



GETTLER-RYAN INC.

TRANSMITTAL

August 30, 2002

G-R #180068

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

CC: Mr. David Vossler
Gettler-Ryan Inc.
Petaluma, California

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

Alameda County:

SEP 18 2002

Environmental Health

Tosco (Former Unocal)
Service Station #1871
96 MacArthur Boulevard
Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	August 23, 2002	Groundwater Monitoring and Sampling Report Third Quarter - Event of July 11, 2002

COMMENTS:

This report is being sent to you for your review/comment, prior to being distributed on your behalf. If no comments are received by **September 13, 2002**, this report will be distributed to the following:

cc: Alameda County Health Care Services, 1131 Harbor Bay Parkway, Alameda, California 94502

Enclosure

trans/1871-DBD



GETTLER - RYAN INC.

August 23, 2002
G-R Job #180068

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

RE: Third Quarter Event of July 11, 2002
Groundwater Monitoring & Sampling Report
Tosco (Former Unocal) Service Station #1871
96 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 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 reports are also attached.

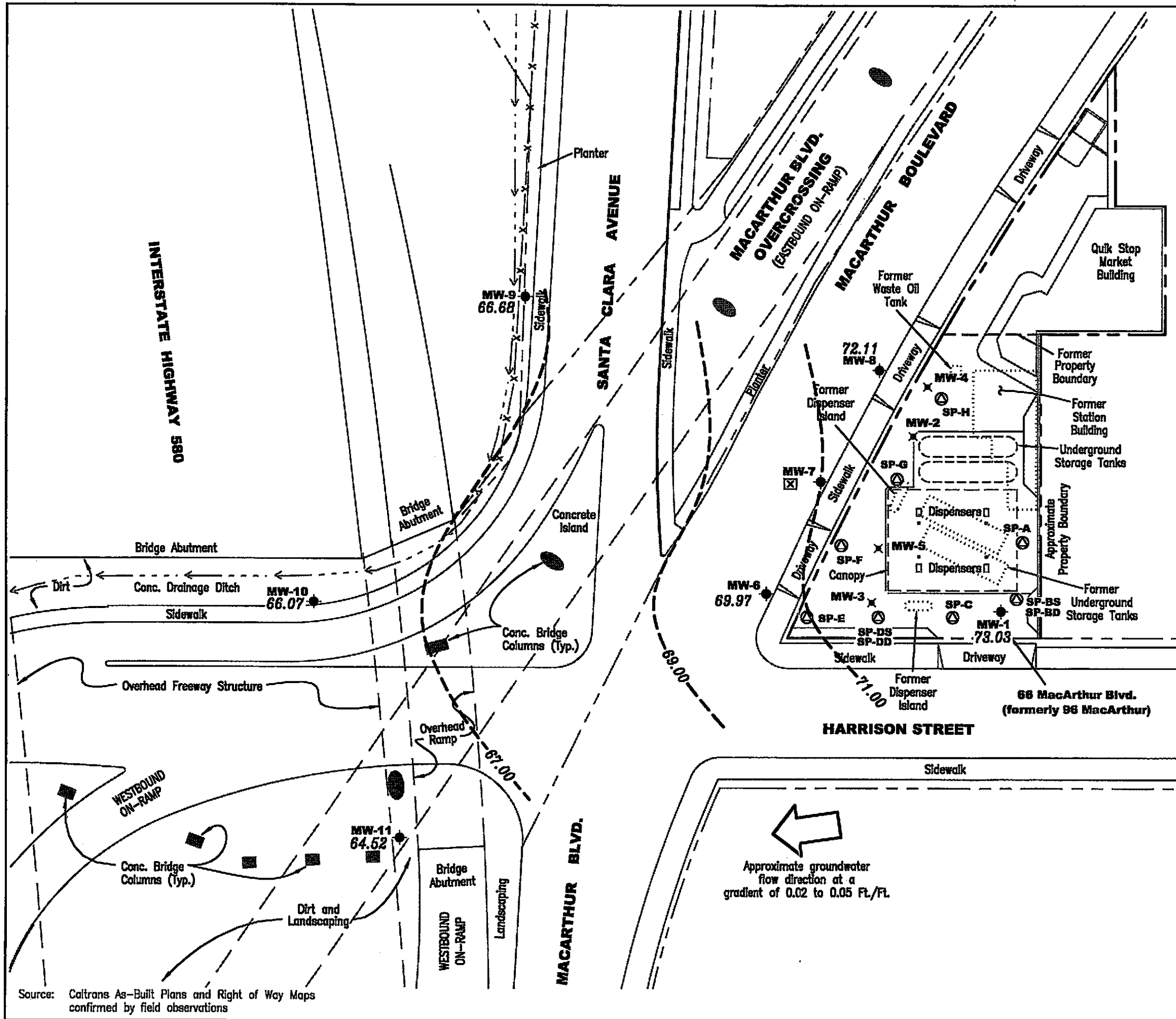
Sincerely,

Deanna L. Harding
Project Coordinator

Hagop Kevork
P.E. No. C55734



- Figure 1: Potentiometric Map
- Figure 2: Concentration Map
- Table 1: Groundwater Monitoring Data and Analytical Results
- Table 2: Field Measurements
- Table 3: Groundwater Analytical Results - Oxygenate Compounds
- Table 4: Groundwater Analytical Results
- Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports



EXPLANATION

- ◆ Groundwater monitoring well
- ✕ Destroyed groundwater monitoring well
- ⊙ Ozone Sparge Point
- 99.99 Groundwater elevation in feet referenced to Mean Sea Level
- - - 99.99 - - - Groundwater elevation contour, dashed where inferred
- ⊠ Inaccessible

FIGURE **1**

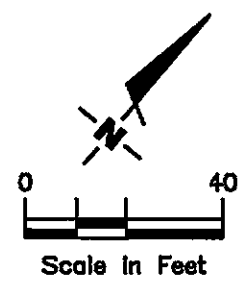
POTENTIOMETRIC MAP
 Tosco (Former Unocal) Service Station #1871
 96 MacArthur Boulevard
 Oakland, California

DATE July 11, 2002
 REVISED DATE

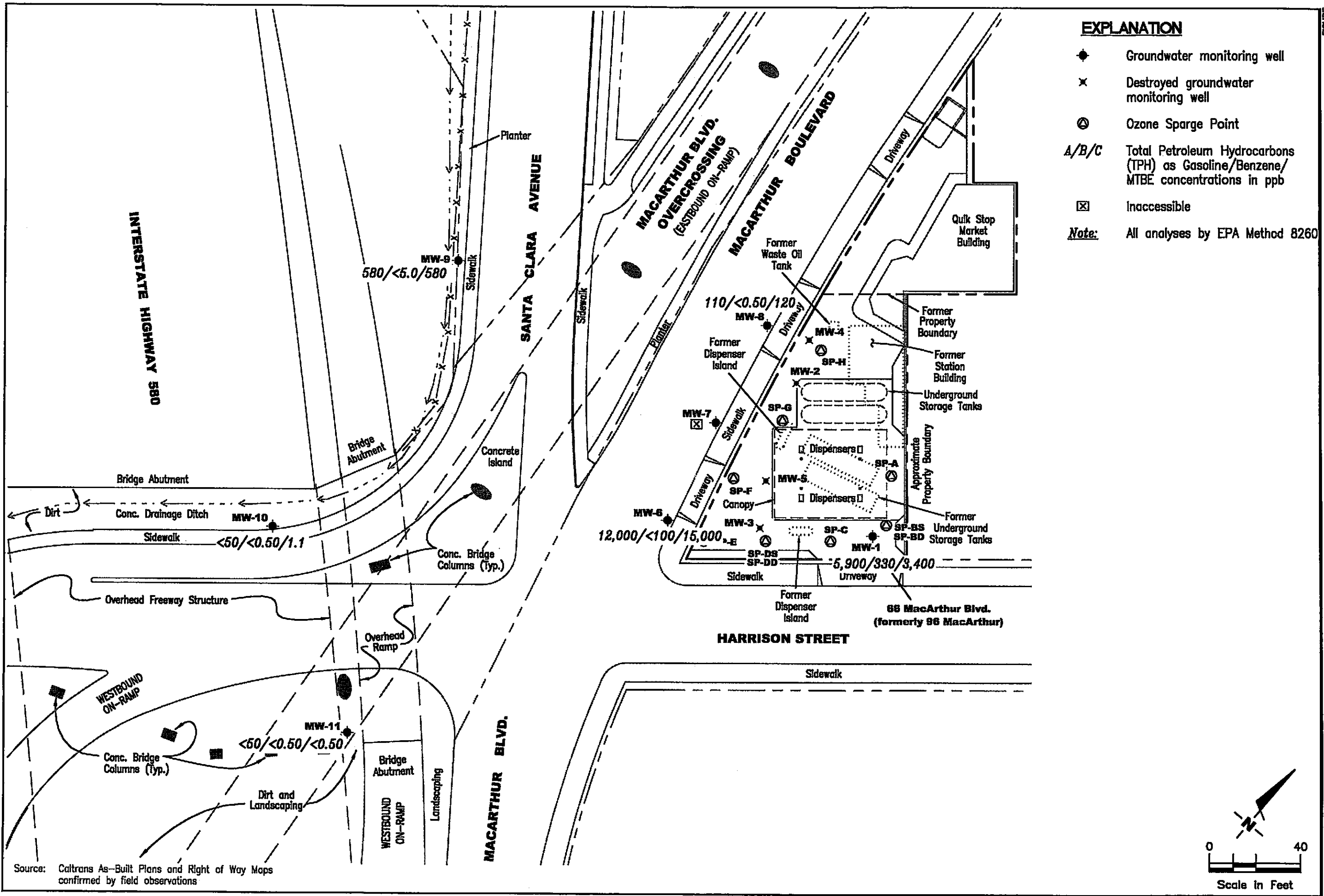
GETTLER-RYAN INC.
 6747 Sierra Ct., Suite J
 Dublin, CA 94588
 (925) 551-7555

