RO-409

GETTLER-RYAN INC.

TRANSMITTAL

March 15, 2002
G-R #180225

APR 02 2002

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

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, California 94568

RE: Tosco 76 Service Station
#1156
4276 MacArthur Boulevard
Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	March 8, 2002	Groundwater Monitoring and Sampling Report First Quarter - Event of January 28, 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 ***March 28, 2002***, this report will be distributed to the following:

cc: **Ms. Eva Chu, Alameda County Health Care Services, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502**
Mr. Bob Hale, Alameda County Public Works Agency, Water Resources Section, 951 Turner Court, Suite 300, Hayward, CA 94545

Enclosure

trans/1156-DBD

GETTLER-RYAN INC.

March 8, 2002
G-R Job #180225

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

RE: First Quarter Event of January 28, 2002
Groundwater Monitoring & Sampling Report
Tosco 76 Service Station #1156
4276 MacArthur Boulevard
Oakland, 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 any of the wells. Static water level data and groundwater elevations are summarized in Table 1. A Potentiometric Map is included as Figure 1.

Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Groundwater Sampling (attached). The field data sheets are also attached. The samples were analyzed by Sequoia Analytical. Analytical results are summarized in Tables 1 and 2. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

Sincerely,

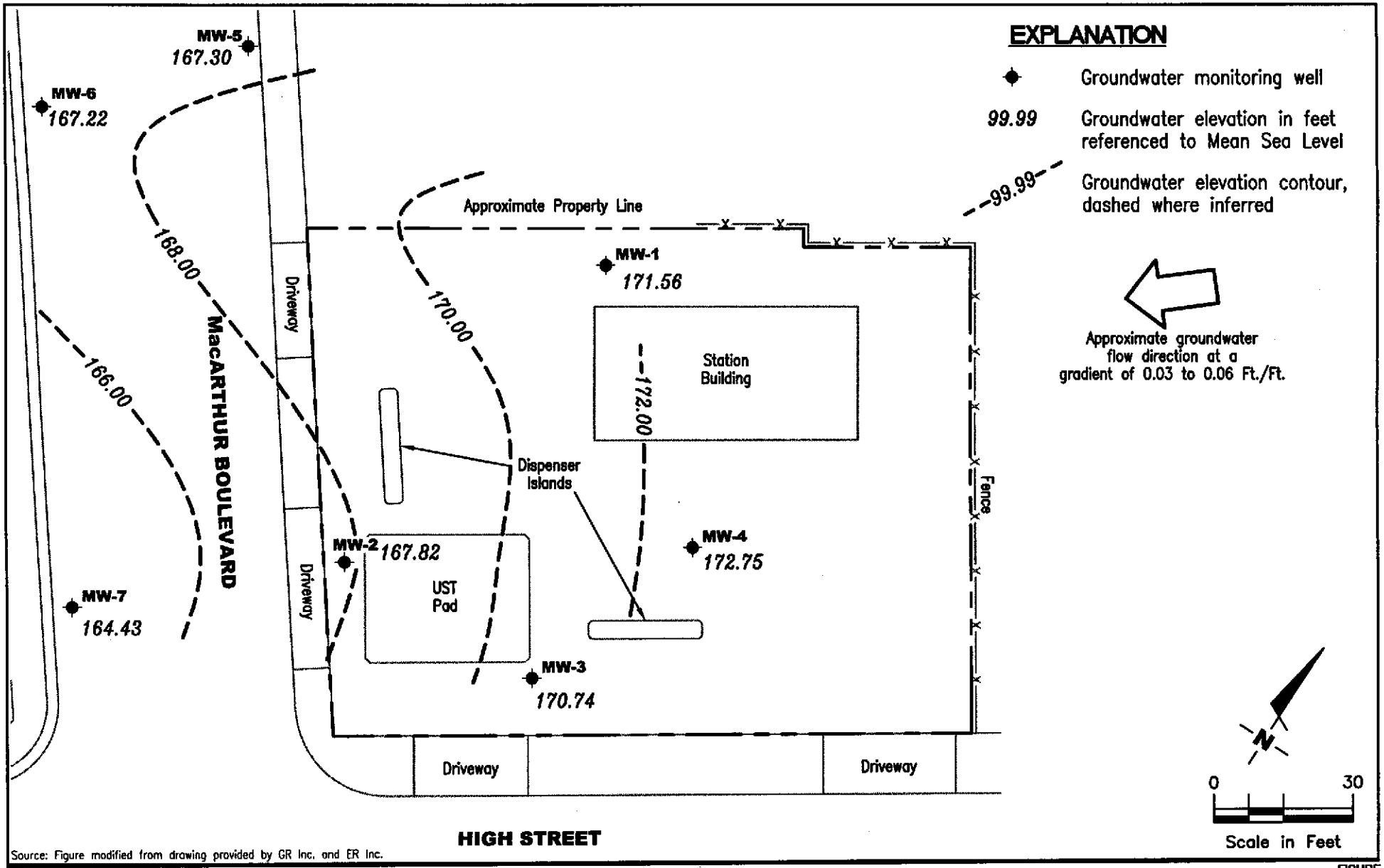
Deanna L. Harding
Project Coordinator

Hagop Kevork
P.E. No. C55734

REGISTERED PROFESSIONAL ENGINEER
HAGOP KEVORK
No. C 55734
Exp. 12/31/04
CIVIL
STATE OF CALIFORNIA

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

1156.qml



Source: Figure modified from drawing provided by GR Inc. and ER Inc.

GETTLER - RYAN INC.
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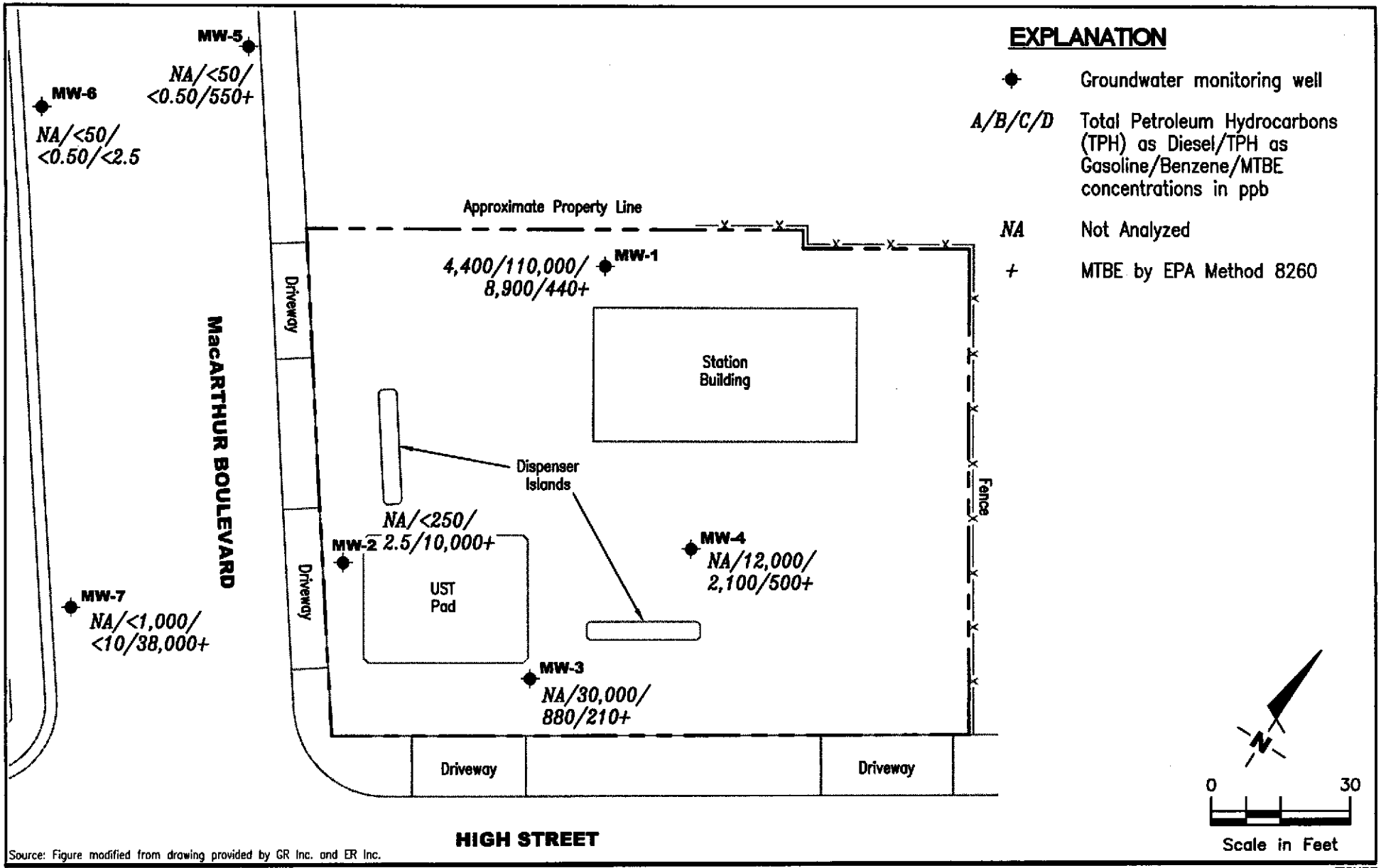
POTENTIOMETRIC MAP
Tosco 76 Service Station #1156
4276 MacArthur Boulevard
Oakland, California

