

ExxonMobil
Refining & Supply Company
Global Remediation
25A Crescent Drive #407
Pleasant Hill, CA 94523
(925) 246-8747 Telephone
(925) 246-7822 Facsimile
gene.n.ortega@exxonmobil.com

Gene N. Ortega
Project Manager
Global Remediation – U.S. Retail

PO 445 AG

ExxonMobil
Refining & Supply

Alameda County
3 2004
Environmental Health

April 14, 2004

Mr. Barney Chan
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, California 94501

Subject: Former Mobil Station 99-105, 6301 San Pablo Avenue, Oakland, California

Dear Mr. Chan:

Attached for your review and comment is a copy of the *Report of Groundwater Monitoring, First Quarter 2004* for the above-referenced site. The report, prepared by ETIC Engineering, Inc. of Pleasant Hill, California, details the results of the January 2004 sampling event.

ExxonMobil has requested closure for the site. Per your telephone conversation with ETIC on April 13, 2004, no further monitoring at the site is planned unless requested by the Alameda County Health Care Services Agency.

If you have any questions or comments, please contact me at (925) 246-8747.

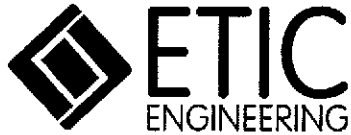
Sincerely,



Gene N. Ortega
Project Manager

Attachment: ETIC Groundwater Monitoring Report dated April 2004

- c: w/ attachment:
Mr. Chuck Headlee - California Regional Water Quality Control Board, San Francisco Bay Region
Ms. Connie Lam (property owner)
- c: w/o attachment:
Mr. Joseph Muehleck - ETIC Engineering, Inc.



Alameda County
APR 28 2004
Environmental Health

Report of Groundwater Monitoring First Quarter 2004

Former Mobil Station 99-105 6301 San Pablo Avenue Oakland, California

Prepared for

ExxonMobil Refining and Supply Company
25A Crescent Drive #407
Pleasant Hill, California 94523

Prepared by

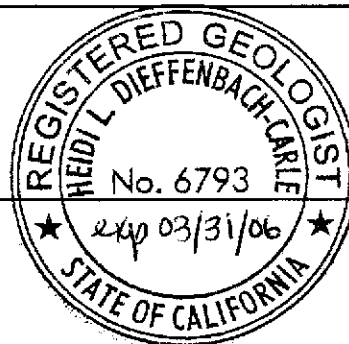
ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, California 94523
(925) 602-4710

Bryan Campbell
Project Manager

April 14, 2004

Date

Heidi Dieffenbach-Carle, R.G. #6793
Senior Geologist



April 14, 2004

Date

April 2004

SITE CONTACTS

Station Number: Former Mobil Station 99-105

Station Address: 6301 San Pablo Avenue
Oakland, California

ExxonMobil Project Manager: Gene N. Ortega
ExxonMobil Refining and Supply Company
25A Crescent Drive #407
Pleasant Hill, California 94523
(925) 246-8747

Consultant to ExxonMobil: ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, California 94523
(925) 602-4710

ETIC Project Manager: Bryan Campbell

Regulatory Oversight: Barney Chan
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, California 94501
510-567-6765

Chuck Headlee
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612
(510) 622-2300

INTRODUCTION

At the request of ExxonMobil Refining and Supply Company, ETIC Engineering, Inc. has prepared this quarterly groundwater monitoring report for former Mobil Station 99-105. This report presents the results for the most recent groundwater monitoring conducted at the site and summarizes recent site activities. This report covers site activities from 8 October 2003, the date of the last monitoring event, until 15 January 2004, the date of the recent monitoring event. Groundwater monitoring results, well construction details, and a groundwater monitoring plan are provided in the attached figures and tables. Groundwater monitoring protocols, field data, and analytical results are provided in the attached appendixes.

GENERAL SITE INFORMATION

Site name:	Former Mobil Station 99-105
Site address:	6301 San Pablo Avenue, Oakland, California
Current property owner:	Connie Lam
Current site use:	Automobile oil change facility
Current phase of project:	Groundwater monitoring
Tanks at site:	None (four gasoline and one used-oil tank removed 1994)
Number of wells:	3 (all onsite)

GROUNDWATER MONITORING SUMMARY

Gauging and sampling date:	15 January 2004
Wells gauged and sampled:	MW2, MW3, MW5
Wells gauged only:	None
Groundwater flow direction:	West-southwest
Groundwater gradient:	0.23
Well screens submerged:	None
Well screens not submerged:	MW2, MW3, MW5
Liquid-phase hydrocarbons:	Not observed or detected
Laboratory:	TestAmerica, Inc., Nashville, Tennessee

Analyses performed:

- Total Petroleum Hydrocarbons as gasoline by EPA Method 8015B
- Benzene, toluene, ethylbenzene, and total xylenes by EPA Method 8021B
- Methyl t-butyl ether by EPA Method 8021B
- Methyl t-butyl ether by EPA Method 8260B (confirmation sample)

ADDITIONAL ACTIVITIES PERFORMED AT SITE

No additional activities were performed at the site.

WORK PROPOSED FOR NEXT QUARTER

Closure has been requested for the site. Per a telephone conversation with ETIC on April 13, 2004, no further monitoring at the site is planned unless requested by the Alameda County Health Care Services Agency.

Attachments:

Figure 1: Site Plan Showing Groundwater Elevations and Analytical Results

Table 1: Well Construction Details

Table 2: Groundwater Monitoring Data

Table 3: Groundwater Monitoring Plan

Appendix A: Field Protocols

Appendix B: Field Documents

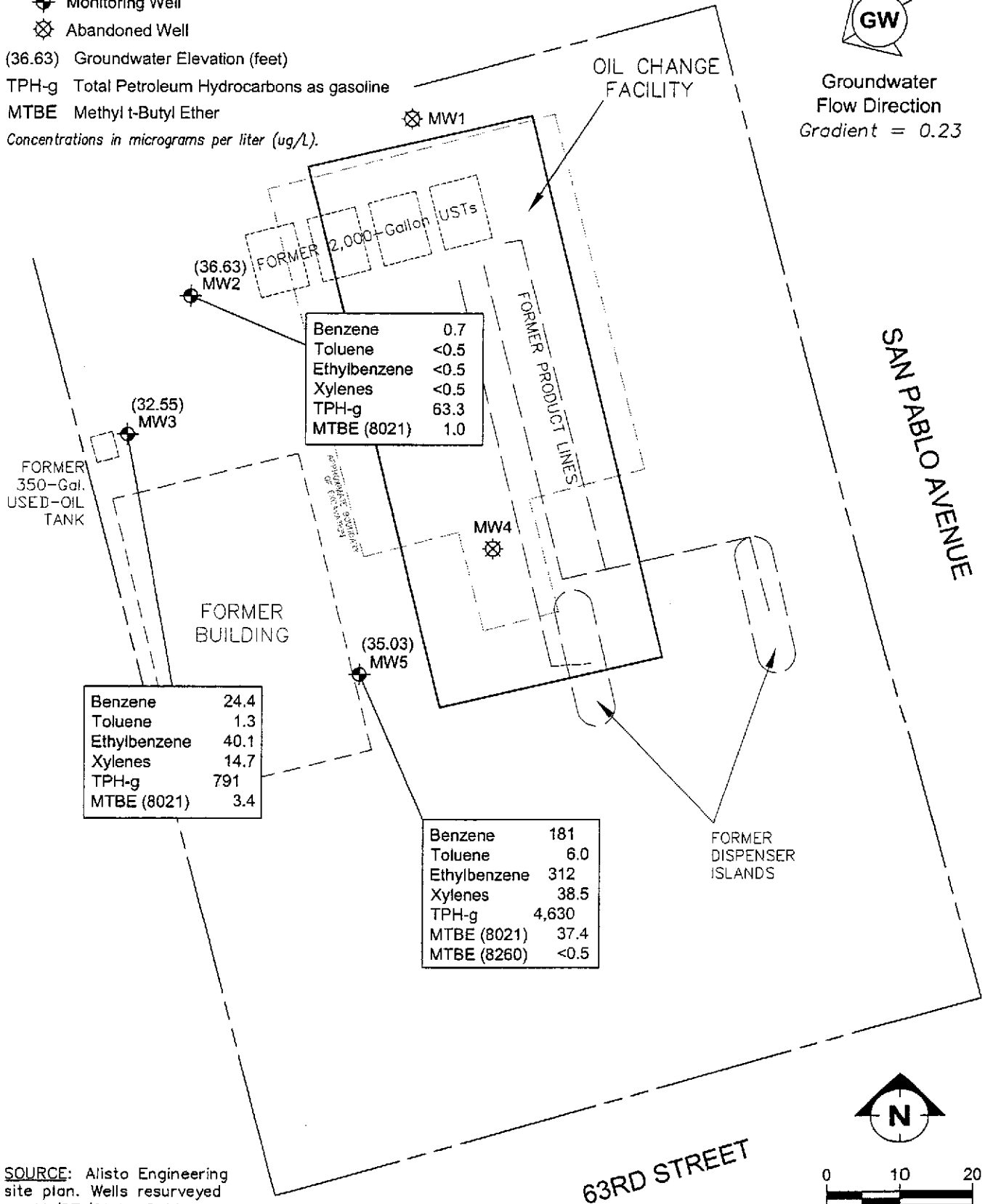
Appendix C: Laboratory Analytical Reports

LEGEND

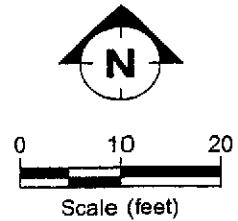
- ◆ Monitoring Well
- ⊗ Abandoned Well

(36.63) Groundwater Elevation (feet)
 TPH-g Total Petroleum Hydrocarbons as gasoline
 MTBE Methyl t-Butyl Ether
 Concentrations in micrograms per liter (ug/L).

GW
 Groundwater
 Flow Direction
 Gradient = 0.23



SOURCE: Alisto Engineering site plan. Wells resurveyed on 11/27/01 by Doble Thomas Associates.



FILENAME: 1q2001.DWG 03/23/04



SITE PLAN SHOWING GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS
 FORMER MOBIL STATION 99-105
 6301 SAN PABLO AVENUE, OAKLAND, CALIFORNIA
 15 JANUARY 2004

FIGURE: 1

TABLE 1 WELL CONSTRUCTION DETAILS, FORMER MOBIL STATION 99-105, 6301 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well Number	Well Installation Date	Elevation TOC (feet)	Casing Material	Total Depth (feet)	Well Depth (feet)	Borehole Diameter (inches)	Casing Diameter (inches)	Screened Interval (feet)	Slot Size (inches)	Filter Pack Interval (feet)	Filter Pack Material
MW1	b 03/01/96	--	PVC	21.5	20	10	4	5 - 20	0.010	4.5 - 21.5	#12 Sand
MW2	a 03/01/96	41.99	PVC	21.5	20	10	4	5 - 20	0.010	4.5 - 21.5	#12 Sand
MW3	a 03/01/96	41.71	PVC	21.5	20	10	4	5 - 20	0.010	4.5 - 21.5	#12 Sand
MW4	b 03/01/96	--	PVC	26.5	25	10	4	5 - 25	0.010	4.5 - 21.5	#12 Sand
MW5	a 09/06/00	41.59	PVC	21.5	20	10	4	5 - 20	0.010	4 - 21.5	#2/12 Sand

a Well surveyed on 11/27/01 by Doble Thomas Associates.

b Well destroyed.

PVC Polyvinyl chloride.

TOC Top of casing.

-- Information not available.