PROJECT NUMBER
180068

FILE NAME: P:\enviro\tosco\1871\002-1871.dwg | Layout Tab: P03



Source: Caltrans As-Built Plans and Right of Way Maps confirmed by field observations



Source: Caltrans As-Built Plans and Right of Way Maps confirmed by field observations

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Former Unocal) Service Station #1871
 96 MacArthur Boulevard
 Oakland, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.L. (ft. bgs.)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-1	11/03/92	--	9.5-24.5	--	260,000	2,300	4,600	3,700	17,000	--
	01/25/93	--		--	120,000	2,100	4,600	4,900	22,000	--
81.18	04/29/93	13.71		67.47	100,000	850	2,000	4,300	19,000	--
	07/16/93	14.51		66.67	29,000	590	560	980	4,200	--
	10/19/93	15.20		65.98	67,000	1,400	2,600	2,900	5,000	--
	01/20/94	15.17		66.01	92,000	1,200	3,000	3,400	17,000	--
	04/13/94	14.44		66.74	51,000	1,000	2,600	3,200	15,000	--
	07/13/94	14.88		66.30	35,000	550	150	1,400	5,700	--
	10/10/94	15.55		65.63	52,000	1,000	810	3,300	12,000	--
	01/10/95	12.44		68.74	810	16	18	59	250	--
	04/17/95	12.68		68.50	48,000	880	530	2,500	11,000	--
	07/24/95	13.97		67.21	48,000	1,500	420	2,700	9,700	--
	10/23/95	14.85		66.33	47,000	780	210	2,100	11,000	270
	01/18/96	14.21		66.97	30,000	1,500	500	3,500	13,000	2,400
86.24	04/18/96	13.40		72.84	66,000	2,700	2,200	3,100	13,000	57,000
	07/24/96	14.15		72.09	5,600	2,100	ND	160	160	24,000
	10/24/96	14.85		71.39	110,000	7,500	8,000	3,300	14,000	58,000
	01/28/97	11.25		74.99	94,000	7,700	19,000	3,100	15,000	120,000
	07/29/97	14.67		71.57	ND	ND	ND	ND	ND	70,000
	01/14/98	12.27		73.97	85,000	6,100	10,000	3,000	17,000	110,000
	07/01/98	14.32		71.92	110,000	8,700	12,000	2,700	15,000	110,000
	06/18/99	13.93		72.31	49,000	6,900	6,500	380	12,000	72,000/47,000 ⁴
	01/21/00	15.05		71.19	63,700 ⁵	5,520	2,000	2,640	13,100	57,100
	07/10/00	13.97		72.27	67,800 ⁵	9,910	4,120	3,330	16,100	67,400/54,000 ⁴
	01/04/01	14.92		71.32	63,900 ⁵	6,270	784	2,670	12,900	--/38,100 ⁴
	07/16/01	14.32		71.92	66,000 ⁵	7,100	330	2,300	9,800	36,000/41,000 ⁴
86.99	◆ 01/31/02	13.54		73.45	42,000 ⁵	5,800	1,800	2,000	8,200	26,000/26,000 ⁴
	04/11/02	13.64		73.35	58,000	2,900	1,200	1,800	10,000	19,000
	07/11/02 ⁸	13.96		73.03	5,900	330	<10	230	600	3,400

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Former Unocal) Service Station #1871
 96 MacArthur Boulevard
 Oakland, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.L. (ft. bgs.)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-2	11/03/92	--	--	--	140	2.2	ND	ND	2.0	--
	01/25/93	--		--	2,100	56	1.1	90	140	--
76.61	04/29/93	9.73		66.88	1,500	290	ND	33	11	--
	07/16/93	10.17		66.44	510 ¹	17	0.60	3.2	2.5	--
	10/19/93	11.18		65.43	670	24	1.1	7.7	23	--
	01/20/94	11.12		65.49	820	97	ND	12	ND	--
	04/13/94	10.12		66.49	550	71	ND	5.1	1.3	--
	07/13/94	10.86		65.75	2,000	490	ND	17	13	--
	10/10/94	11.48		65.13	2,300	340	ND	25	ND	--
	01/10/95	8.71		67.90	850	3.8	ND	8.5	1.3	--
	04/17/95	8.90		67.71	1,300	4.7	ND	8.3	1.2	--
	07/24/95	9.94		66.67	960	20	ND	4.2	6.2	--
	10/23/95	10.70		65.91	ND	ND	ND	ND	ND	19
	01/18/96	10.11		66.50	900	300	86	7.6	18	4,300
81.66	04/18/96	9.27		72.39	18,000	3,600	680	890	4,100	19,000
	07/24/96	10.02		71.64	100,000	13,000	21,000	2,700	16,000	120,000
	10/24/96	10.78		70.88	800	110	17	11	20	20,000
	01/28/97	7.70		73.96	45,000	2,400	2,900	2,000	7,600	29,000
	07/29/97	10.28		71.38	ND	1.2	0.72	0.63	0.62	17,000
	01/14/98	8.63		73.03	14,000	1,000	150	790	3,300	23,000
	07/01/98	9.53		72.13	2,700	100	ND ³	180	78	7,100
	DESTROYED									
MW-3	11/03/92	--	--	--	2,100	120	15	38	200	--
	01/25/93	--		--	2,300	80	1	55	52	-
77.48	04/29/93	11.37		66.11	4,500	1,700	ND	200	140	--
	07/16/93	12.09		65.39	4,000 ¹	1,100	28	52	70	--
	10/19/93	12.69		64.79	3,800	42	ND	50	56	--
	01/20/94	12.65		64.83	4,200	11	ND	21	15	--
	04/13/94	12.02		65.46	4,200	210	ND	36	53	--
	07/13/94	12.46		65.02	1,800 ²	16	16	ND	21	--