FIGURE
1

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
180225		January 28, 2002	

FILE NAME: P:\Enviro\TOSCO\1156\002-1156.dwg | Layout Tab: Pot1



Source: Figure modified from drawing provided by GR Inc. and ER Inc.

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CONCENTRATION MAP
Tosco 76 Service Station #1156
4276 MacArthur Boulevard
Oakland, California

FIGURE
2

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
180225		January 28, 2002	

FILE NAME: P:\Enviro\TOSCO\1156\Q02-1156.dwg | Layout Tab: Con1

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco 76 Service Station #1156
4276 MacArthur Boulevard
Oakland, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (msl)	Product Thickness (ft.)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-1												
174.86	07/20/99[5]	7.50	5.0-25.0	167.36	--	16,000[2]	120,000	11,000	27,000	3,300	18,000	ND[1]
	09/28/99	8.75		166.11	<0.01	2,410[2]	6,020[6]	1,030	1,040	68.5	412	321/333[3]
	01/07/00	9.05		165.83**	0.02	7,870[2,4]	72,700[6]	7,410	13,900	2,070	9,620	ND[1]
	03/31/00	7.18		167.68	0.00	3,600[2]	92,000[6]	10,000	23,000	3,200	14,000	ND[1]
	07/14/00	7.68		167.18	0.00	8,580[2]	108,000[6]	8,250	18,700	3,750	17,800	ND[1]
	10/03/00	7.99		166.87	0.00	9,260[2]	96,000[6]	8,760	20,000	3,350	15,600	ND[1]
	01/03/01	9.18		165.68	0.00	11,000[8]	37,000[6]	5,800	13,000	1,700	8,100	2,200
	04/04/01	8.05		166.81	0.00	14,000[8]	86,900[6]	7,780	18,500	2,470	11,800	[1]ND/481[3]
	07/17/01	7.01		167.85	0.00	2,200[8]	79,000[6]	5,600	11,000	2,800	12,000	[1]ND/230[3]
177.54	10/03/01	7.89		169.65	0.00	--	99,000[6]	8,200	18,000	3,000	16,000	<2,500
	10/05/01	7.91		169.63	0.00	13,000[2]	--	--	--	--	--	--
	01/28/02	**5.98**		**171.56**	**0.00**	**4,400[11]**	**110,000[12]**	**8,900**	**19,000**	**2,600**	**12,000**	**3,000/440[3]**
MW-2												
173.01	07/20/99	5.40	5.0-25.0	167.61	--	--	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	4,500/11,000[3,4]
	09/28/99	5.60		167.41	0.00	--	1,390[6]	124	ND[1]	62.9	43.1	5,280/6,150[3]
	01/07/00	5.92		167.09	0.00	--	1,450[6]	99.0	ND[1]	23.8	16.0	33,100
	03/31/00	5.23		167.78	0.00	--	ND[1]	42	ND[1]	ND[1]	ND[1]	17,000
	07/14/00	5.52		167.49	0.00	--	ND[1]	44.7	ND[1]	ND[1]	ND[1]	66,500
	10/03/00	6.04		166.97	0.00	--	ND[1]	56.7	ND[1]	ND[1]	ND[1]	57,500
	01/03/01	6.42		166.59	0.00	--	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	49,000
	04/04/01	6.14		166.87	0.00	--	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	38,700/37,800[3]
	07/17/01	5.30		167.71	0.00	--	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	65,000/56,000[3]
173.50	10/03/01	7.38		166.12	0.00	--	<250	2.7	<2.5	<2.5	<2.5	14,000/18,000[3]
	01/28/02	**5.68**		**167.82**	**0.00**	**--**	**<250**	**2.5**	**4.4**	**2.8**	**7.4**	**11,000/10,000[3]**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco 76 Service Station #1156
4276 MacArthur Boulevard
Oakland, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (msl)	Product Thickness (ft.)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-3												
178.44	07/20/99	8.50	5.0-25.0	169.94	--	--	1,000	76	52	79	76	330
	09/28/99	8.31		170.13	0.00	--	1,860[6]	174	95.4	71.8	135	443/288[3]
	01/07/00	8.56		169.88	0.00	--	28,400[6]	2,450	3,090	1,560	3,910	1,940
	03/31/00	8.42		170.02	0.00	--	26,000[6]	1,300	2,900	2,600	3,500	2,800
	07/14/00	8.61		169.83	0.00	--	24,500[6]	1,850	2,630	2,750	3,900	548
	10/03/00	9.14		169.30	0.00	--	22,000[6]	1,910	2,020	2,400	2,680	965
	01/03/01	9.06		169.38	0.00	--	14,000[6]	1,600	1,100	2,300	1,400	3,300
	04/04/01	8.98		169.46	0.00	--	19,600[6]	1,150	1,470	2,100	1,820	1,050/450[3]
	07/17/01	7.46		170.98	0.00	--	26,000[6]	1,500	2,100	2,100	3,400	[1]ND/350[3]
178.13	10/03/01	9.81		168.32	0.00	--	22,000[6]	830	1,900	1,700	3,000	<1,000
	01/28/02	**7.39**		**170.74**	**0.00**	**--**	**30,000[12]**	**880**	**2,600**	**1,800**	**4,300**	**3,200/210[3]**
MW-4												
179.10	07/20/99	7.40	5.0-25.0	171.70	--	--	69	2.7	0.77	ND	7.1	100
	09/28/99	7.19		171.91	0.00	--	4,050[6]	1,250	72.0	51.3	133	416/459[3]
	01/07/00	8.98		170.12	0.00	--	7,010[6]	2,260	167	271	276	764
	03/31/00	7.26		171.84	0.00	--	5,500[6]	1,800	230	330	400	1,000
	07/14/00	7.67		171.43	0.00	--	7,940[6]	2,810	332	450	247	1,530
	10/03/00	8.12		170.98	0.00	--	11,400[6]	3,110	437	519	816	1,040
	01/03/01[7]	9.10		170.00	0.00	--	8,600[6]	2,500	340	480	960	850
	04/04/01	8.63		170.47	0.00	--	9,950[6]	2,380	126	416	725	1,140/819[3]
	07/17/01	6.49		172.61	0.00	--	10,000[6]	2,300	110	410	800	1,200/900[3]
178.96	10/03/01	7.01		171.95	0.00	--	7,800[6]	2,100	85	380	390	580/820[3]
	01/28/02	**6.21**		**172.75**	**0.00**	**--**	**12,000[12]**	**2,100**	**130**	**350**	**670**	**1,100/500[3]**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco 76 Service Station #1156
4276 MacArthur Boulevard
Oakland, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (msl)	Product Thickness (ft.)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-5												
169.18	10/03/01[10]	2.81	--	166.37	0.00	--	<50	<0.50	<0.50	<0.50	<0.50	1,800/2,100[3]
	01/28/02	**1.88**		**167.30**	**0.00**	**--**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**650/550[3]**
MW-6												
169.04	10/03/01[10]	2.87	--	166.17	0.00	--	<50	<0.50	<0.50	<0.50	<0.50	200/270[3]
	01/28/02	**1.82**	**--**	**167.22**	**0.00**	**--**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.5**
MW-7												
171.64	10/03/01[10]	7.62	--	164.02	0.00	--	10,000[9]	210	<50	<50	800	35,000/40,000[3]
	01/28/02	**7.21**	**--**	**164.43**	**0.00**	**--**	**<1,000**	**<10**	**<10**	**<10**	**<10**	**42,000/38,000[3]**
Trip Blank												
TB-LB	07/20/99	--	--	--	--	--	--	--	--	--	--	--
	09/28/99	--		--	--	--	ND	ND	ND	ND	ND	ND
	01/07/00	--		--	--	--	ND	ND	ND	ND	ND	ND
	03/31/00	--		--	--	--	ND	ND	ND	ND	ND	ND
	07/14/00	--		--	--	--	ND	ND	ND	ND	ND	ND
	10/03/00	--		--	--	--	ND	ND	ND	ND	ND	ND
	01/03/01	--		--	--	--	ND	ND	ND	ND	ND	ND
	04/04/01	--		--	--	--	ND	ND	ND	ND	ND	ND
	07/17/01	--		--	--	--	ND	ND	ND	ND	ND	ND
	10/03/01	--		--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	10/05/01	--		--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	01/28/02	**--**		**--**	**--**	**--**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.5**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco 76 Service Station #1156
4276 MacArthur Boulevard
Oakland, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to September 28, 1999, were compiled from reports prepared by Environmental Resolutions, Inc.