TABLE 2 GROUNDWATER MONITORING DATA, FORMER MOBIL STATION 99-105, 6301 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TOC Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	LPH Thickness (feet)	Concentrations (µg/L)							
						TPH-g	TPH-d	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8020 or 8021)	M'1BE (8240 or 8260)
TW1	01/04/96	--	6.00	--	0.00	ND	700	ND	ND	ND	ND	--	--
WW1	01/04/96	--	3.00	--	0.00	ND	--	ND	ND	ND	ND	--	--
MW1	03/14/96	32.79	4.50	28.29	0.00	610	450	0.75	0.54	1.5	59	--	--
MW1	05/21/96	32.79	5.64	27.15	0.00	ND	ND	ND	ND	ND	ND	--	--
MW1	08/13/96	32.79	9.76	23.03	0.00	ND	ND	ND	ND	ND	ND	--	--
MW1	11/08/96	32.79	10.24	22.55	0.00	ND	ND	ND	0.92	ND	2.1	ND	--
MW1	01/31/97	32.79	3.83	28.96	0.00	ND	ND	ND	0.85	ND	ND	2.6	ND
MW1	04/22/97	32.79	9.14	23.65	0.00	ND	ND	ND	ND	ND	ND	ND	--
MW1 ^u	07/29/97	32.79	10.18	22.61	0.00	ND	60 ^e	0.84	0.95	ND	1.6	36	--
MW1 ^u	10/09/97	32.79	10.46	22.33	0.00	ND	56 ^e	ND	ND	ND	ND	ND	--
MW1 ^u	01/23/98	32.79	3.95	28.84	0.00	ND	33	ND	ND	ND	ND	ND	--
MW1	04/22/98	32.79	5.33	27.46	0.00	ND	ND	ND	ND	ND	ND	ND	--
MW1	07/21/98	32.79	9.17	23.62	0.00	ND	--	ND	ND	ND	ND	ND	--
MW1	10/20/98	32.79	10.41	22.38	0.00	ND	--	ND	ND	ND	ND	ND	--
MW1	01/27/99	32.79	5.51	27.28	0.00	ND	--	ND	ND	ND	ND	ND	--
MW1	Destroyed during construction activities in April 1999												
MW2	03/14/96	32.80	4.51	28.29	0.00	560	250	2.0	0.96	4.3	11	--	--
MW2	05/21/96	32.80	5.65	27.15	0.00	730	560	5.1	1.4	6.7	5.9	--	--
MW2	08/13/96	32.80	10.14	22.66	0.00	490	380 ^h	25	3.5	7.2	13	--	--
MW2	11/08/96	32.80	10.70	22.10	0.00	520	160 ^d	80	2.7	14	66	6.1	--
MW2	01/31/97	32.80	3.84	28.96	0.00	74	130 ^h	ND	ND	ND	ND	ND	--
MW2	04/22/97	32.80	9.61	23.19	0.00	260	430	2.7	ND	2.5	ND	ND	--
MW2 ^u	07/29/97	32.80	10.53	22.27	0.00	320	150 ^d	28	1.2	10	ND	ND	--
MW2 ^u	10/09/97	32.80	10.87	21.93	0.00	460	160 ^b	43	2.8	2.0	2.6	2.6	--
MW2 ^u	01/23/98	32.80	3.75	29.05	0.00	ND	54	ND	ND	ND	ND	ND	--
MW2	04/22/98	32.80	5.36	27.44	0.00	180	540	1.2	0.3	0.4	ND	ND	--
MW2	07/21/98	32.80	9.55	23.25	0.00	80	--	8.9	2.1	0.6	2.5	ND	--
MW2	10/20/98	32.80	10.75	22.05	0.00	50	--	0.8	0.7	ND	0.8	ND	--
MW2	01/27/99	32.80	5.53	27.27	0.00	ND	--	0.6	ND	ND	ND	ND	--
MW2	07/27/99	32.80	6.20	26.60	0.00	ND	--	ND	0.6	ND	ND	ND	--
MW2	12/08/99	32.80	9.98	22.82	0.00	ND	--	1.2	0.43	ND	ND	ND	--
MW2	10/25/00	39.34	11.30	28.04	0.00	<20	--	2.0	0.59	0.46	1.3	<0.30	--
MW2	01/15/01	39.34	9.41	29.93	0.00	<20	--	<0.20	0.46	<0.20	<0.60	<0.30	--

TABLE 2 GROUNDWATER MONITORING DATA, FORMER MOBIL STATION 99-105, 6301 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TOC Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	LPH Thickness (feet)	Concentrations (µg/L)							
						TPH-g	TPH-d	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8020 or 8021)	MTBE (8240 or 8260)
MW2	04/10/01	39.34	6.16	33.18	0.00	23	--	0.28	<0.20	<0.20	<0.60	<1.0	--
MW2	07/24/01	39.34	10.70	28.64	0.00	<50	--	<0.20	0.93	<0.20	0.82	<0.30	--
MW2	11/27/01	39.34	10.15	29.19	0.00	<50	--	1.2	0.22	<0.20	<0.60	<0.30	--
MW2	01/18/02	41.99	5.46	36.53	0.00	<50.0	--	<0.50	<0.50	<0.50	<0.50	1.40	--
MW2	04/10/02	41.99	6.48	35.51	0.00	<50.0	--	<0.50	<0.50	<0.50	<0.50	1.80	--
MW2	07/12/02	41.99	10.45	31.54	0.00	<50.0	--	<0.50	<0.50	<0.50	<0.50	<0.50	--
MW2	10/14/02	41.99	11.46	30.53	0.00	<50.0	--	<0.5	4.1	0.6	4.0	<0.5	--
MW2	01/20/03	41.99	5.39	36.60	0.00	<50.0	--	<0.50	<0.50	<0.50	<0.50	0.6	--
MW2	04/28/03	41.99	5.87	36.12	0.00	<50.0	--	<0.50	<0.50	<0.50	<0.50	<0.50	--
MW2	07/15/03	41.99	10.31	31.68	0.00	<50	--	<0.5	<0.5	<0.5	<0.5	<0.5	--
MW2	10/08/03	41.99	11.20	30.79	0.00	<50	--	<0.5	<0.5	<0.5	<0.5	<0.5	--
MW2	01/15/04	41.99	5.36	36.63	0.00	63.3	--	0.70	<0.5	<0.5	<0.5	1.0	--
MW3	03/14/96	32.80	9.55	23.25	0.00	4,200	1,200	220	30	140	520	--	--
MW3	05/21/96	32.80	10.16	22.64	0.00	8,500	2,800	710	110	440	1,700	--	--
MW3	08/13/96	32.80	11.18	21.62	0.00	5,000	2,300 ^c	430	ND	200	360	--	--
MW3	11/08/96	32.80	11.51	21.29	0.00	8,400	2,900 ^b	890	82	790	1,700	73	ND
MW3	01/31/97	32.80	7.90	24.90	0.00	16,000	7,500 ^b	660	85	960	1,800	ND	--
MW3	04/22/97	32.80	10.64	22.16	0.00	8,000	2,700	340	33	400	490	200	ND
MW3 ^a	07/29/97	32.80	11.36	21.44	0.00	9,800	2,300 ^b	330	ND	530	530	ND	--
MW3 ^a	10/09/97	32.80	11.52	21.28	0.00	7,300	2,600 ^b	300	ND	430	460	270	ND
MW3 ^a	01/23/98	32.80	7.50	25.30	0.00	6,100	2,300	190	23	330	320	ND	--
MW3	04/22/98	32.80	6.81	25.99	0.00	4,900	2,600	140	12	250	230	ND	ND
MW3	07/21/98	32.80	10.65	22.15	0.00	7,400	--	250	16	400	370	74	ND
MW3	10/20/98	32.80	11.57	21.23	0.00	6,700	--	200	18	350	350	ND	ND
MW3	01/27/99	32.80	9.11	23.69	0.00	3,100	--	74	4	94	39	13	--
MW3	07/27/99	32.80	7.27	25.53	0.00	8,900	--	170	21	360	440	ND	--
MW3	12/08/99	32.80	10.63	22.17	0.00	4,800	--	94	13	170	210	ND	--
MW3	10/25/00	39.27	12.08	27.19	0.00	3,800	--	63	2.9	100	65	<50	<5
MW3	01/15/01	39.27	10.29	28.98	0.00	4,300	--	76	9.5	47	76	<5.0	--
MW3	04/10/01	39.27	10.11	29.16	0.00	2,700	--	55	4.4	100	37	<20	--
MW3	07/24/01	39.27	11.57	27.70	0.00	3,100	--	110	6.9	110	81	<1.0	--
MW3	11/27/01	39.27	10.93	28.34	0.00	2,400	--	47	8.9	25	35	<0.30	--
MW3	01/18/02	41.71	9.47	32.24	0.00	1,130	--	15.3	2.30	42.0	24.6	13.6	--
MW3	04/10/02	41.71	10.14	31.57	0.00	916	--	35.1	3.00	22.5	13.8	11.2	--
MW3	07/12/02	41.71	11.34	30.37	0.00	2,330	--	60.5	2.90	39.8	50.9	15.4	--