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Former Unocal) Service Station #1871
 96 MacArthur Boulevard
 Oakland, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.L. (ft. bgs.)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-3	10/10/94	12.98	--	64.50	4,300	11	ND	12	ND	--
(cont)	01/10/95	10.42		67.06	310	4.6	ND	3.5	2.1	--
	04/17/95	10.42		67.06	7,800	ND	4.6	300	450	--
	07/24/95	11.76		65.72	3,200	170	ND	22	16	--
	10/23/95	12.50		64.98	3,900	55	ND	19	11	4,500
	01/18/96	11.79		65.69	2,200	270	33	26	18	5,500
82.55	04/18/96	11.30		71.25	6,000	1,800	ND	100	230	48,000
	07/24/96	12.17		70.38	ND	2,500	ND	ND	ND	71,000
	10/24/96	12.65		69.90	3,800	660	ND	15	ND	65,000
	01/28/97	9.50		73.05	4,400	250	13	87	47	54,000
	07/29/97	11.99		70.56	ND	3,500	ND	220	ND	75,000
	01/14/98	10.30		72.25	ND ³	430	ND ³	100	380	37,000
	07/01/98	11.70		70.85	ND ³	430	ND ³	ND ³	ND ³	45,000
	DESTROYED									
MW-4										
82.04	04/18/96	9.83	--	72.21	ND	630	ND	ND	ND	18,000
	07/24/96	10.47		71.57	ND	ND	ND	ND	5.2	3,900
	10/24/96	11.14		70.90	ND	ND	ND	ND	ND	6,300
	01/28/97	7.94		74.10	1,200	490	ND	17	6.8	16,000
	07/29/97	10.86		71.18	50	1.5	0.61	0.73	0.78	15,000
	01/14/98	8.73		73.31	ND ³	ND ³	ND ³	ND ³	ND ³	5,200
	07/01/98	10.51		71.53	ND	ND	ND	ND	ND	640
	DESTROYED									
MW-5										
81.80	04/18/96	9.65	--	72.15	31,000	5,500	1,400	1,700	8,100	66,000
	07/24/96	10.80		71.00	32,000	6,400	ND	1,600	6,100	120,000
	10/24/96	11.40		70.40	17,000	6,900	ND	970	130	84,000
	01/28/97	7.76		74.04	19,000	6,100	62	82	310	160,000

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Former Unocal) Service Station #1871
 96 MacArthur Boulevard
 Oakland, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.L. (ft. bgs.)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-5	07/29/97	11.58	--	70.22	ND	ND	ND	ND	ND	71,000
(cont)	01/14/98	9.08		72.72	ND ³	3,600	ND ³	ND ³	ND ³	80,000
	07/01/98	11.25		70.55	6,400	2,100	21	120	330	61,000
	DESTROYED									
MW-6										
78.91	06/18/99	9.30	5.0-25.0	69.61	2,100	21	29	ND ³	47	97,000/71,000 ⁴
	01/21/00	9.37		69.54	1,880 ⁵	143	31.2	106	196	41,200/48,800 ⁴
	07/10/00	8.94		69.97	5,710 ⁵	869	209	301	1,430	22,200/19,500 ⁴
	01/04/01	9.21		69.70	ND	ND	ND	ND	ND	--/9,510 ⁴
	07/16/01	9.42		69.49	4,800 ⁵	200	21	150	440	29,000/34,000 ⁴
	01/31/02	8.50		70.41	12,000 ⁷	250	92	500	1,500	26,000/31,000 ⁴
79.67	04/11/02	9.08		70.59	3,600	42	32	39	280	120,000
	07/11/02 ⁸	9.70		69.97	12,000 ⁹	<100	<100	<100	<200	15,000
MW-7										
79.92	06/18/99	8.70	5.0-25.0	71.22	ND	ND	ND	ND	ND	16,000/13,000 ⁴
	01/21/00	9.30		70.62	ND ³	ND ³	ND ³	ND ³	ND ³	12,300/18,200 ⁴
	07/10/00	8.72		71.20	ND ³	ND ³	ND ³	ND ³	ND ³	16,900/13,800 ⁴
	01/04/01	9.17		70.75	ND	ND	ND	ND	0.719	--/37.3 ⁴
	07/16/01	9.02		70.90	ND	ND	ND	ND	ND	7,200/4,700 ⁴
	01/31/02	7.91		72.01	<50	<0.50	<0.50	<0.50	<0.50	8,900/9,900 ⁴
80.67	04/11/02	INACCESSIBLE - CAR PARKED OVER WELL				--	--	--	--	--
	07/11/02	INACCESSIBLE - TRUCK PARKED OVER WELL				--	--	--	--	--
MW-8										
80.96	06/18/99	9.10	5.0-25.0	71.86	ND	ND	ND	ND	ND	290/160 ⁴
	01/21/00	10.00		70.96	ND	ND	ND	ND	1.09	224/221 ⁴
	07/10/00	7.94		73.02	ND	ND	ND	ND	ND	234/223 ⁴

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Former Unocal) Service Station #1871
 96 MacArthur Boulevard
 Oakland, 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-8	01/04/01	9.76	5.0-25.0	71.20	3,790 ⁵	141	8.92	128	375	--/34,200 ⁴
(cont)	07/16/01	9.15		71.81	ND	ND	ND	ND	ND	66/70 ⁴
	01/31/02	7.99		72.97	5,900 ⁷	86	<10	630	390	670/700 ⁴
81.71	04/11/02	9.00		72.71	250	2.0	<0.50	38	2.2	410
	07/11/02 ⁸	9.60		72.11	110 ⁹	<0.50	<0.50	<0.50	<1.0	120
MW-9										
82.07	01/31/02 ⁶	14.72	--	67.35	<50	<0.50	<0.50	<0.50	<0.50	680/910 ⁴
	04/11/02	14.85		67.22	<50	<0.50	<0.50	<0.50	<0.50	620
	07/11/02 ⁸	15.39		66.68	580 ⁹	<5.0	<5.0	<5.0	<10	580
MW-10										
74.98	01/31/02 ⁶	8.02	--	66.96	<50	<0.50	<0.50	<0.50	<0.50	<5.0/1.2 ⁴
	04/11/02	7.60		67.38	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	07/11/02 ⁸	8.91		66.07	<50	<0.50	<0.50	<0.50	<1.0	1.1
MW-11										
77.31	01/31/02 ⁶	11.71	--	65.60	<50	<0.50	<0.50	<0.50	<0.50	<5.0/<1.0 ⁴
	04/11/02	11.95		65.36	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	07/11/02 ⁸	12.79		64.52	<50	<0.50	<0.50	<0.50	<1.0	<0.50
Trip Blank										
TB-LB	01/14/98	--	--	--	ND	ND	ND	ND	ND	ND
	07/01/98	--	--	--	ND	ND	ND	ND	ND	ND
	06/18/99	--	--	--	ND	ND	ND	ND	ND	ND
	01/21/00	--	--	--	ND	ND	ND	ND	ND	14.6
	07/10/00	--	--	--	ND	ND	ND	ND	ND	ND
	01/04/01	--	--	--	ND	ND	ND	ND	ND	ND

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Former Unocal) Service Station #1871
 96 MacArthur Boulevard
 Oakland, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.L. (ft. bgs.)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
TB-LB	07/16/01	--	--	--	ND	ND	ND	ND	ND	ND
(cont)	01/31/02	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	04/11/02	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5
QA	07/11/02 ⁸	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<0.50

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Former Unocal) Service Station #1871
 96 MacArthur Boulevard
 Oakland, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to January 14, 1998, were compiled from reports prepared by MPDS Services, Inc.

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

* TOC elevation were surveyed by Virgil Chaves Land Surveying on January 15, 2002. Elevations were based on a USGS bronze disc located near the north end of the curb return at the northwest corner of 38th Street and Broadway, Oakland, California, (Benchmark = 85.41 feet NGVD 29).

TOC elevations were re-surveyed by Kier & Wright in May, 1996, per City of Oakland Benchmark No. 2310, a cut square in concrete curb at mid point of return at the northeast corner of El Dorado and Fairmont Street. (Elevation = 77.53 feet msl).

◆ Well elevation has been adjusted up 0.75 feet based on Virgil Chavez Land Survey dated March 5, 2002.

- 1 Laboratory report indicates the presence of discrete peaks not indicative of gasoline.
- 2 Laboratory report indicates the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.
- 3 Detection limit raised. Refer to analytical reports.
- 4 MTBE by EPA Method 8260.
- 5 Laboratory report indicates gasoline C6-C12.
- 6 Well development performed.
- 7 Laboratory report indicates weathered gasoline C6-C12.
- 8 TPH-G, BTEX and MTBE by EPA Method 8260.
- 9 Laboratory report indicates hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.