TOC = Top of Casing	TPH-D = Total Petroleum Hydrocarbons as Diesel	(ppb) = Parts per billion
DTW = Depth to Water	TPH-G = Total Petroleum Hydrocarbons as Gasoline	ND = Not Detected
(ft.) = Feet	B = Benzene	-- = Not Measured/Not Analyzed
S.I. = Screen Interval	T = Toluene	
(ft. bgs) = Feet Below Ground Surface	E = Ethylbenzene	
GWE = Groundwater Elevation	X = Xylenes	
(msl) = Mean sea level	MTBE = Methyl tertiary butyl ether	

* TOC elevations were resurveyed in September 2001, by Morrow Surveying. TOC elevations are based on City of Oakland Benchmark No. 3967, (Elevation = 174.40 feet, msl).

** GWE has been corrected due to the presence of free product; correction factor: [(TOC - DTW) + (Product Thickness x 0.77)].

1 Detection limit raised. Refer to analytical reports.

2 Laboratory report indicates unidentified hydrocarbons C9-C24.

3 MTBE by EPA Method 8260.

4 Laboratory analyzed sample past EPA recommended holding time.

5 Total Recoverable Petroleum Oil was ND.

6 Laboratory report indicates gasoline C6-C12.

7 This sample was originally analyzed within holding time. Re-analysis for confirmation or dilution was performed past the recommended holding time.

8 Laboratory report indicates unidentified hydrocarbons <C16.

9 Laboratory report indicates weathered gasoline C6-C12.

10 Well development performed.

11 Laboratory report indicates unidentified hydrocarbons C10-C28.

12 Laboratory report indicates gasoline C6-C10.

Table 2

Groundwater Analytical Results

Tosco 76 Service Station #1156

4276 MacArthur Boulevard

Oakland, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)	HVOCs (ppb)	SVOCs (ppb)
MW-1	07/20/99	--	--	11,000[3]	--	--	--	--	--	ND[1]	ND[2]
	09/28/99	--	ND[6]	333	ND[6]	ND[6]	ND[6]	--	--	ND[4]	ND[5]
	01/07/00	--	--	--	--	--	--	--	--	ND[7,8]	ND[9]
	03/31/00	--	--	--	--	--	--	--	--	--[11]	ND[10]
	07/14/00	--	--	--	--	--	--	--	--	ND[12]	ND[13]
	10/03/00	--	--	--	--	--	--	--	--	ND[15]	ND[14]
	01/03/01	--	--	--	--	--	--	--	--	ND[15]	ND[16]
	04/04/01	ND[6]	ND[6]	481	ND[6]	ND[6]	ND[6]	ND[6]	ND[6]	ND[17]	ND[18]
	07/17/01	ND[6]	ND[6]	230	ND[6]	ND[6]	ND[6]	ND[6]	ND[6]	ND[20]	ND[19]
	01/28/02	--	--	**440**	--	--	--	--	--	--	--
MW-2	09/28/99	--	ND[6]	6,150	ND[6]	ND[6]	ND[6]	--	--	--	--
	04/04/01	ND[6]	ND[6]	37,800	ND[6]	ND[6]	ND[6]	ND[6]	ND[6]	--	--
	07/17/01	ND[6]	ND[6]	56,000	ND[6]	ND[6]	ND[6]	ND[6]	ND[6]	--	--
	10/03/01	--	--	18,000	--	--	--	--	--	--	--
	01/28/02	--	--	**10,000**	--	--	--	--	--	--	--
MW-3	09/28/99	--	ND[6]	288	ND[6]	ND[6]	8.80	--	--	--	--
	04/04/01	ND[6]	ND[6]	450	ND[6]	ND[6]	ND[6]	ND[6]	ND[6]	--	--
	07/17/01	ND[6]	ND[6]	350	ND[6]	ND[6]	ND[6]	ND[6]	ND[6]	--	--
	01/28/02	--	--	**210**	--	--	--	--	--	--	--
MW-4	09/28/99	--	ND[6]	459	ND[6]	ND[6]	ND[6]	--	--	--	--
	04/04/01	ND[6]	ND[6]	819	ND[6]	ND[6]	ND[6]	ND[6]	ND[6]	--	--
	07/17/01	ND[6]	ND[6]	900	ND[6]	ND[6]	ND[6]	ND[6]	ND[6]	--	--
	10/03/01	--	--	820	--	--	--	--	--	--	--
	01/28/02	--	--	**500**	--	--	--	--	--	--	--

Table 2

Groundwater Analytical Results

Tosco 76 Service Station #1156

4276 MacArthur Boulevard

Oakland, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)	HVOCs (ppb)	SVOCs (ppb)
MW-5	10/03/01	--	--	2,100	--	--	--	--	--	--	--
	01/28/02	**--**	**--**	**550**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
MW-6	10/03/01	--	--	270	--	--	--	--	--	--	--
MW-7	10/03/01	--	--	40,000	--	--	--	--	--	--	--
	01/28/02	**--**	**--**	**38,000**	**--**	**--**	**--**	**--**	**--**	**--**	**--**

Table 2

Groundwater Analytical Results

Tosco 76 Service Station #1156
4276 MacArthur Boulevard
Oakland, California

EXPLANATIONS:

Groundwater laboratory analytical results prior to September 28, 1999, were compiled from reports prepared by Environmental Resolutions, Inc.

