date: 0943 12-12-02 Water Color: clear Odor: none  
 Purging Flow Rate: 1 gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm) X 10 <sup>0</sup>	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
<u>0930</u>	<u>2.5</u>	<u>7.39</u>	<u>2.65</u>	<u>73.1</u>	_____	_____
<u>0932</u>	<u>5</u>	<u>7.21</u>	<u>2.67</u>	<u>72.8</u>	_____	_____
<u>0934</u>	<u>7</u>	<u>7.18</u>	<u>2.84</u>	<u>72.3</u>	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-6</u>	<u>3</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH-G(8015)/BTEX/MTBE(8021)/ 8 Oxy's(8260)</u>

COMMENTS: \_\_\_\_\_

Add/Replaced Lock: \_\_\_\_\_ Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_





2 January, 2003

Deanna L. Harding  
Gettler-Ryan - Dublin  
6747 Sierra Court, Ste. J  
Dublin, CA 94568

RECEIVED  
GENERAL INVESTIGATION  
LABORATORY

RE: Tosco 0843, Alameda, CA  
Sequoia Work Order: S212411

Enclosed are the results of analyses for samples received by the laboratory on 12/13/02 09:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ron Chew  
Client Services Representative

CA ELAP Certificate #1624

Gettler-Ryan - Dublin  
6747 Sierra Court, Ste. J  
Dublin CA, 94568

Project: Tosco 0843, Alameda, CA  
Project Number: N/A  
Project Manager: Deanna L. Harding

**S212411**  
**Reported:**  
01/02/03 20:10

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
QA	S212411-01	Water	12/12/02 00:00	12/13/02 09:15
MW-2	S212411-02	Water	12/12/02 11:08	12/13/02 09:15
MW-4	S212411-03	Water	12/12/02 10:30	12/13/02 09:15
MW-5	S212411-04	Water	12/12/02 09:05	12/13/02 09:15
MW-6	S212411-05	Water	12/12/02 09:43	12/13/02 09:15

Gettler-Ryan - Dublin  
 6747 Sierra Court, Ste. J  
 Dublin CA, 94568

 Project: Tosco 0843, Alameda, CA  
 Project Number: N/A  
 Project Manager: Deanna L. Harding

 S212411  
 Reported:  
 01/02/03 20:10

**Total Purgeable Hydrocarbon, BTEX and MTBE by DHS LUFT**  
**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>QA (S212411-01) Water</b> <b>Sampled: 12/12/02 00:00</b> <b>Received: 12/13/02 09:15</b>										
Purgeable Hydrocarbons	ND	50		ug/l	1	2120429	12/24/02	12/24/02	DHS LUFT	
Benzene	ND	0.50		"	"	"	"	"	"	
Toluene	ND	0.50		"	"	"	"	"	"	
Ethylbenzene	ND	0.50		"	"	"	"	"	"	
Xylenes (total)	ND	0.50		"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.0		"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		91 %		60-140		"	"	"	"	
<b>MW-2 (S212411-02) Water</b> <b>Sampled: 12/12/02 11:08</b> <b>Received: 12/13/02 09:15</b>										
Purgeable Hydrocarbons	3400	500		ug/l	10	2120429	12/24/02	12/25/02	DHS LUFT	
Benzene	80	5.0		"	"	"	"	"	"	
Toluene	260	5.0		"	"	"	"	"	"	
Ethylbenzene	210	5.0		"	"	"	"	"	"	
Xylenes (total)	1000	5.0		"	"	"	"	"	"	
Methyl tert-butyl ether	380	20		"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		80 %		60-140		"	"	"	"	
<b>MW-4 (S212411-03) Water</b> <b>Sampled: 12/12/02 10:30</b> <b>Received: 12/13/02 09:15</b>										
Purgeable Hydrocarbons	ND	50		ug/l	1	2120429	12/24/02	12/25/02	DHS LUFT	
Benzene	ND	0.50		"	"	"	"	"	"	
Toluene	ND	0.50		"	"	"	"	"	"	
Ethylbenzene	ND	0.50		"	"	"	"	"	"	
Xylenes (total)	ND	0.50		"	"	"	"	"	"	
Methyl tert-butyl ether	2.9	2.0		"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		88 %		60-140		"	"	"	"	

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 6747 Sierra Court, Ste. J  
 Dublin CA, 94568

 Project: Tosco 0843, Alameda, CA  
 Project Number: N/A  
 Project Manager: Deanna L. Harding