TABLE 2 GROUNDWATER MONITORING DATA, FORMER MOBIL STATION 99-105, 6301 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TOC Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	LPH Thickness (feet)	Concentrations (µg/L)							
						TPH-g	TPH-d	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8020 or 8021)	MTBE (8240 or 8260)
MW3	10/14/02	41.71	12.10	29.61	0.00	2,550	--	36.9	3.8	20.3	48.0	<0.5	--
MW3	01/20/03	41.71	9.20	32.51	0.00	1,750	--	20.4	304.0	60.7	22.0	10.7	--
MW3	04/28/03	41.71	9.37	32.34	0.00	2,730	--	10.0	2.7	42.7	20.1	11.2	--
MW3	07/15/03	41.71	11.15	30.56	0.00	1,790	--	68.8	3.6	39.0	44.7	5.6	--
MW3	10/08/03	41.71	11.89	29.82	0.00	1,320	--	35.1	4.0	23.6	31.8	7.1	--
MW3	01/15/04	41.71	9.16	32.55	0.00	791	--	24.4	1.3	40.1	14.7	3.4	--
MW4	03/14/96	31.50	4.92	26.58	0.00	12,000	3,500	2,200	140	880	2,000	--	--
MW4	05/21/96	31.50	8.60	22.90	0.00	11,000	4,200	1,700	ND	930	470	--	--
MW4	08/13/96	31.50	10.02	21.50	0.02	--	--	--	--	--	--	--	--
MW4	11/08/96	31.50	10.28	21.33	0.15	--	--	--	--	--	--	--	--
MW4	01/31/97	31.50	7.88	23.62	0.00	23,000	8,200 ^b	980	68	1,100	1,400	ND	--
MW4	04/22/97	31.50	7.40	24.10	0.00	8,800	4,500	950	ND	610	130	ND	--
MW4	07/29/97	31.50	9.85	21.74	0.12	--	--	--	--	--	--	--	--
MW4	10/09/97	31.50	10.35	21.38	0.30	--	--	--	--	--	--	--	--
MW4	01/23/98	31.50	4.68	27.51	0.92	--	--	--	--	--	--	--	--
MW4	04/22/98	31.50	6.39	25.22	0.14	--	--	--	--	--	--	--	--
MW4	07/21/98	31.50	7.10	24.55	0.20	--	--	--	--	--	--	--	--
MW4	10/20/98	31.50	9.03	22.60	0.17	--	--	--	--	--	--	--	--
MW4	01/27/99	31.50	5.37	26.18	0.07	--	--	--	--	--	--	--	--
MW4	Destroyed during construction activities in April 1999												
MW5	10/25/00	39.18	10.92	28.26	0.00	2,500	--	79	3.8	66	<20	<20	--
MW5	01/15/01	39.18	8.32	30.86	0.00	3,900	--	120	7.9	280	52	<5.0	--
MW5	04/10/01	39.18	7.21	31.97	0.00	8,000	--	280	4.4	410	100	<50	<5
MW5	07/24/01	39.18	9.54	29.64	0.00	7,000	--	360	7.4	380	67	<1.0	--
MW5	11/27/01	39.18	8.84	30.34	0.00	5,000	--	64	11	340	52	8.9	<2
MW5	01/18/02	41.59	6.52	35.07	0.00	6,330	--	99.1	2.30	103	19.6	21.8	--
MW5	04/10/02	41.59	7.20	34.39	0.00	2,140	--	275	8.00	183	24.5	<2.50	--
MW5	07/12/02	41.59	8.83	32.76	0.00	3,940	--	350	<0.50	268	14	20	<0.50
MW5	10/14/02	41.59	10.74	30.85	0.00	4,040	--	98.5	9.0	169	29.0	<2.5	--
MW5	01/20/03	41.59	6.45	35.14	0.00	7,660	--	421	10.0	743	96.0	59	<0.50
MW5	04/28/03	41.59	6.68	34.91	0.00	7,510	--	403	5.5	524	50.5	47	<0.50
MW5	07/15/03	41.59	8.68	32.91	0.00	6,080	--	406	19.8	412	34.7	52.9	<2.5
MW5	10/08/03	41.59	10.56	31.03	0.00	2,460	--	160	12.8	173	31.7	54.3	<0.5
MW5	01/15/04	41.59	6.56	35.03	0.00	4,630	--	181	6.0	312	38.5	37.4	<0.5