TBA = Tertiary butyl alcohol
MTBE = Methyl tertiary butyl ether
DIPE = Di-isopropyl ether
ETBE = Ethyl tertiary butyl ether
TAME = Tertiary amyl methyl ether
EDB = 1,2-Dibromoethane
HVOCs = Halogenated Volatile Organic Compounds
SVOCs = Semi-Volatile Organic Compounds
(ppb) = Parts per billion
ND = Not Detected
-- = Not Analyzed

1 All HVOCs were ND except for Chlorobenzene at 12 ppb; 1,2-Dichlorobenzene (1,2-DCB) at 3.9 ppb; 1,1-Dichloroethane (1,1-DCA) at 2.0 ppb; 1,2-Dichloroethane (1,2-DCA) at 20 ppb; cis-1,2-Dichloroethene (cis-1,2-DCE) at 3.6 ppb and 1,2-Dichloropropane (1,2-DCP) at 0.92 ppb.

2 All SVOCs were ND except for Benzyl alcohol at 37 ppb; 2,4-Dimethylphenol at 140 ppb; 2-Methylnaphthalene at 240 ppb; 4-Methylphenol at 27 ppb and Naphthalene at 600 ppb.

3 Laboratory analyzed sample past EPA recommended holding time.

4 All HVOCs were ND except for Benzene at 6,130 ppb; Ethylbenzene at 1,590 ppb; Naphthalene at 534 ppb; Toluene at 11,900 ppb; 1,2,4-Trimethylbenzene at 1,240 ppb; 1,3,5-Trimethylbenzene at 318 ppb and Total Xylenes at 7,360 ppb.

5 All SVOCs were ND (with a raised detection limit) except for 2,4-Dimethylphenol at 13.6 ppb; 2-Methylnaphthalene at 87.4 ppb; 2-Methylphenol at 26.4; 4-Methylphenol at 35.6 and Naphthalene at 292 ppb.

6 Detection limit raised. Refer to analytical reports.

7 All HVOCs were ND (with a raised detection limit) except for Benzene at 8,380 ppb; Ethylbenzene at 2,380 ppb; Naphthalene at 1,050 ppb; n-Propylbenzene at 371 ppb; Toluene at 17,600 ppb; 1,2,4-Trimethylbenzene at 2,210 ppb; 1,3,5-Trimethylbenzene at 597 ppb and Total Xylenes at 10,800 ppb.

8 EPA Method 8260 for HVOCs.

9 All SVOCs were ND (with a raised detection limit) except for 2-Methylnaphthalene at 315 ppb and Naphthalene at 615 ppb.

10 All SVOCs were ND except for Bis(2-ethylhexyl)phthalate at 10 ppb; 1,2-DCB at 6.2 ppb; 2-Methylnaphthalene at 73 ppb; 2-Methylphenol at 31 ppb; 4-Methylphenol at 18 ppb and Naphthalene at 140 ppb. Laboratory report indicates all SVOCs were analyzed outside the EPA recommended holding time.

11 Laboratory did not analyze for HVOCs.

12 All HVOCs were ND (with a raised detection limit) except for Tetrachloroethene at 334 ppb.

13 All SVOCs were ND (with a raised detection limit) except for 2-Methylnaphthalene at 300 ppb and Naphthalene at 690 ppb.

14 All SVOCs were ND (with a raised detection limit) except for Benzoic acid at 362 ppb; Bis(2-ethylhexyl)phthalate at 51.6 ppb; 2-Methylnaphthalene at 98.1 ppb; 4-Methylphenol at 28.9 ppb and Naphthalene at 361 ppb.

15 All HVOCs were ND (with a raised detection limit).

16 All SVOCs were ND (with a raised detection limit) except for 2-Methylnaphthalene at 180 ppb and Naphthalene at 400 ppb.

17 All HVOCs were ND except for cis-1,2-DCA at 3.4 ppb; 1,2-DCA at 5.7 ppb; Chlorobenzene at 5.6 ppb and 1,2-DCB at 4.6 ppb.

18 All SVOCs were ND except for Benzoic acid at 28 ppb; Bis(2-ethylhexyl)phthalate at 55 ppb; 2-Methylnaphthalene at 78 ppb and Naphthalene at 490 ppb.

Table 2

Groundwater Analytical Results

Tosco 76 Service Station #1156

4276 MacArthur Boulevard

Oakland, California

EXPLANATIONS: (cont)

[19] All SVOCs were ND except for Bis(2-ethylhexyl)phthalate at 400 ppb; 1,2-DCB at 18 ppb; 2,4-Dimethylphenol at 16 ppb; 2-Methylnaphthalene at 290 ppb; 2-Methylphenol at 47 ppb; 4-Methylphenol at 25 ppb; Naphthalene at 740 ppb and N-Nitrosodimethylamine at 7.7 ppb.

[20] Volatile Organic Compounds (VOCs) by EPA Method 8021B were ND with a raised detection limit.

ANALYTICAL METHODS:

EPA Method 8260 for Oxygenate Compounds

EPA Method 8010 for HVOCs

EPA Method 8270 for SVOCs

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.

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 1156 Job#: 180225

Address: 4276 MacArthur Blvd. Date: 1-28-02

City: Oakland Sampler: Joe

Well ID: MW-1 Well Condition: O.K

Well Diameter: 2 in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)

Total Depth: 25.15 ft.

Depth to Water: 5.98 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

19.17 X VF 0.17 = 3.26 X 3 (case volume) = Estimated Purge Volume: 10 (gal.)

Purge Equipment: Disposable Bailer / Bailer / Stack / (Suction) / Grundfos / Other: _____

Sampling Equipment: (Disposable Bailer) / Bailer / Pressure Bailer / Grab Sample / Other: _____

Starting Time: 9:44 Weather Conditions: cloudy/wet/cold

Sampling Time: 10:06Am/1006 Water Color: clear Odor: yes

Purging Flow Rate: _____ gpm. Sediment Description: _____

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity (mmhos/cm)	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
9:53	3.5	7.17	1.97	69.8			
9:55	7.5	7.18	2.05	70.2			
9:57	10	7.23	1.93	70.7			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-1	3 VOA	Y	HCL	Seq.	TPHG, BTEX, MTBE
	1 Amb	"	—	"	TPHD

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 1156 Job#: 180225

Address: 4276 MacArthur Blvd. Date: 1-28-02

City: Oakland Sampler: Joe

Well ID MW-2 Well Condition: O.K

Well Diameter 2 in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)

Total Depth 25.45 ft.

Depth to Water 5.68 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

19.77 X VF 0.17 = 3.36 X 3 (case volume) = Estimated Purge Volume: 10 (gal.)

Purge Equipment: Disposable Bailer / Bailer / Stack / Suction / Grundfos / Other:

Sampling Equipment: Disposable Bailer / Bailer / Pressure Bailer / Grab Sample / Other:

Starting Time: 9:06 Weather Conditions: cloudy/wet

Sampling Time: 9:30 Am (0930) Water Color: clear Odor: yes

Purging Flow Rate: 1 gpm Sediment Description:

Did well de-water? If yes; Time: Volume: (gal.)