 S212411  
 Reported:  
 01/02/03 20:10

**Total Purgeable Hydrocarbon, BTEX and MTBE by DHS LUFT**  
**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-5 (S212411-04) Water</b> Sampled: 12/12/02 09:05 Received: 12/13/02 09:15									
Purgeable Hydrocarbons	ND	50	ug/l	1	2120429	12/24/02	12/25/02	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		90 %	60-140		"	"	"	"	
<b>MW-6 (S212411-05) Water</b> Sampled: 12/12/02 09:43 Received: 12/13/02 09:15									
Purgeable Hydrocarbons	590	50	ug/l	1	2120429	12/24/02	12/25/02	DHS LUFT	HC-19
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	1500	100	"	50	"	"	12/26/02	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		79 %	60-140		"	"	12/25/02	"	



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 Project: Tosco 0843, Alameda, CA  
 Project Number: N/A  
 Project Manager: Deanna L. Harding

 S212411  
 Reported:  
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**Volatile Organic Compounds by EPA Method 8260B  
 Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-2 (S212411-02) Water</b> Sampled: 12/12/02 11:08 Received: 12/13/02 09:15									
Tert-butyl alcohol	ND	100	ug/l	1	2120403	12/24/02	12/24/02	EPA 8260B	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Ethanol	ND	500	"	"	"	"	"	"	
1,2-Dichloroethane	2.3	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
<i>Surrogate: 1,2-DCA-d4</i>		88 %		60-140	"	"	"	"	
<b>MW-2 (S212411-02RE1) Water</b> Sampled: 12/12/02 11:08 Received: 12/13/02 09:15									
Methyl tert-butyl ether	400	20	ug/l	10	2120442	12/27/02	12/27/02	EPA 8260B	HT-RS
<i>Surrogate: 1,2-DCA-d4</i>		126 %		60-140	"	"	"	"	HT-RS
<b>MW-4 (S212411-03) Water</b> Sampled: 12/12/02 10:30 Received: 12/13/02 09:15									
Tert-butyl alcohol	ND	100	ug/l	1	2120433	12/26/02	12/26/02	EPA 8260B	
Methyl tert-butyl ether	3.3	2.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Ethanol	ND	500	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
<i>Surrogate: 1,2-DCA-d4</i>		95 %		60-140	"	"	"	"	
<b>MW-6 (S212411-05) Water</b> Sampled: 12/12/02 09:43 Received: 12/13/02 09:15									
Tert-butyl alcohol	ND	10000	ug/l	100	2120433	12/26/02	12/26/02	EPA 8260B	
Methyl tert-butyl ether	6200	200	"	"	"	"	"	"	
Di-isopropyl ether	ND	200	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	200	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	200	"	"	"	"	"	"	
Ethanol	ND	50000	"	"	"	"	"	"	
1,2-Dichloroethane	ND	200	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	200	"	"	"	"	"	"	
<i>Surrogate: 1,2-DCA-d4</i>		99 %		60-140	"	"	"	"	

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 Project Manager: Deanna L. Harding

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### Total Purgeable Hydrocarbon, BTEX and MTBE by DHS LUFT - Quality Control

#### Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2120429 - EPA 5030B (P/T)**
**Blank (2120429-BLK1)**

Prepared &amp; Analyzed: 12/24/02

Purgeable Hydrocarbons	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	2.0	"							
<hr/>										
Surrogate: a,a,a-Trifluorotoluene	8.79		"	10.0		88	60-140			

**Blank (2120429-BLK2)**

Prepared &amp; Analyzed: 12/26/02

Purgeable Hydrocarbons	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	2.0	"							
<hr/>										
Surrogate: a,a,a-Trifluorotoluene	8.76		"	10.0		88	60-140			

**Blank (2120429-BLK3)**

Prepared &amp; Analyzed: 12/26/02

Purgeable Hydrocarbons	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	2.0	"							
<hr/>										
Surrogate: a,a,a-Trifluorotoluene	10.1		"	10.0		101	60-140			

**Laboratory Control Sample (2120429-BS1)**

Prepared &amp; Analyzed: 12/24/02

Benzene	9.32	0.50	ug/l	10.0		93	70-130			
Toluene	9.19	0.50	"	10.0		92	70-130			
Ethylbenzene	9.36	0.50	"	10.0		94	70-130			
Xylenes (total)	27.5	0.50	"	30.0		92	70-130			
Methyl tert-butyl ether	9.73	2.0	"	10.0		97	70-130			

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*The results in this report apply to the samples analyzed in accordance with the chain of custody document. Unless otherwise stated, results are reported on a wet weight basis. This analytical report must be reproduced in its entirety.*