Table 2
Field Measurements
 Tosco (Former Unocal) Service Station #1871
 96 MacArthur Boulevard
 Oakland, California

WELL ID	DATE	POST FIRST CASING VOLUME PURGE		POST SECOND CASING VOLUME PURGE		POST THIRD CASING VOLUME PURGE	
		D.O. (mg/L)	ORP (mV)	D.O. (mg/L)	ORP (mV)	D.O. (mg/L)	ORP (mV)
MW-1	07/11/02	5.0	122	3.1	118	2.9	116
MW-6	07/11/02	0.7	-17	3.4	13	2.4	12
MW-8	07/11/02	1.1	26	1.6	10	2.4	13
MW-9	07/11/02	1.1	10	1.0	11	1.2	15
MW-10	07/11/02	1.1	36	1.0	31	1.2	24
MW-11	07/11/02	1.8	419	1.4	400	1.1	391

EXPLANATIONS:

D.O. = Dissolved Oxygen
 (mg/L) = Milligrams per liter
 ORP = Oxidation Reduction Potential
 (mV) = Millivolts

Table 3
Groundwater Analytical Results - Oxygenate Compounds
 Tosco (Former Unocal) Service Station #1871
 96 MacArthur Boulevard
 Oakland, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	EDB (ppb)	1,2-DCA (ppb)
MW-1	06/18/99	ND ¹	ND ¹	47,000	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	07/10/00	--	--	54,000	--	--	--	--	--
	01/04/01	--	--	38,100	--	--	--	--	--
	07/16/01	ND ¹	ND ¹	41,000	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	01/31/02	--	--	26,000	--	--	--	--	--
	07/11/02	--	--	3,400	--	--	--	--	--
MW-6	06/18/99	ND ¹	ND ¹	71,000	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	01/21/00	--	--	48,800	--	--	--	--	--
	07/10/00	--	--	19,500	--	--	--	--	--
	01/04/01	--	--	9,510	--	--	--	--	--
	07/16/01	ND ¹	ND ¹	34,000	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	01/31/02	--	--	31,000	--	--	--	--	--
	07/11/02	<5,000	<1,000	15,000	<200	<100	<100	<100	<100
MW-7	06/18/99	ND ¹	ND ¹	13,000	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	01/21/00	--	--	18,200	--	--	--	--	--
	07/10/00	--	--	13,800	--	--	--	--	--
	01/04/01	--	--	37.3	--	--	--	--	--
	07/16/01	ND ¹	ND ¹	4,700	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	01/31/02	--	--	9,900	--	--	--	--	--
	07/11/02	INACCESSIBLE - TRUCK PARKED OVER WELL				--	--	--	--
MW-8	06/18/99	ND ¹	ND ¹	160	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	01/21/00	--	--	221	--	--	--	--	--
	07/10/00	--	--	223	--	--	--	--	--
	01/04/01	--	--	34,200	--	--	--	--	--

Table 3
Groundwater Analytical Results - Oxygenate Compounds
 Tosco (Former Unocal) Service Station #1871
 96 MacArthur Boulevard
 Oakland, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	EDB (ppb)	1,2-DCA (ppb)
MW-8	07/16/01	ND	ND	70	ND	ND	ND	ND	ND
(cont)	01/31/02	--	--	700	--	--	--	--	--
	07/11/02	--	--	120	--	--	--	--	--
MW-9	01/31/02	<3,600	<140	910	<7.1	<7.1	<7.1	<7.1	<7.1
	07/11/02	--	--	580	--	--	--	--	--
MW-10	01/31/02	<500	<20	1.2	<1.0	<1.0	<1.0	<1.0	<1.0
	07/11/02	--	--	1.1	--	--	--	--	--
MW-11	01/31/02	<500	<20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/11/02	--	--	<0.50	--	--	--	--	--
TRIP BLANK									
QA	07/11/02	--	--	<0.50	--	--	--	--	--

Table 3
Groundwater Analytical Results - Oxygenate Compounds
Tosco (Former Unocal) Service Station #1871
96 MacArthur Boulevard
Oakland, California

EXPLANATIONS:

TBA = Tertiary butyl alcohol
MTBE = Methyl tertiary butyl ether
DIPE = Di-isopropyl ether
ETBE = Ethyl tertiary butyl ether
TAME = Tertiary amyl methyl ether
EDB = 1,2-Dibromoethane
1,2-DCA = 1,2-Dichloroethane
(ppb) = Parts per billion
-- = Not Analyzed
ND = Not Detected
QA = Quality Assurance

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

¹ Detection limit raised. Refer to analytical reports.

Table 4
Groundwater Analytical Results
 Tosco (Former Unocal) Service Station #1871
 96 MacArthur Boulevard
 Oakland, California

WELL ID	DATE	TPH-D (ppb)	TOG (ppb)	HVOC (ppb)	SVOC (ppb)
MW-1	06/18/99	--	--	ND	--
MW-4	04/18/96	110 ¹	ND	ND	--
	07/24/96	ND	ND	ND	ND
	10/24/96	ND	ND	ND	ND ²
	01/28/97	210 ³	ND	ND	ND ⁴
	07/29/97	ND	ND	ND	ND
	01/14/98	ND	ND	ND	ND
	07/01/98	ND	ND	ND	ND
	DESTROYED				
MW-6	06/18/99	--	--	ND	--
MW-7	06/18/99	--	--	ND	--
MW-8	06/18/99	--	--	ND	ND ⁵

EXPLANATIONS:

Groundwater analytical results prior to January 14, 1998, were compiled from reports prepared by MPDS Services, Inc.

TPH-D = Total Petroleum Hydrocarbons as Diesel

TOG = Total Oil and Grease

HVOC = Halogenated Volatile Organic Compounds by EPA Method 8010

SVOC = Semi-Volatile Organic Compounds by EPA Method 8270

(ppb) = Parts per billion

-- = Not Analyzed

ND = Not Detected

¹ Laboratory report indicates the hydrocarbons detected did not appear to contain diesel.

² Bis (2-ethylhexyl) phthalate was detected at a concentration of 14 ppb.

³ Laboratory report indicates the hydrocarbons detected appeared to be a diesel and non-diesel mixture.

⁴ Naphthalene was detected at a concentration of 17 ppb.

⁵ All SVOCs were ND except for Bis(2-ethylhexyl)phthalate at 11 ppb.

All EPA Method 8010 and 8270 constituents were ND, unless noted.

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.



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Tosco #1871 Job Number: 180068
 Site Address: 96 MacArthur Blvd. Event Date: 7-11-02
 City: Oakland, CA Sampler: BG

Well ID: MW-1 Well Condition: OK
 Well Diameter: 2 1/4 in. Hydrocarbon Thickness: 0 ft. Amount Bailed (product/water): 0 gal.
 Total Depth: 24.08 ft.
 Depth to Water: 13.96 ft.

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

10.12 xVF .66 = 7 x3 (case volume) = Estimated Purge Volume: 21 gal.

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

Sampling Equipment: Disposable Bailer ✓
 Pressure Bailer _____
 Discrete Bailer _____
 Other: _____

Start Time (purge): 1120 Weather Conditions: Sunny
 Sample Time/Date: 1135 7-11-02 Water Color: Clear Odor: None
 Purging Flow Rate: 3 gpm. Sediment Description: _____
 Did well de-water? No If yes, Time: _____ Volume: _____ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
<u>1125</u>	<u>7</u>	<u>6.11</u>	<u>310</u>	<u>65.1</u>	<u>5.0</u>	<u>122</u>
<u>1126</u>	<u>14</u>	<u>6.16</u>	<u>319</u>	<u>65.6</u>	<u>3.1</u>	<u>118</u>
<u>1129</u>	<u>21</u>	<u>6.17</u>	<u>316</u>	<u>65.1</u>	<u>2.9</u>	<u>116</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-1</u>	<u>3</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>STL Pleasanton</u>	<u>TPH-G, BTEX, MTBE by 8260</u>

COMMENTS: _____

Add/Replaced Lock: Add/Replaced Plug: Size:



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Tosco #1871 Job Number: 180068
 Site Address: 96 MacArthur Blvd. Event Date: 7-11-02
 City: Oakland, CA Sampler: BG

Well ID: MW-4 Well Condition: OK
 Well Diameter: 21.4 in. Hydrocarbon Thickness: 5 ft. Amount Bailed (product/water): 0 gal.
 Total Depth: 24.23 ft.
 Depth to Water: 9.70 ft.
 Volume Factor (VF) table:

3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

 14.73 xVF .17 = 2 x3 (case volume) = Estimated Purge Volume: 6 gal.

