

ExxonMobil Environmental Services Company
4096 Piedmont Avenue #194
Oakland, California 94611
510 547 8196 Telephone
510 547 8706 Facsimile

Jennifer C. Sedlachek
Project Manager

RECEIVED

10:58 am, Sep 14, 2009

Alameda County
Environmental Health

ExxonMobil

September 9, 2009

Ms. Barbara Jakub
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Subject: Former Mobil Station 04334, 2492 Castro Valley Boulevard, Castro Valley, California

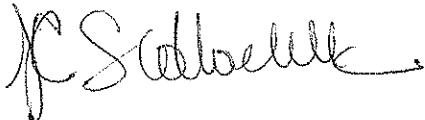
Dear Ms. Jakub:

Attached for your review and comment is a copy of the *Report of Groundwater Monitoring, Third Quarter 2009* for the above-referenced site. The report, prepared by ETIC Engineering, Inc. of Pleasant Hill, California, details the results of the July 2009 sampling event.

Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached report is true and correct.

If you have any questions or comments, please contact me at 510.547.8196.

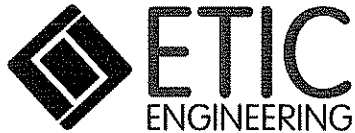
Sincerely,



Jennifer C. Sedlachek
Project Manager

Attachment: ETIC Groundwater Monitoring Report

- c: w/ attachment:
Ms. Paula Floeck – Jiffy Lube International
Mr. Joseph D. Phillips – Jiffy Lube Remediation Coordinator
Mr. William Slautterback – Cal Lube Real Estate Limited Partnership
Mr. William Peterson – Owner of Castro Valley Lumber Company
- c: w/o attachment:
Mr. Bryan Campbell – ETIC Engineering, Inc.



**Report of Groundwater Monitoring
Third Quarter 2009**

**Former Mobil Station 04334
2492 Castro Valley Boulevard
Castro Valley, California**

Prepared for

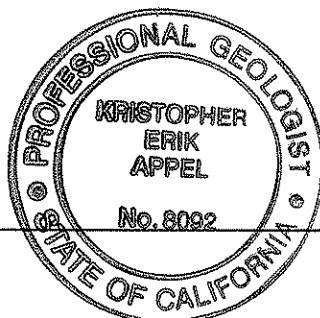
ExxonMobil Oil Corporation

Prepared by

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

A handwritten signature in cursive script that reads "K. Erik Appel".

K. Erik Appel, P.G. #8092
Senior Project Geologist



A handwritten date in cursive script that reads "September 9, 2009".

Date

September 2009

SITE CONTACTS

Site Name: Former Mobil Station 04334

Site Address: 2492 Castro Valley Boulevard
Castro Valley, California

ExxonMobil Project Manager: Jennifer C. Sedlachek
ExxonMobil Environmental Services Company
4096 Piedmont Avenue #194
Oakland, California 94611
(510) 547-8196

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

ETIC Project Manager: K. Erik Appel

Regulatory Oversight: Barbara Jakub
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502
(510) 567-6700

INTRODUCTION

ETIC Engineering, Inc. (ETIC) has prepared this quarterly groundwater monitoring report for ExxonMobil Environmental Services Company on behalf of ExxonMobil Oil Corporation for the former Mobil Station 04334. 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 15 April 2009, the date of the previous monitoring event, to 21 July 2009, the date of the most 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 04334
Site address:	2492 Castro Valley Boulevard, Castro Valley, California
Current property owner:	Cal Lube Real Estate Limited Partnership
Current site use:	Jiffy Lube Oil Change facility
Current phase of project:	Groundwater monitoring
Tanks at site:	Four former underground storage tanks removed 1983
Number of wells:	5 (3 onsite, 2 offsite)

GROUNDWATER MONITORING SUMMARY

Gauging and sampling date:	21 July 2009
Wells gauged and sampled:	MW1-MW5
Wells gauged only:	None
Groundwater flow direction:	Northeast
Groundwater gradient:	0.022
Well screens submerged:	None
Well screens not submerged:	MW1, MW2, MW3, MW4, MW5
Liquid-phase hydrocarbons:	Not observed or detected
Laboratory:	Calscience Environmental Laboratories, Inc., Garden Grove, California

Analyses performed:

- Total Petroleum Hydrocarbons as gasoline and as diesel by EPA Method 8015B (M)
- Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8021B
- Methyl tertiary butyl ether by EPA Method 8260B
- Ethyl tertiary butyl ether, tertiary amyl methyl ether, tertiary butyl alcohol, 1,2-dibromoethane, 1,2-dichloroethane, diisopropyl ether, and ethanol by EPA Method 8260B

ADDITIONAL ACTIVITIES PERFORMED

None.