Time	Volume (gal.)	pH	Conductivity (mmhos/cm)	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
9:15	3.5	7.46	3:10	70.7			
9:17	7.5	7.21	3.15	71.0			
9:19	10	7.28	3.21	71.4			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-2	3 VOA	Y	HCL	Seq.	TPHG, BTEX, MTBE

COMMENTS:

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 1156 Job#: 180225

Address: 4276 MacArthur Blvd. Date: 1-28-02

City: Oakland Sampler: Joe

Well ID MW-3 Well Condition: O.K

Well Diameter 2 in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)

Total Depth 25.04 ft.

Depth to Water 7.39 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

17.65 X VF 0.17 = 3.00 X 3 (case volume) = Estimated Purge Volume: 9 (gal.)

Purge Equipment: Disposable Bailer / Bailer / Stack / Suction / Grundfos / Other:

Sampling Equipment: Disposable Bailer / Bailer / Pressure Bailer / Grab Sample / Other:

Starting Time: 8:30 Weather Conditions: cloudy/wet

Sampling Time: 8:55Am (0855) Water Color: clear Odor: yes

Purging Flow Rate: 1 gpm Sediment Description:

Did well de-water? If yes; Time: Volume: (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
8:42	3	7.56	2.35	70.9			
8:44	6	7.40	2.48	71.2			
8:46	9	7.37	2.52	71.5			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-3	3VOA	Y	HCL	Seq.	TPHG, BTEX, MTBE

COMMENTS:

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 1156 Job#: 180225

Address: 4276 MacArthur Blvd. Date: 1-28-02

City: Oakland Sampler: Joe

Well ID MW-4 Well Condition: O.K

Well Diameter 2 in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)

Total Depth 25.33 ft.

Depth to Water 6.21 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

19.12 X VF 0.17 = 3.25 X 3 (case volume) = Estimated Purge Volume: 10 (gal.)

Purge Equipment: Disposable Bailer / Bailer / Stack / (Suction) / Grundfos / Other:

Sampling Equipment: (Disposable Bailer) / ~~Bailer~~ / Pressure Bailer / Grab Sample / Other:

Starting Time: 7:45 Weather Conditions: cloudy/wet

Sampling Time: 8:10 AM (0810) Water Color: clear Odor: yes

Purging Flow Rate: 1 gpm Sediment Description:

Did well de-water? If yes; Time: Volume: (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
7:53	3.5	7.72	4.40	72.1			
7:55	7.5	7.52	4.85	71.6			
7:58	10	7.54	4.83	70.9			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-4	3 VOA	Y	HCL	Seq.	TPHG, BTEX, MTBE

COMMENTS:

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 1156 Job#: 180225

Address: 4276 MacArthur Blvd. Date: 1-28-02

City: Oakland Sampler: Joe

Well ID MW-5 Well Condition: O.K

Well Diameter 2 in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)

Total Depth 25.40 ft.

Depth to Water 1.88 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

23.62 X VF 0.17 = 4.02 X 3 (case volume) = Estimated Purge Volume: 12 (gal.)

Purge Equipment: Disposable Bailer / Bailer / Stack / Suction / Grundfos / Other: _____

Sampling Equipment: ~~Disposable Bailer~~ / Bailer / Pressure Bailer / Grab Sample / Other: _____

Starting Time: 7:07 Weather Conditions: cloudy/wet

Sampling Time: 7:32Am (0732) Water Color: clear Odor: none

Purging Flow Rate: 1 gpm Sediment Description: _____

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
7:15	4	7.80	10.11	69.8			
7:17	8	7.60	10.22	70.7			
7:19	12	7.56	10.26	70.4			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-5	3 VOA	Y	HCL	Seq.	TPHG, BTEX, MTBE

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 1156 Job#: 180225

Address: 4276 MacArthur Blvd. Date: 1-28-02

City: Oakland Sampler: Joe

Well ID MW-6 Well Condition: O.K

Well Diameter 2 in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)

Total Depth 25.34 ft

Depth to Water 1.82 ft

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

23.52 X VF 0.17 = 4.0 X 3 (case volume) = Estimated Purge Volume: 12 (gal.)

Purge Equipment: Disposable Bailer / Bailer / Stack / Suction / Grundfos / Other: _____

Sampling Equipment: Disposable Bailer / Bailer / Pressure Bailer / Grab Sample / Other: _____

Starting Time: 10:25 Weather Conditions: cloudy/wet

Sampling Time: 10:43 Am (1043) Water Color: clear Odor: none

Purging Flow Rate: _____ gpm Sediment Description: _____

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity (µmhos/cm)	Temperature (F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
10:36	4	7.38	8.41	70.4			
10:38	8	7.30	8.22	70.8			
10:40	12	7.36	7.31	71.0			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-6	3 VOA	Y	HCL	Seq.	TPHG, BTEX, MTBE

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 1156 Job#: 180225

Address: 4276 MacArthur Blvd. Date: 1-28-02

City: Oakland Sampler: Joe

Well ID MW-7 Well Condition: O.K

Well Diameter 2 in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)

Total Depth 25.50 ft.

Depth to Water 7.21 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

18.29 X VF 0.17 = 3.11 X 3 (case volume) = Estimated Purge Volume: 9.5 (gal.)

Purge Equipment: Disposable Bailer; Bailer; Stack; (Suction); Grundfos; Other:

Sampling Equipment: (Disposable Bailer); Bailer; Pressure Bailer; Grab Sample; Other:

Starting Time: 11:00 Weather Conditions: cloudy/wet

Sampling Time: 11:22 Am (1122) Water Color: clear Odor: yes

Purging Flow Rate: ppm Sediment Description:

Did well de-water? If yes; Time: Volume: (gal.)

Time	Volume (gal.)	pH	Conductivity (x 1000) µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
11:08	3	6.85	1.97	71.2			
11:10	6	6.92	2.05	71.6			
11:12	9	6.96	2.05	71.5			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-7	3 VOA	Y	HCL	Seq.	TPHG, BTEX, MTBE

COMMENTS: 2" cap & padlock.

TOSCO

Tosco Marketing Company
2000 Crow Canyon Pl., Ste. 400
San Ramon, California 94583

Facility Number 11-0501767 SS# 1120
Facility Address 4276 MacArthur, Oakland, CA
Consultant Project Number 180225.85
Consultant Name Gettler-Ryan Inc. (G-R Inc.)
Address 6747 SIERRA COURT, SUITE J, DUBLIN, CA 94568
Project Contact (Name) Deanna L. Harding
(Phone) (925) 551-7555 (Fax Number) 925-551-7899

Contact (Name) MR. Dave DeWitt
(Phone) 925-277-2384
Laboratory Name Sequoia Analytical
Laboratory Release Number
Samples Collected by (Name) JOE ASEMIAN
Collection Date 1-28-02
Signature
MLA050

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed: TPH Gas + BTEX w/MTBE (8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)					
TB-LB	01	VOA	W	G	—	HCL	Y	✓												
MW-1	02	3 VOA 1 AMB	1	1	1006	1	1	✓	✓											
MW-2	03	3 VOA	1	1	0930	1	1	✓												
MW-3	04	1	1	1	0855	1	1	✓												
MW-4	05	1	1	1	0810	1	1	✓												
MW-5	06	1	1	1	0732	1	1	✓												
MW-6	07	1	1	1	1043	1	1	✓												
MW-7	08	1	1	1	1122	1	1	✓												

DO NOT BILL TB-LB ANALYSIS

Run MTBE by 8260 on all 8020 MTBE hits.