Purge Equipment: Disposable Bailer Stainless Steel Bailer _____ Stack Pump _____ Suction Pump _____ Grundfos _____ Other: _____
 Sampling Equipment: Disposable Bailer Pressure Bailer _____ Discrete Bailer _____ Other: _____

Start Time (purge): 0924 Weather Conditions: Sunny
 Sample Time/Date: 0945 7-11-02 Water Color: Brown Odor: N/A
 Purging Flow Rate: — gpm. Sediment Description: _____
 Did well de-water? No If yes, Time: _____ Volume: _____ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
0929	2	6.06	525	67.6	0.7	-14
0935	4	5.87	303	66.1	3.4	13
0940	6	5.85	293	65.8	2.4	12

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-4	5 x voa vial	YES	HCL	STL Pleasanton	TPH-G, BTEX, MTBE by 8260

COMMENTS: _____

Add/Replaced Lock:

Add/Replaced Plug: _____ Size: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Tosco #1871 Job Number: 180068
 Site Address: 96 MacArthur Blvd. Event Date: 7-11-02
 City: Oakland, CA Sampler: BO

Well ID: MW-7 Well Condition: (Inaccessible)
 Well Diameter: 2 1/4 in. Hydrocarbon Amount Bailed
 Total Depth: 24.50 ft. Thickness: _____ ft. (product/water): _____ gal.
 Depth to Water: _____ 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: _____

Start Time (purge): _____ Weather Conditions: _____
 Sample Time/Date: _____ 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 (μ mhos/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	STL Pleasanton	TPH-G, BTEX, MTBE by 8260

COMMENTS: Truck parked over well. Went inside to locate owner but had no luck!

Add/Replaced Lock: _____

Add/Replaced Plug: _____ Size: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Tosco #1871 Job Number: 180068
 Site Address: 96 MacArthur Blvd. Event Date: 7-11-02
 City: Oakland, CA Sampler: Bc

Well ID: MW-8 Well Condition: Oh
 Well Diameter: 21 4 in. Hydrocarbon Thickness: 0 ft. Amount Bailed (product/water): 0 gal.
 Total Depth: 27.51 ft.
 Depth to Water: 9.60 ft.

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

15.21 xVF .17 = 2 x3 (case volume) = Estimated Purge Volume: 4 gal.

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

Sampling Equipment: Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Other: _____

Start Time (purge): 0953 Weather Conditions: Sunny
 Sample Time/Date: 1013 17-11-02 Water Color: Brown Odor: NO
 Purging Flow Rate: — gpm. Sediment Description: _____
 Did well de-water? No If yes, Time: _____ Volume: _____ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
<u>0957</u>	<u>2</u>	<u>6.30</u>	<u>222</u>	<u>45.9</u>	<u>1.1</u>	<u>26</u>
<u>1002</u>	<u>4</u>	<u>6.34</u>	<u>215</u>	<u>66.2</u>	<u>1.6</u>	<u>10</u>
<u>1008</u>	<u>6</u>	<u>6.21</u>	<u>189</u>	<u>65.9</u>	<u>2.4</u>	<u>13</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-8</u>	<u>3</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>STL Pleasanton</u>	<u>TPH-G, BTEX, MTBE by 8260</u>

COMMENTS: _____

Add/Replaced Lock: Add/Replaced Plug: Size:



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Tosco #1871 Job Number: 180068
 Site Address: 96 MacArthur Blvd. Event Date: 7-11-02
 City: Oakland, CA Sampler: RG

Well ID: MW-9 Well Condition: OK
 Well Diameter: 21.4 in. Hydrocarbon Amount Bailed: 0 gal.
 Total Depth: 19.91 ft. Thickness: 0 ft. (product/water): 0 gal.
 Depth to Water: 15.39 ft.

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

4.52 xVF .17 = .90 x3 (case volume) = Estimated Purge Volume: 2.4 gal.

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

Sampling Equipment: Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Other: _____

Start Time (purge): 1020 Weather Conditions: Sunny
 Sample Time/Date: 1031 17-11-02 Water Color: Clear Odor: NO
 Purging Flow Rate: _____ gpm. Sediment Description: _____
 Did well de-water? No If yes, Time: _____ Volume: _____ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
<u>1021</u>	<u>.50</u>	<u>6.98</u>	<u>201</u>	<u>66.1</u>	<u>1.1</u>	<u>10</u>
<u>1024</u>	<u>1.6</u>	<u>6.87</u>	<u>200</u>	<u>66.2</u>	<u>1.0</u>	<u>11</u>
<u>1026</u>	<u>2.4</u>	<u>6.80</u>	<u>200</u>	<u>66.0</u>	<u>1.2</u>	<u>15</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-9</u>	<u>3</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>STL Pleasanton</u>	<u>TPH-G, BTEX, MTBE by 8260</u>

COMMENTS: _____

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Size: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Tosco #1871 Job Number: 180068
 Site Address: 96 MacArthur Blvd. Event Date: 7-11-02
 City: Oakland, CA Sampler: BC

Well ID: MW-10 Well Condition: OK
 Well Diameter: 21.4 in. Hydrocarbon Amount Bailed
 Total Depth: 19.98 ft. Thickness: 0 ft. (product/water): 0 gal.
 Depth to Water: 8.91 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

11.07 xVF .17 = 2 x3 (case volume) = Estimated Purge Volume: 6 gal.

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

Sampling Equipment: Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Other: _____

Start Time (purge): 1034 Weather Conditions: Sunny
 Sample Time/Date: 1050 17-11-02 Water Color: Clear Odor: NO
 Purging Flow Rate: — gpm. Sediment Description: _____
 Did well de-water? N. If yes, Time: _____ Volume: _____ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
<u>1038</u>	<u>2</u>	<u>6.51</u>	<u>310</u>	<u>66.5</u>	<u>1.1</u>	<u>36</u>
<u>1042</u>	<u>4</u>	<u>6.46</u>	<u>306</u>	<u>66.1</u>	<u>1.0</u>	<u>31</u>
<u>1045</u>	<u>6</u>	<u>6.44</u>	<u>311</u>	<u>66.1</u>	<u>1.2</u>	<u>29</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-10</u>	<u>3</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>STL Pleasanton</u>	<u>TPH-G, BTEX, MTBE by 8260</u>

COMMENTS: _____

Add/Replaced Lock:

Add/Replaced Plug: Size: 1



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Tosco #1871 Job Number: 180068
 Site Address: 96 MacArthur Blvd. Event Date: 7.11.02
 City: Oakland, CA Sampler: BC

Well ID: MW-11 Well Condition: OK
 Well Diameter: (2) 4 in. Hydrocarbon Amount Bailed: 0 gal.
 Total Depth: 30.02 ft. Thickness: 0 ft. (product/water): 0 gal.
 Depth to Water: 12.79 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

17.29 xVF .17 = 3 x3 (case volume) = Estimated Purge Volume: 9 gal.

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

Sampling Equipment: Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Other: _____

Start Time (purge): 1057 Weather Conditions: Sunny
 Sample Time/Date: 1114 7.11.02 Water Color: Clear Odor: N/A
 Purging Flow Rate: - gpm. Sediment Description: _____
 Did well de-water? N/A If yes, Time: _____ Volume: _____ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
<u>1100</u>	<u>3</u>	<u>6.31</u>	<u>520</u>	<u>62.6</u>	<u>1.8</u>	<u>419</u>
<u>1104</u>	<u>6</u>	<u>6.21</u>	<u>513</u>	<u>62.3</u>	<u>1.4</u>	<u>400</u>
<u>1108</u>	<u>9</u>	<u>6.19</u>	<u>496</u>	<u>61.1</u>	<u>1.1</u>	<u>391</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-11</u>	<u>3</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>STL Pleasanton</u>	<u>TPH-G, BTEX, MTBE by 8260</u>

COMMENTS: _____

Add/Replaced Lock: Add/Replaced Plug: Size:

2002-07-0264

67479
Gettler-Ryan Inc., Chain-of-Custody

Toaco Corp./
Phillips 66 Co.
2000 Crow Canyon Place
Suite 400
San Ramon, CA 94583

Facility Number #1871
Facility Address 96 MACARTHUR, OAKLAND, CA
Global ID T0600101493 Project 180068.80
Client Contact MR. DAVID B. DEWITT
Phone (925) 277-2384

Laboratory Name STL Pleasanton
Consultant GETTLER-RYAN, INC. DEANNA L. HARDING
Address 6747 SIERRA CT., SUITE J, DUBLIN CA 94568
Phone (925) 551-7555 Fax (925) 551-7899
Samples Collected by BRIAN GAN