TABLE 2 GROUNDWATER MONITORING DATA, FORMER MOBIL STATION 99-105, 6301 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TOC Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	LPH Thickness (feet)	Concentrations (µg/L)						
						TPH-g	TPH-d	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8020 or 8021)

- a Well sampled using no-purge method.
- b Diesel and unidentified hydrocarbons <C15
- c Diesel and unidentified hydrocarbons <C15>C25
- d Diesel and unidentified hydrocarbons >C20
- e Unidentified hydrocarbons >C18

- LPH Liquid-phase hydrocarbons.
- MTBE Methyl tertiary butyl ether.
- ND Not detected at or above laboratory reporting limit.
- TOC Top of casing.
- TPH-d Total Petroleum Hydrocarbons as diesel.
- TPH-g Total Petroleum Hydrocarbons as gasoline.
- Not measured/not analyzed.
- µg/L Micrograms per liter.

TABLE 3 GROUNDWATER MONITORING PLAN,
FORMER MOBIL STATION 99-105, 6301 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well Number	Groundwater Gauging Frequency	Groundwater Sampling and Analysis Frequency	
		BTEX and TPH-g	MTBE
MW2	Q	Q	Q
MW3	Q	Q	Q
MW5	Q	Q	Q

Q = Quarterly.

BTEX = Benzene, toluene, ethylbenzene, total xylenes.

MTBE = Methyl tertiary butyl ether.

TPH-g = Total Petroleum Hydrocarbons as gasoline.

Appendix A

Field Protocols

PROTOCOLS FOR QUARTERLY GROUNDWATER MONITORING

GROUNDWATER GAUGING

Wells are opened prior to gauging to allow the groundwater level in the wells to equilibrate with atmospheric pressure. The depth to groundwater and depth to liquid-phase hydrocarbons, if present, are then measured to the nearest 0.01 feet using an electronic water level meter or optical interface probe. The measurements are made from a permanent reference point at the top of the well casing. If less than 1 foot of water is measured in a well, the water is bailed from the well and, if the well does not recover, the well is considered "functionally dry." Wells with a sheen or measurable liquid-phase hydrocarbons are generally not purged or sampled.

WELL PURGING

After the wells are gauged, each well is purged of approximately 3 well casing volumes of water to provide representative groundwater samples for analysis. Field parameters of pH, temperature, and electrical conductance are measured during purging to ensure that these parameters have stabilized before groundwater in a well is sampled. Groundwater in each well is purged using an inertial pump (WaTerra), an electric submersible pump, or a bailer. After the well is purged, the water level is checked to ensure that the well has recharged to at least 80 percent of its original water level.

GROUNDWATER SAMPLING

After purging, groundwater in each well is sampled using dedicated tubing and an inertial pump (WaTerra) or a factory-cleaned disposable bailer. Samples from extraction wells are typically collected from sample ports associated with the groundwater remediation system. Samples collected for volatile organic analysis are placed in Teflon septum-sealed 40-milliliter glass vials. Samples collected for diesel analysis are placed in 1-liter amber glass bottles. Each sample bottle is labeled with the site name, well number, date, sampler's initials, and preservative. The samples are placed in a cooler with ice for delivery to a state-certified laboratory. The information for each sample is entered on a chain-of-custody form prior to transport to the laboratory.

Appendix B

Field Documents



GROUNDWATER PURGE AND SAMPLE

Project Name: Former Exxon 99-105

Well No: MW2

Date: 1/15/04

Project No: TM99105.6

Personnel: AP

GAUGING DATA

Water Level Measuring Method: WLM

Measuring Point Description: TOC

WELL PURGE VOLUME CALCULATION	Total Depth (feet)	Depth to Water (feet)	Water Column (feet)	Multiplier for Casing Diameter				Casing Volume (gal)	Total Purge Volume (gal)			
	18.73	-	5.36	=	13.37	X	1 0.04	2 0.16	4 0.64	6 1.44	8.55	=

PURGING DATA

Purge Method: WaTerra

Purge Depth: Screen

Purge Rate: (gpm)

Time	6:45	6:53	7:00			
Volume Purge (gal)	9	18	27			
Temperature (C)	15.6	15.7	16.4			
pH	5.84	5.95	5.80			
Spec.Cond.(umhos)	354.9	336.3	341.9			
Turbidity/Color	SILT/BLN	SILT/BLN	SILT/BLN			
Odor (Y/N)	N	N	N			
Dewatered (Y/N)	N	N	N			

Comments/Observations:

SAMPLING DATA

Time Sampled: 7:05

Approximate Depth to Water During Sampling: (feet)

Comments:

Sample Number	Number of Containers	Container Type	Perservative	Volume Filled (mL or L)	Turbidity/ Color	Analysis Method
MW2	6	Voa	HCL	40 ml		TPH-g, BTEX, MTBE

Total Purge Volume: 27 (gallons)

Disposal:

Weather Conditions: OK

Condition of Well Box and Casing at Time of Sampling: OK

Well Head Conditions Requiring Correction: NONE

Problems Encountered During Purging and Sampling: NONE

Comments:



GROUNDWATER PURGE AND SAMPLE

Project Name: Former Exxon 99-105	Well No: MW3	Date: 1/15/04
Project No: TM99105.6	Personnel: JP	

GAUGING DATA

Water Level Measuring Method: WLM Measuring Point Description: TOC

WELL PURGE VOLUME CALCULATION	Total Depth (feet)	Depth to Water (feet)	Water Column (feet)	Multiplier for Casing Diameter				Casing Volume (gal)	Total Purge Volume (gal)
	$18.30 - 9.16 = 9.14 \times \left(\frac{1}{0.04} \frac{2}{0.16} \frac{4}{0.64} \frac{6}{1.44} \right)$	18.30	9.16	9.14	1	2	4	6	5.84

PURGING DATA

Purge Method: WaTerra Purge Depth: Screen Purge Rate: (gpm)

Time	7:08	7:11	7:20			
Volume Purge (gal)	6	12	18			
Temperature (C)	16.9	17.2	17.0			
pH	6.29	6.39	6.50			
Spec. Cond. (umhos)	1041	1003	943.2			
Turbidity/Color	BLK / BLK	BLK / BLK	BLK / BLK			
Odor (Y/N)	Y	Y	Y			
Dewatered (Y/N)	N	N	Y			