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	G-R Inc.	1-28-02 1500			1/28/02 1500
		1/28/02	WH SEQ	SEQ	1-28-1 1630
WH	SEQ	1/28 1745	Shelley (HH)		1/28/02 1745

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted

Sequoia
Analytical

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11 February, 2002

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

RE: Tosco (76) SS #1156,Oakland,Ca
Sequoia Report: MLA0510

Enclosed are the results of analyses for samples received by the laboratory on 01/28/02 15:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

James Hartley
Project Manager

CA ELAP Certificate #1210

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Gettler Ryan/Geostrategies - Tosco/Unocal	Project: Tosco (76) SS #1156,Oakland,Ca	
6747 Sierra Ct, Suite J	Project Number: 4276 MacArthur	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	02/11/02 11:39

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	MLA0510-01	Water	01/28/02 00:00	01/28/02 15:00
MW-1	MLA0510-02	Water	01/28/02 10:06	01/28/02 15:00
MW-2	MLA0510-03	Water	01/28/02 09:30	01/28/02 15:00
MW-3	MLA0510-04	Water	01/28/02 08:55	01/28/02 15:00
MW-4	MLA0510-05	Water	01/28/02 08:10	01/28/02 15:00
MW-5	MLA0510-06	Water	01/28/02 07:32	01/28/02 15:00
MW-6	MLA0510-07	Water	01/28/02 10:43	01/28/02 15:00
MW-7	MLA0510-08	Water	01/28/02 11:22	01/28/02 15:00

Sequoia Analytical - Morgan Hill

James Hartley, Project Manager

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.

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Gettler Ryan/Geostrategies - Tosco/Unocal	Project: Tosco (76) SS #1156,Oakland,Ca	
6747 Sierra Ct, Suite J	Project Number: 4276 MacArthur	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	02/11/02 11:39

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 (MLA0510-01) Water Sampled: 01/28/02 00:00 Received: 01/28/02 15:00									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	2A31002	01/31/02	01/31/02	8015Bm/8021B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*105 %*	*70-130*		"	"	"	"	
MW-1 (MLA0510-02) Water Sampled: 01/28/02 10:06 Received: 01/28/02 15:00									
Gasoline Range Organics (C6-C10)	**110000**	10000	ug/l	200	2A30003	01/30/02	01/30/02	8015Bm/8021B	P-01
Benzene	**8900**	100	"	"	"	"	"	"	
Toluene	**19000**	100	"	"	"	"	"	"	
Ethylbenzene	**2600**	100	"	"	"	"	"	"	
Xylenes (total)	**12000**	100	"	"	"	"	"	"	
Methyl tert-butyl ether	**3000**	500	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*110 %*	*70-130*		"	"	"	"	
MW-2 (MLA0510-03) Water Sampled: 01/28/02 09:30 Received: 01/28/02 15:00									
Gasoline Range Organics (C6-C10)	ND	250	ug/l	5	2B05003	02/05/02	02/05/02	8015Bm/8021B	R-05
Benzene	**2.5**	2.5	"	"	"	"	"	"	
Toluene	**4.4**	2.5	"	"	"	"	"	"	
Ethylbenzene	**2.8**	2.5	"	"	"	"	"	"	
Xylenes (total)	**7.4**	2.5	"	"	"	"	"	"	
Methyl tert-butyl ether	**11000**	250	"	100	"	"	"	"	A-02,M-03
Surrogate: a,a,a-Trifluorotoluene		*85.4 %*	*70-130*		"	"	"	"	

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Gettler Ryan/Geostrategies - Tosco/Unocal	Project: Tosco (76) SS #1156,Oakland,Ca	
6747 Sierra Ct, Suite J	Project Number: 4276 MacArthur	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	02/11/02 11:39

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 (MLA0510-04) Water Sampled: 01/28/02 08:55 Received: 01/28/02 15:00									
Gasoline Range Organics (C6-C10)	**30000**	5000	ug/l	100	2A30003	01/30/02	01/30/02	8015Bm/8021B	P-01
Benzene	**880**	50	"	"	"	"	"	"	
Toluene	**2600**	50	"	"	"	"	"	"	
Ethylbenzene	**1800**	50	"	"	"	"	"	"	
Xylenes (total)	**4300**	50	"	"	"	"	"	"	
Methyl tert-butyl ether	**3200**	250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*116 %*	*70-130*		"	"	"	"	
MW-4 (MLA0510-05) Water Sampled: 01/28/02 08:10 Received: 01/28/02 15:00									
Gasoline Range Organics (C6-C10)	**12000**	5000	ug/l	100	2A30003	01/30/02	01/30/02	8015Bm/8021B	P-01
Benzene	**2100**	50	"	"	"	"	"	"	
Toluene	**130**	50	"	"	"	"	"	"	
Ethylbenzene	**350**	50	"	"	"	"	"	"	
Xylenes (total)	**670**	50	"	"	"	"	"	"	
Methyl tert-butyl ether	**1100**	250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*105 %*	*70-130*		"	"	"	"	
MW-5 (MLA0510-06) Water Sampled: 01/28/02 07:32 Received: 01/28/02 15:00									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	2A30001	01/30/02	01/30/02	8015Bm/8021B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**650**	25	"	10	"	"	"	"	A-01,M-03
Surrogate: a,a,a-Trifluorotoluene		*100 %*	*70-130*		"	"	"	"	

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Gettler Ryan/Geostrategies - Tosco/Unocal	Project: Tosco (76) SS #1156,Oakland,Ca	
6747 Sierra Ct, Suite J	Project Number: 4276 MacArthur	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	02/11/02 11:39

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-6 (MLA0510-07) Water Sampled: 01/28/02 10:43 Received: 01/28/02 15:00									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	2A30001	01/30/02	01/30/02	8015Bm/8021B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*89.9 %*		*70-130*	"	"	"	"	
MW-7 (MLA0510-08) Water Sampled: 01/28/02 11:22 Received: 01/28/02 15:00									
Gasoline Range Organics (C6-C10)	ND	1000	ug/l	20	2B05003	02/05/02	02/05/02	8015Bm/8021B	R-05
Benzene	ND	10	"	"	"	"	"	"	R-05
Toluene	ND	10	"	"	"	"	"	"	R-05
Ethylbenzene	ND	10	"	"	"	"	"	"	R-05
Xylenes (total)	ND	10	"	"	"	"	"	"	R-05
Methyl tert-butyl ether	**42000**	1000	"	400	"	"	"	"	A-02,M-03
Surrogate: a,a,a-Trifluorotoluene		*87.1 %*		*70-130*	"	"	"	"	

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Gettler Ryan/Geostrategies - Tosco/Unocal	Project: Tosco (76) SS #1156,Oakland,Ca	
6747 Sierra Ct, Suite J	Project Number: 4276 MacArthur	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	02/11/02 11:39

Diesel Hydrocarbons (C10-C28) by 8015B modified

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MLA0510-02) Water Sampled: 01/28/02 10:06 Received: 01/28/02 15:00									**HT-08**
Diesel Range Organics (C10-C28)	**4400**	210	ug/l	4	2B07022	02/07/02	02/09/02	8015Bm	D-15
Surrogate: n-Octacosane		*151 %*	*50-150*		"	"	"	"	*S-06*

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6747 Sierra Ct, Suite J	Project Number: 4276 MacArthur	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	02/11/02 11:39