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 Project: Tosco 0843, Alameda, CA  
 Project Number: N/A  
 Project Manager: Deanna L. Harding

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**Total Purgeable Hydrocarbon, BTEX and MTBE by DHS LUFT - Quality Control**  
**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2120429 - EPA 5030B (P/T)**
**Laboratory Control Sample (2120429-BS1)**

Prepared &amp; Analyzed: 12/24/02

<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.90		ug/l	10.0		99	60-140			
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**Laboratory Control Sample (2120429-BS2)**

Prepared &amp; Analyzed: 12/26/02

Benzene	9.49	0.50	ug/l	10.0		95	70-130			
Toluene	9.49	0.50	"	10.0		95	70-130			
Ethylbenzene	9.69	0.50	"	10.0		97	70-130			
Xylenes (total)	28.7	0.50	"	30.0		96	70-130			
Methyl tert-butyl ether	9.99	2.0	"	10.0		100	70-130			

<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.2		"	10.0		102	60-140			
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**Laboratory Control Sample (2120429-BS3)**

Prepared &amp; Analyzed: 12/26/02

Benzene	9.34	0.50	ug/l	10.0		93	70-130			
Toluene	9.96	0.50	"	10.0		100	70-130			
Ethylbenzene	10.0	0.50	"	10.0		100	70-130			
Xylenes (total)	29.4	0.50	"	30.0		98	70-130			
Methyl tert-butyl ether	11.1	2.0	"	10.0		111	70-130			

<i>Surrogate: a,a,a-Trifluorotoluene</i>	11.2		"	10.0		112	60-140			
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**Laboratory Control Sample Dup (2120429-BSD1)**

Prepared &amp; Analyzed: 12/24/02

Benzene	9.49	0.50	ug/l	10.0		95	70-130	2	25	
Toluene	9.39	0.50	"	10.0		94	70-130	2	25	
Ethylbenzene	9.49	0.50	"	10.0		95	70-130	1	25	
Xylenes (total)	28.4	0.50	"	30.0		95	70-130	3	25	
Methyl tert-butyl ether	10.2	2.0	"	10.0		102	70-130	5	25	

<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.1		"	10.0		101	60-140			
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**Duplicate (2120429-DUP1)**

Source: S212411-04

Prepared: 12/24/02 Analyzed: 12/26/02

Purgeable Hydrocarbons	ND	50	ug/l		ND				50	
Benzene	ND	0.50	"		ND				50	
Toluene	ND	0.50	"		ND				50	
Ethylbenzene	ND	0.50	"		ND				50	

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 Project: Tosco 0843, Alameda, CA  
 Project Number: N/A  
 Project Manager: Deanna L. Harding

 S212411  
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**Total Purgeable Hydrocarbon, BTEX and MTBE by DHS LUFT - Quality Control**  
**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2120429 - EPA 5030B (P/T)</b>										
<b>Duplicate (2120429-DUP1)</b>		<b>Source: S212411-04</b>			<b>Prepared: 12/24/02</b>		<b>Analyzed: 12/26/02</b>			
Xylenes (total)	ND	0.50	ug/l		ND				50	
Methyl tert-butyl ether	ND	2.0	"		ND			60	50	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	8.86		"	10.0		89	60-140			



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**Volatile Organic Compounds by EPA Method 8260B - Quality Control  
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2120403 - EPA 5030B [P/T]**

Blank (2120403-BLK1)				Prepared & Analyzed: 12/24/02						
Tert-butyl alcohol	ND	100	ug/l							
Methyl tert-butyl ether	ND	2.0	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
Tert-amyl methyl ether	ND	2.0	"							
Ethanol	ND	500	"							
1,2-Dichloroethane	ND	2.0	"							
1,2-Dibromoethane (EDB)	ND	2.0	"							

<i>Surrogate: 1,2-DCA-d4</i>	20.5		"	25.0		82	60-140			
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**Laboratory Control Sample (2120403-BS1)** Prepared & Analyzed: 12/24/02

Methyl tert-butyl ether	18.7	2.0	ug/l	22.4		83	60-140			
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<i>Surrogate: 1,2-DCA-d4</i>	24.6		"	25.0		98	60-140			
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**Matrix Spike (2120403-MS1)** Source: S212595-01 Prepared & Analyzed: 12/24/02

Methyl tert-butyl ether	36.2	2.0	ug/l	22.4	13	104	60-140			
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<i>Surrogate: 1,2-DCA-d4</i>	24.5		"	25.0		98	60-140			
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**Matrix Spike Dup (2120403-MSD1)** Source: S212595-01 Prepared & Analyzed: 12/24/02