Comments/Observations: SHEEN DETECTED ON SURFACE OF WATER & STRONG ODOR PRESENT. (ABSENT TO DEWATER AFTER LAST CASING VOLUME)

SAMPLING DATA

Time Sampled: 7:25 Approximate Depth to Water During Sampling: (feet)

Comments:

Sample Number	Number of Containers	Container Type	Perservative	Volume Filled (mL or L)	Turbidity/ Color	Analysis Method
MW3	6	Voa	HCL	40 ml	/	TPH-g, BTEX, MTBE

Total Purge Volume: 18 (gallons) Disposal:

Weather Conditions: OK

Condition of Well Box and Casing at Time of Sampling: OK

Well Head Conditions Requiring Correction: NONE

Problems Encountered During Purging and Sampling: NONE

Comments:



GROUNDWATER PURGE AND SAMPLE

Project Name: Former Exxon 99-105

Well No: **MW5**

Date: **1.15.07**

Project No: TM99105.6

Personnel: **(W)**

GAUGING DATA

Water Level Measuring Method: WLM

Measuring Point Description: TOC

WELL PURGE VOLUME CALCULATION	Total Depth (feet)	Depth to Water (feet)	Water Column (feet)	Multiplier for Casing Diameter				Casing Volume (gal)	Total Purge Volume (gal)
	$20.37 - 6.56 = 13.81 \times$	20.37	6.56	13.81	1	2	4	6	8.83
				0.04	0.16	0.64	1.44		

PURGING DATA

Purge Method: WaTerra

Purge Depth: Screen

Purge Rate: (gpm)

Time	6:47	6:55	7:03			
Volume Purge (gal)	9	18	27			
Temperature (C)	17.0	17.0				
pH	6.54	6.54				
Spec. Cond. (umhos)	39.74	2685				
Turbidity/Color	OK/OK	OK/OK				
Odor (Y/N)	Y	Y	Y			
Dewatered (Y/N)	N	N	N			

Comments/Observations:

WELL DEWATERED @ 26 Gallons
RESAMPLED & SAMPLED

SAMPLING DATA

Time Sampled: **7:05**

Approximate Depth to Water During Sampling:

(feet)

Comments:

Sample Number	Number of Containers	Container Type	Perservative	Volume Filled (mL or L)	Turbidity/ Color	Analysis Method
MW5	6	Voa	HCL	40 ml	/	TPH-g, BTEX, MTBE

Total Purge Volume: **27** (gallons)

Disposal:

Weather Conditions: **OK**

Condition of Well Box and Casing at Time of Sampling: **OK**

Well Head Conditions Requiring Correction: **NONE**

Problems Encountered During Purging and Sampling: **NONE**

Comments:

Appendix C

Laboratory Analytical Reports

1/22/04

CASE NARRATIVE

ETIC 3865
BRYAN CAMPBELL
2285 MORELLO AVENUE
PLEASANT HILL, CA 94523

This report includes the analytical certificates of analysis for all samples listed below. These samples relate to your project identified below:

Project Name: EXXONMOBIL 99-105
Project Number: .
Laboratory Project Number: 360971.

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. Any QC recoveries outside laboratory control limits are flagged individually with an #. Sample specific comments and quality control statements are included in the Laboratory notes section of the analytical report for each sample report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accreditation.

Sample Identification	Lab Number	Page 1
		Collection Date
MW2	04-A6285	1/15/04
MW3	04-A6286	1/15/04
MW5	04-A6287	1/15/04

RECEIVED
JAN 27 2004
ETIC ENGINEERING

TestAmerica

ANALYTICAL TESTING CORPORATION

2960 FOSTER CREIGHTON DRIVE • NASHVILLE, TENNESSEE 37204
800-765-0980 • 615-726-3404 FAX

Page 2

Sample Identification	Lab Number	Collection Date
-----	-----	-----

These results relate only to the items tested.
This report shall not be reproduced except in full and with
permission of the laboratory.

Report Approved By: *Ashley Morris* Report Date: 1/20/04

Ashley Morris, Lab Director	Gail A. Lage, Technical Serv.
Michael H. Dunn, M.S., QA/QC Director	Glenn L. Norton, Technical Serv.
Johnny A. Mitchell, Operations Manager Organics	Kelly S. Comstock, Technical Serv.
Eric S. Smith, Assistant Technical Director	Pamela A. Langford, Technical Serv.
Roxanne L. Connor, Technical Services	

Laboratory Certification Number: 01168CA

This material is intended only for the use of the individual(s) or entity to whom it is addressed,
and may contain information that is privileged and confidential. If you are not the intended recipient,
or the employee or agent responsible for delivering this material to the intended recipient, you are
hereby notified that any dissemination, distribution, or copying of this material is strictly prohibited.
If you have received this material in error, please notify us immediately at 615-726-0177.

ANALYTICAL REPORT

ETIC 3865
 BRYAN CAMPBELL
 2285 MORELLO AVENUE
 PLEASANT HILL, CA 94523

Lab Number: 04-A6285
 Sample ID: MW2
 Sample Type: Water
 Site ID: 99-105

Project:
 Project Name: EXXONMOBIL 99-105
 Sampler: WYNN P.

Date Collected: 1/15/04
 Time Collected: 7:05
 Date Received: 1/16/04
 Time Received: 8:10
 Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis		Analyst	Method	Batch
					Date	Time			
ORGANIC PARAMETERS									
Benzene	0.70	ug/L	0.50	1.0	1/17/04	20:23	I. Ahmed	8021B	152
Ethylbenzene	ND	ug/L	0.5	1.0	1/17/04	20:23	I. Ahmed	8021B	152
Toluene	ND	ug/L	0.5	1.0	1/17/04	20:23	I. Ahmed	8021B	152
Xylenes (Total)	ND	ug/L	0.5	1.0	1/17/04	20:23	I. Ahmed	8021B	152
Methyl-t-butylether	1.0	ug/L	0.5	1.0	1/17/04	20:23	I. Ahmed	8021B	152
TPH (Gasoline Range)	63.3	ug/L	50.0	1.0	1/17/04	20:23	I. Ahmed	8015B	152

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-TFT	95.	70. - 124.