SAMPLE ID	Number of Containers Matrix	S = Soil W = Water A = Air C = Charcoal	Sample Preservation	Date/Time (2400 Hrs)	TPH-GAS/BTEX/MTBE EPA 8015/8021B	TPH-DIESEL EPA 8015	TPH-DIESEL w/Silica gel EPA 8015	TPH-GAS EPA 8015	TPH-GAS/BTEX/MTBE EPA 8260	OXYGENATES EPA 8260	METHANOL EPA 8015	TOTAL OIL & GREASE EPA 5420	METALS Cd, Cr, Pb, Zn, Ni	NITRATE/SULFATE/ALKALINITY EPA 300 SERIES	HYDROCARBONS (B010) EPA 8021B	VOC'S (8240) EPA 8260	SVOC'S EPA 8270	Remarks
DA	1	W	HC	7-11-02					X									Run 8 Oxy's by 8260 on highest 8260 MTBE hit.
MW-1	3			1135					X									
MW-6	3			0945					X									
MW-8	3			1013					X									
MW-9	7			1031					X									
MW-10	3			1050					X									
MW-11	3	W	W	1114					X									

- OXYGENATES 8260
- 1 - MTBE
 - 2 - TBA
 - 3 - TAME
 - 4 - DIPE
 - 5 - ETBE
 - 6 - 1,2-DCA
 - 7 - EDB
 - 8 - ETHANOL

Inquished By (Signature) <i>[Signature]</i>	Organization G-R	Date/Time 7-11-02	Received By (Signature) <i>[Signature]</i>	Organization SED-WC	Date/Time 7/11/02 12:28	Iced Y/N	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 72 Hrs. 15.3°C 5 Days 10 Days As-Contracted
Inquished By (Signature) <i>[Signature]</i>	Organization SED-WC	Date/Time 7/11/02 14:30	Received By (Signature) <i>[Signature]</i>	Organization G-R	Date/Time 7-12-02	Iced Y/N	
Inquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)	Date/Time	Iced Y/N	Date/Time 7-12-02 12:05	

Submission#: 2002-07-0264

July 26, 2002

SEVERN

TRENT

LABORATORY

Gettler Ryan

6747 Sierra Court Suite J
Dublin, CA 94568

RECEIVED

STL San Francisco
1220 Quarry Ln
Pleasanton CA 94566

Tel.: (925) 484-1919
Fax: (925) 484-1096
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www.chromalab.com

CA DHS ELAP#:2496

Attn.: Deanna Harding

Project#: 180068.80

Project: Tosco #1871

Site: 95 MacArthur
Oakland, CA

GETTLER-RYAN INC
GENERAL CONTRACTOR

Dear Ms. Harding,

Attached is our report for your samples received on 07/12/2002 17:05

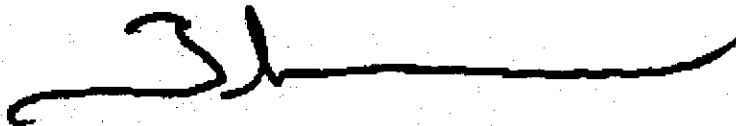
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 08/26/2002 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

You can also contact me via email. My email address is: tgranicher@chromalab.com

Sincerely,



Tod Granicher
Project Manager

Submission #: 2002-07-0264

Gas/BTEXFuel Oxygenates by 8260B

Gettler Ryan

Attn.: Deanna Harding
6747 Sierra Court Suite J
Dublin, CA 94568

Phone: (925) 551-7444 Fax: (925) 551-7899

Project: 180068.80
Tosco #1871

Received: 07/12/2002 17:05

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Oakland, CA

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STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
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CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
QA	07/11/2002	Water	1
MW-1	07/11/2002 11:35	Water	2
MW-6	07/11/2002 09:45	Water	3
MW-8	07/11/2002 10:13	Water	4
MW-9	07/11/2002 10:31	Water	5
MW-10	07/11/2002 10:50	Water	6
MW-11	07/11/2002 11:14	Water	7

Submission #: 2002-07-0264

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CA DHS ELAP# 2496

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	QA	Lab ID:	2002-07-0264 - 1
Sampled:	07/11/2002	Extracted:	7/24/2002 18:01
Matrix:	Water	QC Batch#:	2002/07/24-02.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	07/24/2002 18:01	
Benzene	ND	0.50	ug/L	1.00	07/24/2002 18:01	
Toluene	ND	0.50	ug/L	1.00	07/24/2002 18:01	
Ethylbenzene	ND	0.50	ug/L	1.00	07/24/2002 18:01	
Total xylenes	ND	1.0	ug/L	1.00	07/24/2002 18:01	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	07/24/2002 18:01	
Surrogates(s)						
1,2-Dichloroethane-d4	116.5	76-114	%	1.00	07/24/2002 18:01	sh
Toluene-d8	91.8	88-110	%	1.00	07/24/2002 18:01	

Submission #: 2002-07-0264

Gas/BTEX Fuel Oxygenates by 8260B

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CA DHS ELAP# 2496

Prep(s): 5030B	Test(s): 8260FAB
Sample ID: MW-1	Lab ID: 2002-07-0264 - 2
Sampled: 07/11/2002 11:35	Extracted: 7/25/2002 16:25
Matrix: Water	QC Batch#: 2002/07/25-01.27
Analysis Flag: o (See Legend and Note Section)	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	5900	1000	ug/L	20.00	07/25/2002 16:25	
Benzene	330	10	ug/L	20.00	07/25/2002 16:25	
Toluene	ND	10	ug/L	20.00	07/25/2002 16:25	
Ethylbenzene	230	10	ug/L	20.00	07/25/2002 16:25	
Total xylenes	600	20	ug/L	20.00	07/25/2002 16:25	
Methyl tert-butyl ether (MTBE)	3400	10	ug/L	20.00	07/25/2002 16:25	
Surrogates(s)						
1,2-Dichloroethane-d4	89.0	76-114	%	20.00	07/25/2002 16:25	
Toluene-d8	99.3	88-110	%	20.00	07/25/2002 16:25	

Gas/BTEX Fuel Oxygenates by 8260B

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CA DHS ELAP# 2496

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-6	Lab ID:	2002-07-0264 - 3
Sampled:	07/11/2002 09:45	Extracted:	7/25/2002 12:49
Matrix:	Water	QC Batch#:	2002/07/25-02.62
Analysis Flag: o (See Legent and Note Section)			

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	12000	10000	ug/L	200.00	07/25/2002 12:49	g
Benzene	ND	100	ug/L	200.00	07/25/2002 12:49	
Toluene	ND	100	ug/L	200.00	07/25/2002 12:49	
Ethylbenzene	ND	100	ug/L	200.00	07/25/2002 12:49	
Total xylenes	ND	200	ug/L	200.00	07/25/2002 12:49	
tert-Butyl alcohol (TBA)	ND	1000	ug/L	200.00	07/25/2002 12:49	
Methyl tert-butyl ether (MTBE)	15000	100	ug/L	200.00	07/25/2002 12:49	
Di-isopropyl Ether (DIPE)	ND	200	ug/L	200.00	07/25/2002 12:49	
Ethyl tert-butyl ether (ETBE)	ND	100	ug/L	200.00	07/25/2002 12:49	
tert-Amyl methyl ether (TAME)	ND	100	ug/L	200.00	07/25/2002 12:49	
1,2-DCA	ND	100	ug/L	200.00	07/25/2002 12:49	
EDB	ND	100	ug/L	200.00	07/25/2002 12:49	
Ethanol	ND	5000	ug/L	200.00	07/25/2002 12:49	
Surrogates(s)						
1,2-Dichloroethane-d4	93.4	76-114	%	200.00	07/25/2002 12:49	
Toluene-d8	103.6	88-110	%	200.00	07/25/2002 12:49	

Submission #: 2002-07-0264

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CA DHS ELAP# 2496

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-8	Lab ID:	2002-07-0264 - 4
Sampled:	07/11/2002 10:13	Extracted:	7/23/2002 19:06
Matrix:	Water	QC Batch#:	2002/07/23-02.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	110	50	ug/L	1.00	07/23/2002 19:06	g
Benzene	ND	0.50	ug/L	1.00	07/23/2002 19:06	
Toluene	ND	0.50	ug/L	1.00	07/23/2002 19:06	
Ethylbenzene	ND	0.50	ug/L	1.00	07/23/2002 19:06	
Total xylenes	ND	1.0	ug/L	1.00	07/23/2002 19:06	
Methyl tert-butyl ether (MTBE)	120	0.50	ug/L	1.00	07/23/2002 19:06	
Surrogates(s)						
1,2-Dichloroethane-d4	95.6	76-114	%	1.00	07/23/2002 19:06	
Toluene-d8	101.1	88-110	%	1.00	07/23/2002 19:06	