MTBE Confirmation by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MLA0510-02) Water Sampled: 01/28/02 10:06 Received: 01/28/02 15:00									
Methyl tert-butyl ether	**440**	50	ug/l	100	2B04014	02/01/02	02/01/02	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*60-140*		"	"	"	"	
MW-2 (MLA0510-03) Water Sampled: 01/28/02 09:30 Received: 01/28/02 15:00									
Methyl tert-butyl ether	**10000**	500	ug/l	1000	2B04014	02/01/02	02/01/02	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*60-140*		"	"	"	"	
MW-3 (MLA0510-04) Water Sampled: 01/28/02 08:55 Received: 01/28/02 15:00									
Methyl tert-butyl ether	**210**	50	ug/l	100	2B04014	02/01/02	02/01/02	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*60-140*		"	"	"	"	
MW-4 (MLA0510-05) Water Sampled: 01/28/02 08:10 Received: 01/28/02 15:00									
Methyl tert-butyl ether	**500**	50	ug/l	100	2B04014	02/01/02	02/01/02	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		*103 %*	*60-140*		"	"	"	"	
MW-5 (MLA0510-06) Water Sampled: 01/28/02 07:32 Received: 01/28/02 15:00									
Methyl tert-butyl ether	**550**	50	ug/l	100	2B04014	02/01/02	02/01/02	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*60-140*		"	"	"	"	
MW-7 (MLA0510-08) Water Sampled: 01/28/02 11:22 Received: 01/28/02 15:00									
Methyl tert-butyl ether	**38000**	1000	ug/l	2000	2B04014	02/01/02	02/01/02	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		*105 %*	*60-140*		"	"	"	"	

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6747 Sierra Ct, Suite J	Project Number: 4276 MacArthur	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	02/11/02 11:39

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 2A30001 - EPA 5030B [P/T]										
Blank (2A30001-BLK1)				Prepared & Analyzed: 01/30/02						
Gasoline Range Organics (C6-C10)	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	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	*9.31*		"	*10.0*		*93.1*	*70-130*			
LCS (2A30001-BS1)				Prepared & Analyzed: 01/30/02						
Benzene	10.8	0.50	ug/l	10.0		108	70-130			
Toluene	10.9	0.50	"	10.0		109	70-130			
Ethylbenzene	10.5	0.50	"	10.0		105	70-130			
Xylenes (total)	31.3	0.50	"	30.0		104	70-130			
Surrogate: a,a,a-Trifluorotoluene	*10.0*		"	*10.0*		*100*	*70-130*			
LCS (2A30001-BS2)				Prepared & Analyzed: 01/30/02						
Gasoline Range Organics (C6-C10)	303	50	ug/l	250		121	70-130			
Surrogate: a,a,a-Trifluorotoluene	*10.2*		"	*10.0*		*102*	*70-130*			
Matrix Spike (2A30001-MS1)		**Source: MLA0501-02**		Prepared & Analyzed: 01/30/02						
Gasoline Range Organics (C6-C10)	672	50	ug/l	550	ND	122	60-140			
Benzene	9.58	0.50	"	6.60	ND	145	60-140			QM-07
Toluene	47.7	0.50	"	39.7	ND	120	60-140			
Ethylbenzene	10.0	0.50	"	9.20	ND	109	60-140			
Xylenes (total)	45.4	0.50	"	46.1	ND	98.5	60-140			
Surrogate: a,a,a-Trifluorotoluene	*13.8*		"	*10.0*		*138*	*70-130*			*S-04*
Matrix Spike Dup (2A30001-MSD1)		**Source: MLA0501-02**		Prepared & Analyzed: 01/30/02						
Gasoline Range Organics (C6-C10)	643	50	ug/l	550	ND	117	60-140	4.41	25	
Benzene	9.56	0.50	"	6.60	ND	145	60-140	0.209	25	QM-07
Toluene	46.7	0.50	"	39.7	ND	118	60-140	2.12	25	
Ethylbenzene	9.58	0.50	"	9.20	ND	104	60-140	4.29	25	
Xylenes (total)	45.3	0.50	"	46.1	ND	98.3	60-140	0.221	25	
Surrogate: a,a,a-Trifluorotoluene	*14.0*		"	*10.0*		*140*	*70-130*			*S-04*

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6747 Sierra Ct, Suite J	Project Number: 4276 MacArthur	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	02/11/02 11:39

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 2A30003 - EPA 5030B [P/T]										
Blank (2A30003-BLK1)				Prepared & Analyzed: 01/30/02						
Gasoline Range Organics (C6-C10)	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	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	*9.32*		"	*10.0*		*93.2*	*70-130*			
LCS (2A30003-BS1)				Prepared & Analyzed: 01/30/02						
Benzene	10.3	0.50	ug/l	10.0		103	70-130			
Toluene	9.88	0.50	"	10.0		98.8	70-130			
Ethylbenzene	9.15	0.50	"	10.0		91.5	70-130			
Xylenes (total)	27.8	0.50	"	30.0		92.7	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.46*		"	*10.0*		*94.6*	*70-130*			
LCS (2A30003-BS2)				Prepared & Analyzed: 01/30/02						
Gasoline Range Organics (C6-C10)	308	50	ug/l	250		123	70-130			
Surrogate: a,a,a-Trifluorotoluene	*10.0*		"	*10.0*		*100*	*70-130*			
Matrix Spike (2A30003-MS1)		**Source: MLA0524-01**		Prepared & Analyzed: 01/30/02						
Gasoline Range Organics (C6-C10)	532	50	ug/l	550	ND	96.7	60-140			
Benzene	9.07	0.50	"	6.60	ND	136	60-140			
Toluene	37.1	0.50	"	39.7	ND	93.1	60-140			
Ethylbenzene	8.34	0.50	"	9.20	ND	90.7	60-140			
Xylenes (total)	41.0	0.50	"	46.1	ND	88.9	60-140			
Surrogate: a,a,a-Trifluorotoluene	*11.5*		"	*10.0*		*115*	*70-130*			
Matrix Spike Dup (2A30003-MSD1)		**Source: MLA0524-01**		Prepared & Analyzed: 01/30/02						
Gasoline Range Organics (C6-C10)	563	50	ug/l	550	ND	102	60-140	5.66	25	
Benzene	9.16	0.50	"	6.60	ND	137	60-140	0.987	25	
Toluene	35.7	0.50	"	39.7	ND	89.6	60-140	3.85	25	
Ethylbenzene	8.25	0.50	"	9.20	ND	89.7	60-140	1.08	25	
Xylenes (total)	40.9	0.50	"	46.1	ND	88.7	60-140	0.244	25	
Surrogate: a,a,a-Trifluorotoluene	*11.4*		"	*10.0*		*114*	*70-130*			

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6747 Sierra Ct, Suite J	Project Number: 4276 MacArthur	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	02/11/02 11:39