Methyl tert-butyl ether	36.2	2.0	ug/l	22.4	13	104	60-140	0	25	
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<i>Surrogate: 1,2-DCA-d4</i>	24.0		"	25.0		96	60-140			
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**Batch 2120433 - EPA 5030B [P/T]**

Blank (2120433-BLK1)				Prepared & Analyzed: 12/26/02						
Tert-butyl alcohol	ND	100	ug/l							
Methyl tert-butyl ether	ND	2.0	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
Tert-amyl methyl ether	ND	2.0	"							
Ethanol	ND	500	"							

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 Project Manager: Deanna L. Harding

 S212411  
 Reported:  
 01/02/03 20:10

### Volatile Organic Compounds by EPA Method 8260B - Quality Control

#### Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2120433 - EPA 5030B [P/T]</b>										
Prepared & Analyzed: 12/26/02										
<b>Blank (2120433-BLK1)</b>										
1,2-Dichloroethane	ND	2.0	ug/l							
1,2-Dibromoethane (EDB)	ND	2.0	"							
<i>Surrogate: 1,2-DCA-d4</i>	26.5		"	25.0		106	60-140			
<b>Laboratory Control Sample (2120433-BS1)</b>										
Prepared & Analyzed: 12/26/02										
Methyl tert-butyl ether	20.2	2.0	ug/l	22.4		90	60-140			
<i>Surrogate: 1,2-DCA-d4</i>	23.8		"	25.0		95	60-140			
<b>Matrix Spike (2120433-MS1)</b>										
Source: S212670-03      Prepared & Analyzed: 12/26/02										
Methyl tert-butyl ether	21.8	2.0	ug/l	22.4	ND	94	60-140			
<i>Surrogate: 1,2-DCA-d4</i>	23.2		"	25.0		93	60-140			
<b>Matrix Spike Dup (2120433-MSD1)</b>										
Source: S212670-03      Prepared & Analyzed: 12/26/02										
Methyl tert-butyl ether	22.1	2.0	ug/l	22.4	ND	95	60-140	1	25	
<i>Surrogate: 1,2-DCA-d4</i>	23.7		"	25.0		95	60-140			
<b>Batch 2120442 - EPA 5030B [P/T]</b>										
Prepared & Analyzed: 12/27/02										
<b>Blank (2120442-BLK1)</b>										
Tert-butyl alcohol	ND	100	ug/l							
Methyl tert-butyl ether	ND	2.0	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
Tert-amyl methyl ether	ND	2.0	"							
Ethanol	ND	500	"							
1,2-Dichloroethane	ND	2.0	"							
1,2-Dibromoethane (EDB)	ND	2.0	"							
<i>Surrogate: 1,2-DCA-d4</i>	31.0		"	25.0		124	60-140			

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 Dublin CA, 94568

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 Project Manager: Deanna L. Harding

 S212411  
 Reported:  
 01/02/03 20:10

**Volatile Organic Compounds by EPA Method 8260B - Quality Control  
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2120442 - EPA 5030B [P/T]</b>										
<b>Laboratory Control Sample (2120442-BS1)</b>										
					Prepared & Analyzed: 12/27/02					
Methyl tert-butyl ether	22.6	2.0	ug/l	22.4		101	60-140			
<i>Surrogate: 1,2-DCA-d4</i>	31.7		"	25.0		127	60-140			
<b>Matrix Spike (2120442-MS1)</b>										
					Source: S212673-04 Prepared & Analyzed: 12/27/02					
Methyl tert-butyl ether	19.7	2.0	ug/l	22.4	ND	88	60-140			
<i>Surrogate: 1,2-DCA-d4</i>	29.9		"	25.0		120	60-140			
<b>Matrix Spike Dup (2120442-MSD1)</b>										
					Source: S212673-04 Prepared & Analyzed: 12/27/02					
Methyl tert-butyl ether	20.0	2.0	ug/l	22.4	ND	89	60-140	2	25	
<i>Surrogate: 1,2-DCA-d4</i>	30.8		"	25.0		123	60-140			



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Dublin CA, 94568

Project: Tosco 0843, Alameda, CA  
Project Number: N/A  
Project Manager: Deanna L. Harding

S212411  
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01/02/03 20:10

### Notes and Definitions

- HC-19 Discrete peak @ C5.
- HT-RS This sample was originally analyzed within the EPA recommended hold time. Re-analysis for confirmation or dilution was performed past the recommended hold time. The results may still be useful for their intended purpose.
- 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