Submission #: 2002-07-0264

Gas/BTEX Fuel Oxygenates by 8260B

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CA DHS ELAP# 2496

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-9	Lab ID:	2002-07-0264 - 5
Sampled:	07/11/2002 10:31	Extracted:	7/24/2002 14:21
Matrix:	Water	QC Batch#:	2002/07/24-02.62
Analysis Flag: o (See Legend and Note Section)			

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	580	500	ug/L	10.00	07/24/2002 14:21	g
Benzene	ND	5.0	ug/L	10.00	07/24/2002 14:21	
Toluene	ND	5.0	ug/L	10.00	07/24/2002 14:21	
Ethylbenzene	ND	5.0	ug/L	10.00	07/24/2002 14:21	
Total xylenes	ND	10	ug/L	10.00	07/24/2002 14:21	
Methyl tert-butyl ether (MTBE)	580	5.0	ug/L	10.00	07/24/2002 14:21	
Surrogates(s)						
1,2-Dichloroethane-d4	91.9	76-114	%	10.00	07/24/2002 14:21	
Toluene-d8	103.4	88-110	%	10.00	07/24/2002 14:21	

Submission #: 2002-07-0264

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CA DHS ELAP# 2496

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-10	Lab ID:	2002-07-0264 - 6
Sampled:	07/11/2002 10:50	Extracted:	7/24/2002 14:43
Matrix:	Water	QC Batch#:	2002/07/24-02.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	07/24/2002 14:43	
Benzene	ND	0.50	ug/L	1.00	07/24/2002 14:43	
Toluene	ND	0.50	ug/L	1.00	07/24/2002 14:43	
Ethylbenzene	ND	0.50	ug/L	1.00	07/24/2002 14:43	
Total xylenes	ND	1.0	ug/L	1.00	07/24/2002 14:43	
Methyl tert-butyl ether (MTBE)	1.1	0.50	ug/L	1.00	07/24/2002 14:43	
Surrogates(s)						
1,2-Dichloroethane-d4	93.5	76-114	%	1.00	07/24/2002 14:43	
Toluene-d8	101.7	88-110	%	1.00	07/24/2002 14:43	

Submission #: 2002-07-0264

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CA DHS ELAP# 2496

Prep(s):	50308	Test(s):	8260FAB
Sample ID:	MW-11	Lab ID:	2002-07-0264 - 7
Sampled:	07/11/2002 11:14	Extracted:	7/23/2002 20:13
Matrix:	Water	QC Batch#:	2002/07/23-02.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	07/23/2002 20:13	
Benzene	ND	0.50	ug/L	1.00	07/23/2002 20:13	
Toluene	ND	0.50	ug/L	1.00	07/23/2002 20:13	
Ethylbenzene	ND	0.50	ug/L	1.00	07/23/2002 20:13	
Total xylenes	ND	1.0	ug/L	1.00	07/23/2002 20:13	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	07/23/2002 20:13	
Surrogates(s)						
1,2-Dichloroethane-d4	95.9	76-114	%	1.00	07/23/2002 20:13	
Toluene-d8	104.7	88-110	%	1.00	07/23/2002 20:13	

Submission #: 2002-07-0264

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B

Method Blank

MB: 2002/07/23-02.62-026

Water

Test(s): 8260FAB

QC Batch # 2002/07/23-02.62

Date Extracted: 07/23/2002 14:26

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	07/23/2002 14:26	
Benzene	ND	0.5	ug/L	07/23/2002 14:26	
Toluene	ND	0.5	ug/L	07/23/2002 14:26	
Ethylbenzene	ND	0.5	ug/L	07/23/2002 14:26	
Total xylenes	ND	1.0	ug/L	07/23/2002 14:26	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	07/23/2002 14:26	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	07/23/2002 14:26	
Di-isopropyl Ether (DIPE)	ND	1.0	ug/L	07/23/2002 14:26	
Ethyl tert-butyl ether (ETBE)	ND	0.5	ug/L	07/23/2002 14:26	
tert-Amyl methyl ether (TAME)	ND	0.5	ug/L	07/23/2002 14:26	
1,2-DCA	ND	0.5	ug/L	07/23/2002 14:26	
EDB	ND	0.5	ug/L	07/23/2002 14:26	
Ethanol	ND	25	ug/L	07/23/2002 14:26	
Surrogates(s)					
1,2-Dichloroethane-d4	81.8	76-114	%	07/23/2002 14:26	
Toluene-d8	105.8	88-110	%	07/23/2002 14:26	

Submission #: 2002-07-0264

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Gas/BTEXFuel Oxygenates by 8260B

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B

Method Blank

MB: 2002/07/24-02.27-014

Water

Test(s): 8260FAB

QC Batch # 2002/07/24-02.27

Date Extracted: 07/24/2002 13:56

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	07/24/2002 13:56	
Benzene	ND	0.5	ug/L	07/24/2002 13:56	
Toluene	ND	0.5	ug/L	07/24/2002 13:56	
Ethylbenzene	ND	0.5	ug/L	07/24/2002 13:56	
Total xylenes	ND	1.0	ug/L	07/24/2002 13:56	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	07/24/2002 13:56	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	07/24/2002 13:56	
Di-isopropyl Ether (DIPE)	ND	1.0	ug/L	07/24/2002 13:56	
Ethyl tert-butyl ether (ETBE)	ND	0.5	ug/L	07/24/2002 13:56	
tert-Amyl methyl ether (TAME)	ND	0.5	ug/L	07/24/2002 13:56	
1,2-DCA	ND	0.5	ug/L	07/24/2002 13:56	
EDB	ND	0.5	ug/L	07/24/2002 13:56	
Ethanol	ND	25	ug/L	07/24/2002 13:56	
Surrogates(s)					
1,2-Dichloroethane-d4	107.8	76-114	%	07/24/2002 13:56	
Toluene-d8	91.6	88-110	%	07/24/2002 13:56	

Submission #: 2002-07-0264

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Gas/BTEXFuel Oxygenates by 8260B

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B

Method Blank

MB: 2002/07/24-02.62-047

Water

Test(s): 8260FAB

QC Batch # 2002/07/24-02.62

Date Extracted: 07/24/2002 11:46

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	07/24/2002 11:46	
Benzene	ND	0.5	ug/L	07/24/2002 11:46	
Toluene	ND	0.5	ug/L	07/24/2002 11:46	
Ethylbenzene	ND	0.5	ug/L	07/24/2002 11:46	
Total xylenes	ND	1.0	ug/L	07/24/2002 11:46	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	07/24/2002 11:46	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	07/24/2002 11:46	
Di-isopropyl Ether (DIPE)	ND	1.0	ug/L	07/24/2002 11:46	
Ethyl tert-butyl ether (ETBE)	ND	0.5	ug/L	07/24/2002 11:46	
tert-Amyl methyl ether (TAME)	ND	0.5	ug/L	07/24/2002 11:46	
1,2-DCA	ND	0.5	ug/L	07/24/2002 11:46	
EDB	ND	0.5	ug/L	07/24/2002 11:46	
Ethanol	ND	25	ug/L	07/24/2002 11:46	
Surrogates(s)					
1,2-Dichloroethane-d4	91.6	76-114	%	07/24/2002 11:46	
Toluene-d8	99.6	88-110	%	07/24/2002 11:46	

Submission #: 2002-07-0264

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CA DHS ELAP# 2496

Batch QC Report					
Prep(s): 5030B				Test(s): 8260FAB	
Method Blank		Water		QC Batch # 2002/07/25-01.27	
MB: 2002/07/25-01.27-016				Date Extracted: 07/25/2002 15:26	

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	07/25/2002 15:26	
Benzene	ND	0.5	ug/L	07/25/2002 15:26	
Toluene	ND	0.5	ug/L	07/25/2002 15:26	
Ethylbenzene	ND	0.5	ug/L	07/25/2002 15:26	
Total xylenes	ND	1.0	ug/L	07/25/2002 15:26	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	07/25/2002 15:26	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	07/25/2002 15:26	
Di-isopropyl Ether (DIPE)	ND	1.0	ug/L	07/25/2002 15:26	
Ethyl tert-butyl ether (ETBE)	ND	0.5	ug/L	07/25/2002 15:26	
tert-Amyl methyl ether (TAME)	ND	0.5	ug/L	07/25/2002 15:26	
1,2-DCA	ND	0.5	ug/L	07/25/2002 15:26	
EDB	ND	0.5	ug/L	07/25/2002 15:26	
Ethanol	ND	25	ug/L	07/25/2002 15:26	
Surrogates(s)					
1,2-Dichloroethane-d4	90.4	76-114	%	07/25/2002 15:26	
Toluene-d8	99.2	88-110	%	07/25/2002 15:26	