LABORATORY COMMENTS:

- ND = Not detected at the report limit.
- B = Analyte was detected in the method blank.
- J = Estimated Value below Report Limit.
- E = Estimated Value above the calibration limit of the instrument.
- # = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

ANALYTICAL REPORT

ETIC 3865
BRYAN CAMPBELL
2285 MORELLO AVENUE
PLEASANT HILL, CA 94523

Lab Number: 04-A6286
Sample ID: MW3
Sample Type: Water
Site ID: 99-105

Project:
Project Name: EXXONMOBIL 99-105
Sampler: WYNN P.

Date Collected: 1/15/04
Time Collected: 7:25
Date Received: 1/16/04
Time Received: 8:10
Page: 1

Analyte	Result	Units	Report	Dil	Analysis		Analyst	Method	Batch
			Limit		Factor	Date			
ORGANIC PARAMETERS									
Benzene	24.4	ug/L	0.50	1.0	1/17/04	20:54	I. Ahmed	8021B	152
Ethylbenzene	40.1	ug/L	0.5	1.0	1/17/04	20:54	I. Ahmed	8021B	152
Toluene	1.3	ug/L	0.5	1.0	1/17/04	20:54	I. Ahmed	8021B	152
Xylenes (Total)	14.7	ug/L	0.5	1.0	1/17/04	20:54	I. Ahmed	8021B	152
Methyl-t-butylether	3.4	ug/L	0.5	1.0	1/17/04	20:54	I. Ahmed	8021B	152
TPH (Gasoline Range)	791.	ug/L	50.0	1.0	1/17/04	20:54	I. Ahmed	8015B	152

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-TFT	118.	70. - 124.

LABORATORY COMMENTS:

- ND = Not detected at the report limit.
- B = Analyte was detected in the method blank.
- J = Estimated Value below Report Limit.
- E = Estimated Value above the calibration limit of the instrument.
- # = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

ANALYTICAL REPORT

ETIC 3865
BRYAN CAMPBELL
2285 MORELLO AVENUE
PLEASANT HILL, CA 94523

Lab Number: 04-A6287
Sample ID: MW5
Sample Type: Water
Site ID: 99-105

Project:
Project Name: EXXONMOBIL 99-105
Sampler: WYNN P.

Date Collected: 1/15/04
Time Collected: 7:05
Date Received: 1/16/04
Time Received: 8:10
Page: 1

Analyte	Result	Units	Report	Dil	Analysis		Analyst	Method	Batch
			Limit	Factor	Date	Time			
ORGANIC PARAMETERS									
Benzene	181.	ug/L	1.00	2.0	1/19/04	10:00	I. Ahmed	8021B	1266
Ethylbenzene	312.	ug/L	1.0	2.0	1/19/04	10:00	I. Ahmed	8021B	1266
Toluene	6.0	ug/L	0.5	1.0	1/17/04	22:26	I. Ahmed	8021B	152
Xylenes (Total)	38.5	ug/L	0.5	1.0	1/17/04	22:26	I. Ahmed	8021B	152
Methyl-t-butylether	37.4	ug/L	0.5	1.0	1/17/04	22:26	I. Ahmed	8021B	152
TPH (Gasoline Range)	4630	ug/L	50.0	1.0	1/17/04	22:26	I. Ahmed	8015B	152
VOLATILE ORGANICS									
Methyl-t-butyl ether	ND	ug/L	0.50	1.0	1/21/04	17:25	A. Bruton	8260B	4838

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-TFT	118.	70. - 124.
VOA Surr 1,2-DCA-d4	99.	71. - 128.
VOA Surr Toluene-d8	100.	77. - 119.
VOA Surr, 4-BFB	103.	79. - 123.
VOA Surr, DBFM	99.	78. - 124.

Sample report continued . . .

ANALYTICAL REPORT

Laboratory Number: 04-A6287
Sample ID: MW5
Project:
Page 2

LABORATORY COMMENTS:

- ND = Not detected at the report limit.
- B = Analyte was detected in the method blank.
- J = Estimated Value below Report Limit.
- E = Estimated Value above the calibration limit of the instrument.
- # = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

PROJECT QUALITY CONTROL DATA

Project Number:
 Project Name: **EXXONMOBIL 99-105**
 Page: 1
 Laboratory Receipt Date: 1/16/04

Matrix Spike Recovery

Note: If Blank is referenced as the sample spiked, insufficient volume was received for the defined analytical batch for MS/MSD analysis on an true sample matrix. Laboratory reagent water was used for QC purposes.

Analyte	units	Orig. Val.	MS Val	Spike Conc	Recovery	Target Range	Q.C. Batch	Spike Sample
UST ANALYSIS								
Benzene	mg/l	< 0.00050	0.0561	0.0500	112	53. - 159.	152	04-A5560
Toluene	mg/l	< 0.0005	0.0560	0.0500	112	54. - 156.	152	04-A5560
Ethylbenzene	mg/l	< 0.0005	0.0575	0.0500	115	50. - 159.	152	04-A5560
Xylenes (Total)	mg/l	< 0.0005	0.105	0.100	105	53. - 151.	152	04-A5560
Methyl-t-butylether	mg/l	0.102	0.145	0.0500	86	36. - 158.	152	04-A5560
TPH (Gasoline Range)	mg/l	0.0607	0.988	1.00	93	70. - 157.	152	04-A5560
BTEX/GRO Surr., a,a,a-TFT	% Recovery				99	70 - 124	152	
VOA Surr 1,2-DCA-d4	% Rec				102	71 - 128	4838	
VOA Surr Toluene-d8	% Rec				104	77 - 119	4838	
VOA Surr, 4-BFB	% Rec				100	79 - 123	4838	
VOA Surr, DBFM	% Rec				104	78 - 124	4838	

Matrix Spike Duplicate

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch
UST PARAMETERS						
Benzene	mg/l	0.0561	0.0575	2.46	21.	152
Toluene	mg/l	0.0560	0.0590	5.22	25.	152
Ethylbenzene	mg/l	0.0575	0.0602	4.59	25.	152
Xylenes (Total)	mg/l	0.105	0.108	2.82	24.	152
Methyl-t-butylether	mg/l	0.145	0.0681	72.17#	24.	152
TPH (Gasoline Range)	mg/l	0.988	0.393	10.10	24.	152

Project QC continued . . .