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 2A31002 - EPA 5030B [P/T]										
Blank (2A31002-BLK1)				Prepared & Analyzed: 01/31/02						
Gasoline Range Organics (C6-C10)	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	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	*9.90*		"	*10.0*		*99.0*	*70-130*			
LCS (2A31002-BS1)				Prepared & Analyzed: 01/31/02						
Benzene	10.5	0.50	ug/l	10.0		105	70-130			
Toluene	10.5	0.50	"	10.0		105	70-130			
Ethylbenzene	10.8	0.50	"	10.0		108	70-130			
Xylenes (total)	32.5	0.50	"	30.0		108	70-130			
Surrogate: a,a,a-Trifluorotoluene	*10.2*		"	*10.0*		*102*	*70-130*			
LCS (2A31002-BS2)				Prepared & Analyzed: 01/31/02						
Gasoline Range Organics (C6-C10)	239	50	ug/l	250		95.6	70-130			
Surrogate: a,a,a-Trifluorotoluene	*10.2*		"	*10.0*		*102*	*70-130*			
LCS (2A31002-BS3)				Prepared & Analyzed: 01/31/02						
Gasoline Range Organics (C6-C10)	538	50	ug/l	550		97.8	70-130			
Benzene	12.4	0.50	"	6.60		188	70-130			I-08a
Toluene	44.5	0.50	"	39.7		112	70-130			
Ethylbenzene	10.7	0.50	"	9.20		116	70-130			
Xylenes (total)	51.4	0.50	"	46.1		111	70-130			
Surrogate: a,a,a-Trifluorotoluene	*10.9*		"	*10.0*		*109*	*70-130*			
LCS Dup (2A31002-BSD3)				Prepared & Analyzed: 01/31/02						
Gasoline Range Organics (C6-C10)	514	50	ug/l	550		93.5	70-130	4.56	25	
Benzene	11.3	0.50	"	6.60		171	70-130	9.28	25	I-08
Toluene	42.5	0.50	"	39.7		107	70-130	4.60	25	
Ethylbenzene	10.2	0.50	"	9.20		111	70-130	4.78	25	
Xylenes (total)	49.4	0.50	"	46.1		107	70-130	3.97	25	
Surrogate: a,a,a-Trifluorotoluene	*9.78*		"	*10.0*		*97.8*	*70-130*			

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6747 Sierra Ct, Suite J	Project Number: 4276 MacArthur	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	02/11/02 11:39

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 2B05003 - EPA 5030B [P/T]										
Blank (2B05003-BLK1)				Prepared & Analyzed: 02/05/02						
Gasoline Range Organics (C6-C10)	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	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	*9.54*		"	*10.0*		*95.4*	*70-130*			
LCS (2B05003-BS1)				Prepared & Analyzed: 02/05/02						
Benzene	10.0	0.50	ug/l	10.0		100	70-130			
Toluene	9.72	0.50	"	10.0		97.2	70-130			
Ethylbenzene	9.26	0.50	"	10.0		92.6	70-130			
Xylenes (total)	28.2	0.50	"	30.0		94.0	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.37*		"	*10.0*		*93.7*	*70-130*			
LCS (2B05003-BS2)				Prepared & Analyzed: 02/05/02						
Gasoline Range Organics (C6-C10)	291	50	ug/l	250		116	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.67*		"	*10.0*		*96.7*	*70-130*			
Matrix Spike (2B05003-MS1)		**Source: MLB0039-08**		Prepared & Analyzed: 02/05/02						
Gasoline Range Organics (C6-C10)	603	50	ug/l	550	ND	110	60-140			
Benzene	9.48	0.50	"	6.60	ND	141	60-140			QM-07
Toluene	39.4	0.50	"	39.7	ND	98.8	60-140			
Ethylbenzene	8.75	0.50	"	9.20	ND	95.1	60-140			
Xylenes (total)	43.3	0.50	"	46.1	ND	93.6	60-140			
Surrogate: a,a,a-Trifluorotoluene	*10.3*		"	*10.0*		*103*	*70-130*			
Matrix Spike Dup (2B05003-MSD1)		**Source: MLB0039-08**		Prepared & Analyzed: 02/05/02						
Gasoline Range Organics (C6-C10)	574	50	ug/l	550	ND	104	60-140	4.93	25	
Benzene	9.27	0.50	"	6.60	ND	137	60-140	2.24	25	
Toluene	38.0	0.50	"	39.7	ND	95.3	60-140	3.62	25	
Ethylbenzene	8.38	0.50	"	9.20	ND	91.1	60-140	4.32	25	
Xylenes (total)	41.5	0.50	"	46.1	ND	89.7	60-140	4.25	25	
Surrogate: a,a,a-Trifluorotoluene	*11.3*		"	*10.0*		*113*	*70-130*			

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6747 Sierra Ct, Suite J	Project Number: 4276 MacArthur	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	02/11/02 11:39

Diesel Hydrocarbons (C10-C28) by 8015B modified - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2B07022 - EPA 3510B										
Blank (2B07022-BLK1)				Prepared: 02/07/02 Analyzed: 02/08/02						
Diesel Range Organics (C10-C28)	ND	50	ug/l							
Surrogate: n-Octacosane	*37.1*		"	*50.0*		*74.2*	*50-150*			
LCS (2B07022-BS1)				Prepared: 02/07/02 Analyzed: 02/08/02						
Diesel Range Organics (C10-C28)	430	50	ug/l	500		86.0	60-140			
Surrogate: n-Octacosane	*38.1*		"	*50.0*		*76.2*	*50-150*			
LCS Dup (2B07022-BSD1)				Prepared: 02/07/02 Analyzed: 02/08/02						
Diesel Range Organics (C10-C28)	392	50	ug/l	500		78.4	60-140	9.25	50	
Surrogate: n-Octacosane	*36.1*		"	*50.0*		*72.2*	*50-150*			

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6747 Sierra Ct, Suite J	Project Number: 4276 MacArthur	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	02/11/02 11:39

MTBE Confirmation 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 2B04014 - EPA 5030B P/T										
Blank (2B04014-BLK1)				Prepared & Analyzed: 02/01/02						
Methyl tert-butyl ether	ND	0.50	ug/l							
Surrogate: 1,2-Dichloroethane-d4	*10.1*		"	*10.0*		*101*	*60-140*			
LCS (2B04014-BS1)				Prepared & Analyzed: 02/01/02						
Methyl tert-butyl ether	10.2	0.50	ug/l	10.0		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	*9.96*		"	*10.0*		*99.6*	*60-140*			
Matrix Spike (2B04014-MS1)		**Source: MLA0547-03**		Prepared & Analyzed: 02/01/02						
Methyl tert-butyl ether	10000	100	ug/l	2000	7300	135	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	*10.3*		"	*10.0*		*103*	*60-140*			
Matrix Spike Dup (2B04014-MSD1)		**Source: MLA0547-03**		Prepared & Analyzed: 02/01/02						
Methyl tert-butyl ether	10300	100	ug/l	2000	7300	150	70-130	2.96	25	QM-07
Surrogate: 1,2-Dichloroethane-d4	*10.3*		"	*10.0*		*103*	*60-140*			

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6747 Sierra Ct, Suite J	Project Number: 4276 MacArthur	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	02/11/02 11:39

Notes and Definitions

A-01	MTBE was analyzed on 1/31/02.
A-02	MTBE was analyzed on 1/31/02.
D-15	Chromatogram Pattern: Unidentified Hydrocarbons C10-C28
HT-08	EPA 8015B recommends a 7 day holding time. However, according to the 14 day holding time referenced in the California LUFT manual, the results are valid and useful for their intended purpose.
I-08	The LCS recovery for this analyte was above the control limit by 171%. This should be considered in evaluating the results for this batch for their intended purpose.
I-08a	The LCS recovery for this analyte was above the control limit by 188%. This should be considered in evaluating the results for this batch for their intended purpose.
M-03	This result is from a second dilution of the sample. An initial result was reported from a previous dilution of the sample necessary to report other analytes in a different range.
P-01	Chromatogram Pattern: Gasoline C6-C10
QM-07	The spike recovery was outside control limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
R-05	The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits.
S-04	The surrogate recovery for this sample is outside control limits due to interference from the sample matrix.
S-06	The recovery of this surrogate is outside control limits due to sample dilution which was required by high analyte concentration in the sample and/or matrix interference.
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