Submission #: 2002-07-0264

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CA DHS ELAP# 2496

Batch QC Report					
Prep(s): 5030B				Test(s): 8260FAB	
Method Blank		Water		QC Batch # 2002/07/25-02.62	
MB: 2002/07/25-02.62-034				Date Extracted: 07/25/2002 10:34	

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	07/25/2002 10:34	
Benzene	ND	0.5	ug/L	07/25/2002 10:34	
Toluene	ND	0.5	ug/L	07/25/2002 10:34	
Ethylbenzene	ND	0.5	ug/L	07/25/2002 10:34	
Total xylenes	ND	1.0	ug/L	07/25/2002 10:34	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	07/25/2002 10:34	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	07/25/2002 10:34	
Di-isopropyl Ether (DIPE)	ND	1.0	ug/L	07/25/2002 10:34	
Ethyl tert-butyl ether (ETBE)	ND	0.5	ug/L	07/25/2002 10:34	
tert-Amyl methyl ether (TAME)	ND	0.5	ug/L	07/25/2002 10:34	
1,2-DCA	ND	0.5	ug/L	07/25/2002 10:34	
EDB	ND	0.5	ug/L	07/25/2002 10:34	
Ethanol	ND	25	ug/L	07/25/2002 10:34	
Surrogates(s)					
1,2-Dichloroethane-d4	90.8	76-114	%	07/25/2002 10:34	
Toluene-d8	103.1	88-110	%	07/25/2002 10:34	

Gas/BTEXFuel Oxygenates by 8260B

Gettler Ryan

Attn.: Deanna Harding
 6747 Sierra Court Suite J
 Dublin, CA 94568
 Phone: (925) 551-7444 Fax: (925) 551-7899

STL San Francisco
 1220 Quarry Lane
 Pleasanton, CA 94566

Tel: (925) 484-1919
 Fax: (925) 484-1096
 www.stl-inc.com
 www.chromalab.com

Project: 180068.80
 Tosco #1871

Received: 07/12/2002 17:05

Site: 95 MacArthur
 Oakland, CA

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Laboratory Control Spike

Water

QC Batch # 2002/07/23-02.62

LCS 2002/07/23-02.62-020

Extracted: 07/23/2002

Analyzed: 07/23/2002 13:20

LCSD 2002/07/23-02.62-042

Extracted: 07/23/2002

Analyzed: 07/23/2002 13:42

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Benzene	20.9	22.4	25.0	83.6	89.6	6.9	69-129	20		
Toluene	22.1	22.5	25.0	88.4	90.0	1.8	70-130	20		
Methyl tert-butyl ether (MTBE)	23.4	25.5	25.0	93.6	102.0	8.6	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	499	541	500	99.8	108.2		76-114			
Toluene-d8	508	513	500	101.6	102.6		88-110			

Submission #: 2002-07-0264

Gas/BTEXFuel Oxygenates by 8260B

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Phone: (925) 551-7444 Fax: (925) 551-7899

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Received: 07/12/2002 17:05

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Oakland, CA

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

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Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Laboratory Control Spike

Water

QC Batch # 2002/07/24-02.27

LCS 2002/07/24-02.27-008

Extracted: 07/24/2002

Analyzed: 07/24/2002 12:12

LCSD 2002/07/24-02.27-010

Extracted: 07/24/2002

Analyzed: 07/24/2002 12:47

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD %	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Benzene	21.0	20.8	25.0	84.0	83.2	1.0	69-129	20		
Toluene	22.6	22.1	25.0	90.4	88.4	2.2	70-130	20		
Methyl tert-butyl ether (MTBE)	25.3	23.6	25.0	101.2	94.4	7.0	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	565	529	500	113.0	105.8		76-114			
Toluene-d8	458	473	500	91.6	94.6		88-110			

Submission #: 2002-07-0264

Gas/BTEXFuel Oxygenates by 8260B

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SEVERN

TRENT

LABORATORY

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1220 Quarry Lane
Pleasanton, CA 94566

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Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2002/07/24-02.62

LCS 2002/07/24-02.62-002

Extracted: 07/24/2002

Analyzed: 07/24/2002 11:02

LCSD 2002/07/24-02.62-024

Extracted: 07/24/2002

Analyzed: 07/24/2002 11:24

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	25.1	25.1	25.0	100.4	100.4	0.0	65-165	20		
Benzene	22.6	22.0	25.0	90.4	88.0	2.7	69-129	20		
Toluene	22.3	22.6	25.0	89.2	90.4	1.3	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	487	509	500	97.4	101.8		76-114			
Toluene-d8	514	516	500	102.8	103.2		88-110			

Submission #: 2002-07-0264

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SEVERN

TRENT

LABORATORY

STL San Francisco
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Pleasanton, CA 94566

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Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2002/07/25-01.27

LCS 2002/07/25-01.27-006

Extracted: 07/25/2002

Analyzed: 07/25/2002 14:17

LCSD 2002/07/25-01.27-008

Extracted: 07/25/2002

Analyzed: 07/25/2002 14:51

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD %	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	20.0	21.7	25.0	80.0	86.8	8.2	65-165	20		
Benzene	22.9	22.1	25.0	91.6	88.4	3.6	69-129	20		
Toluene	24.6	23.5	25.0	98.4	94.0	4.6	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	412	443	500	82.4	88.6		76-114			
Toluene-d8	479	478	500	95.8	95.6		88-110			

Gas/BTEXFuel Oxygenates by 8260B

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B Test(s): 8260FAB
 Laboratory Control Spike Water QC Batch # 2002/07/25-02.62
 LCS 2002/07/25-02.62-050 Extracted: 07/25/2002 Analyzed: 07/25/2002 09:50
 LCSD 2002/07/25-02.62-012 Extracted: 07/25/2002 Analyzed: 07/25/2002 10:12

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Benzene	22.8	23.6	25.0	91.2	94.4	3.4	69-129	20		
Toluene	24.5	24.8	25.0	98.0	99.2	1.2	70-130	20		
Methyl tert-butyl ether (MTBE)	27.1	27.5	25.0	108.4	110.0	1.5	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	518	532	500	103.6	106.4		76-114			
Toluene-d8	537	505	500	107.4	101.0		88-110			

Gas/BTEX Fuel Oxygenates by 8260B

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 Dublin, CA 94568
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 Oakland, CA

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 1220 Quarry Lane
 Pleasanton, CA 94566

Tel: (925) 484-1919
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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Matrix Spike (MS / MSD)

Water

QC Batch # 2002/07/24-02.27

QA >> MS

Lab ID: 2002-07-0264 - 001

MS: 2002/07/24-02.27-030

Extracted: 07/24/2002

Analyzed: 07/24/2002 18:36

Dilution: 1.00

MSD: 2002/07/24-02.27-032

Extracted: 07/24/2002

Analyzed: 07/24/2002 19:11

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level	Recovery			Limits %		Flags	
	MS	MSD	Sample		ug/L	MS	MSD	RPD	Rec.	RPD	MS
Benzene	21.3	21.3	ND	25.0	85.2	85.2	0.0	69-129	20		
Toluene	23.2	23.6	ND	25.0	92.8	94.4	1.7	70-130	20		
Methyl tert-butyl ether	22.8	23.9	ND	25.0	91.2	95.6	4.7	65-165	20		
Surrogate(s)											
1,2-Dichloroethane-d4	573	593		500	114.7	118.6		76-114		sh	sh
Toluene-d8	467	484		500	93.4	96.8		88-110			

Submission #: 2002-07-0264

Gas/BTEX Fuel Oxygenates by 8260B

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CA DHS ELAP# 2496

Legend and Notes

Analysis Flag

o

Reporting limits were raised due to high level of analyte present in the sample.

Result Flag

g

Hydrocarbon reported in the gasoline range does not match our gasoline standard.

sh

Surrogate recovery was higher than QC limit due to matrix interference.