TestAmerica

ANALYTICAL TESTING CORPORATION

2960 FOSTER CREIGHTON DRIVE • NASHVILLE, TENNESSEE 37204

800-765-0980 • 615-726-3404 FAX

PROJECT QUALITY CONTROL DATA

Project Number:

Project Name: EXXONMOBIL 99-105

Page: 2

Laboratory Receipt Date: 1/16/04

Matrix Spike Duplicate

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch
BTEX/GRO Surr., a,a,a-TFT	% Recovery		99.			152
VOA Surr 1,2-DCA-d4	% Rec		101.			4838
VOA Surr Toluene-d8	% Rec		99.			4838
VOA Surr, 4-BFB	% Rec		100.			4838
VOA Surr, DBFM	% Rec		101.			4838

Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
UST PARAMETERS						
Benzene	mg/l	0.100	0.0951	95	76 - 118	152
Benzene	mg/l	0.100	0.0919	92	76 - 118	1266
Toluene	mg/l	0.100	0.0945	94	72 - 119	152
Ethylbenzene	mg/l	0.100	0.0970	97	72 - 119	152
Ethylbenzene	mg/l	0.100	0.0969	97	72 - 119	1266
Kylenes (Total)	mg/l	0.200	0.188	94	71 - 123	152
Methyl-t-butylether	mg/l	0.100	0.0891	89	63 - 120	152
TPH (Gasoline Range)	mg/l	1.00	0.988	99	72 - 122	152
BTEX/GRO Surr., a,a,a-TFT	% Recovery			98	70 - 124	152
BTEX/GRO Surr., a,a,a-TFT	% Recovery			97	70 - 124	1266
VOA PARAMETERS						
Methyl-t-butyl ether	mg/l	0.0500	0.0506	101	70 - 130	4838

Project QC continued . . .

www.testamericainc.com

TestAmerica Analytical Testing Corporation | TestAmerica Drilling Corporation | TestAmerica Air Emission Corporation

PROJECT QUALITY CONTROL DATA

Project Number:

Project Name: **EXXONMOBIL 99-105**

Page: 3

Laboratory Receipt Date: 1/16/04

VOA Surr 1,2-DCA-d4	% Rec	100	71 - 128	4838
VOA Surr Toluene-d8	% Rec	99	77 - 119	4838
VOA Surr, 4-BFB	% Rec	102	79 - 123	4838
VOA Surr, DBFM	% Rec	100	78 - 124	4838

Duplicates

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch	Sample Dup'd
---------	-------	------------	-----------	-----	-------	------------	--------------

Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Date Analyzed	Time Analyzed
---------	-------------	-------	------------	---------------	---------------

****UST PARAMETERS****

Benzene	< 0.00050	mg/l	152	1/17/04	15:48
Benzene	< 0.00050	mg/l	1266	1/18/04	9:09
Toluene	< 0.0005	mg/l	152	1/17/04	15:48
Ethylbenzene	< 0.0005	mg/l	152	1/17/04	15:48
Ethylbenzene	< 0.0005	mg/l	1266	1/18/04	9:09
Xylenes (Total)	< 0.0005	mg/l	152	1/17/04	15:48
Methyl-t-butylether	< 0.0005	mg/l	152	1/17/04	15:48
TPH (Gasoline Range)	< 0.0500	mg/l	152	1/17/04	15:48
STEX/GRO Surr., a,a,a-TET	96.	% Recovery	152	1/17/04	15:48
BTEX/GRO Surr., a,a,a-TET	95.	% Recovery	1266	1/18/04	9:09

Project QC continued . . .

PROJECT QUALITY CONTROL DATA

Project Number:

Project Name: EXXONMOBIL 99-105

Age: 4

Laboratory Receipt Date: 1/16/04

VOA PARAMETERS

Methyl-t-butyl ether	< 0.00014	mg/l	4838	1/21/04	12:57
VOA Surr 1,2-DCA-d4	104.	% Rec	4838	1/21/04	12:57
VOA Surr Toluene-d8	100.	% Rec	4838	1/21/04	12:57
VOA Surr, 4-BFB	105.	% Rec	4838	1/21/04	12:57
VOA Surr, DBFM	103.	% Rec	4838	1/21/04	12:57

= Value outside Laboratory historical or method prescribed QC limits.

End of Report for Project 360971



Client: ETIC Engineering

Cooler Received On: 1/16/04 And Opened On: 1/16/04 By: Shane Gambill

[Signature]
(Signature)

1. Temperature of Cooler when opened -3.0 Degrees Celsius
2. Were custody seals on outside of cooler?..... YES...NO...NA
 - a. If yes, how many, what kind and where: 1/2/3/4 FRONT/BACK/SIDE
3. Were custody seals on containers and intact?..... NO...YES... NA
4. Were the seals intact, signed, and dated correctly?..... YES...NO...NA
5. Were custody papers inside cooler?..... YES...NO...NA
6. Were custody papers properly filled out (ink, signed, etc)?..... YES...NO...NA
7. Did you sign the custody papers in the appropriate place?..... YES...NO...NA
8. What kind of packing material used? Bubblewrap Peanuts Vermiculite Other None
9. Cooling process: Ice Ice pack Ice(direct contact) Dry ice Other None
10. Did all containers arrive in good condition(unbroken)?.....YES... NO...NA
11. Were all container labels complete (#, date, signed, pres, etc)?..... YES...NO...NA
12. Did all container labels and tags agree with custody papers?..... YES...NO...NA
13. Were correct containers used for the analysis requested?..... YES...NO...NA
14. a. Were VOA vials received?..... YES...NO...NA
 - b. Was there any observable head space present in any VOA vial?..... NO...YES...NA
15. Was sufficient amount of sample sent in each container?..... YES...NO...NA
16. Were correct preservatives used?..... YES...NO...NA
If not, record standard ID of preservative used here _____

17. Was residual chlorine present?.....NO...YES... NA

18. See attached for resolution of non-conformance: 1 VOA B I.S. For MW 3

<input checked="" type="radio"/> Fed-Ex	<input type="radio"/> UPS	<input type="radio"/> Velocity	<input type="radio"/> Airborne	<input type="radio"/> Route	<input type="radio"/> Off-street	<input type="radio"/> Misc.
---	---------------------------	--------------------------------	--------------------------------	-----------------------------	----------------------------------	-----------------------------