WORK PROPOSED FOR NEXT QUARTER

The Alameda County Health Care Services Agency sent a letter dated 24 July 2009 recommending reducing groundwater monitoring from quarterly to semi-annually. Semi-annual groundwater monitoring will be conducted in the second and fourth quarters per the attached groundwater monitoring plan.

Attachments:

Figure 1: Site Map Showing Groundwater Elevations and Contours

Figure 2: Site Map Showing Groundwater 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 and Chain-of-Custody Documentation

Figures

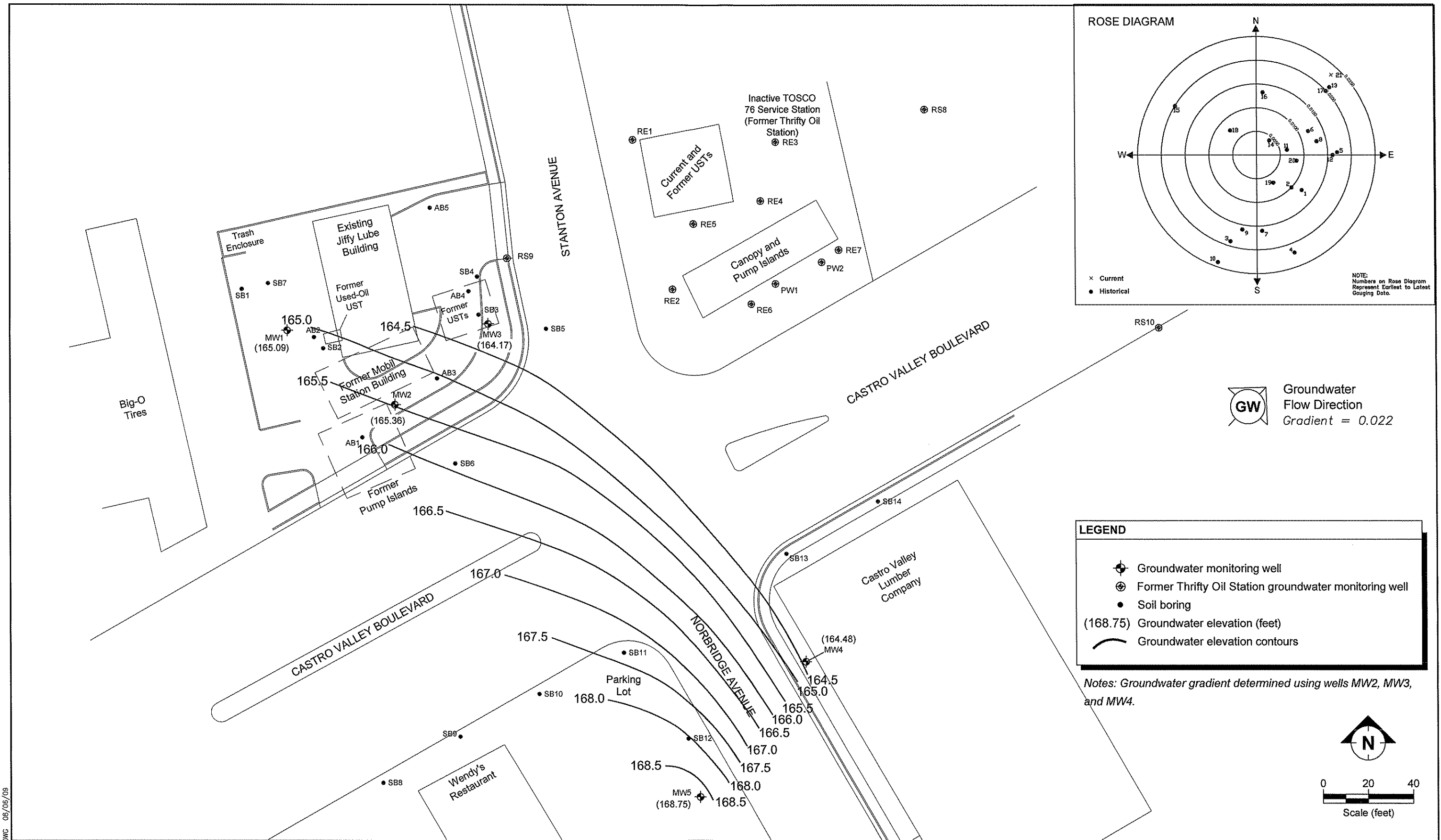
FILENAME: 302009.DWG 08/06/09



SITE MAP SHOWING GROUNDWATER ELEVATIONS AND CONTOURS
FORMER MOBIL STATION 04334
2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA
21 JULY 2009

FIGURE:

1



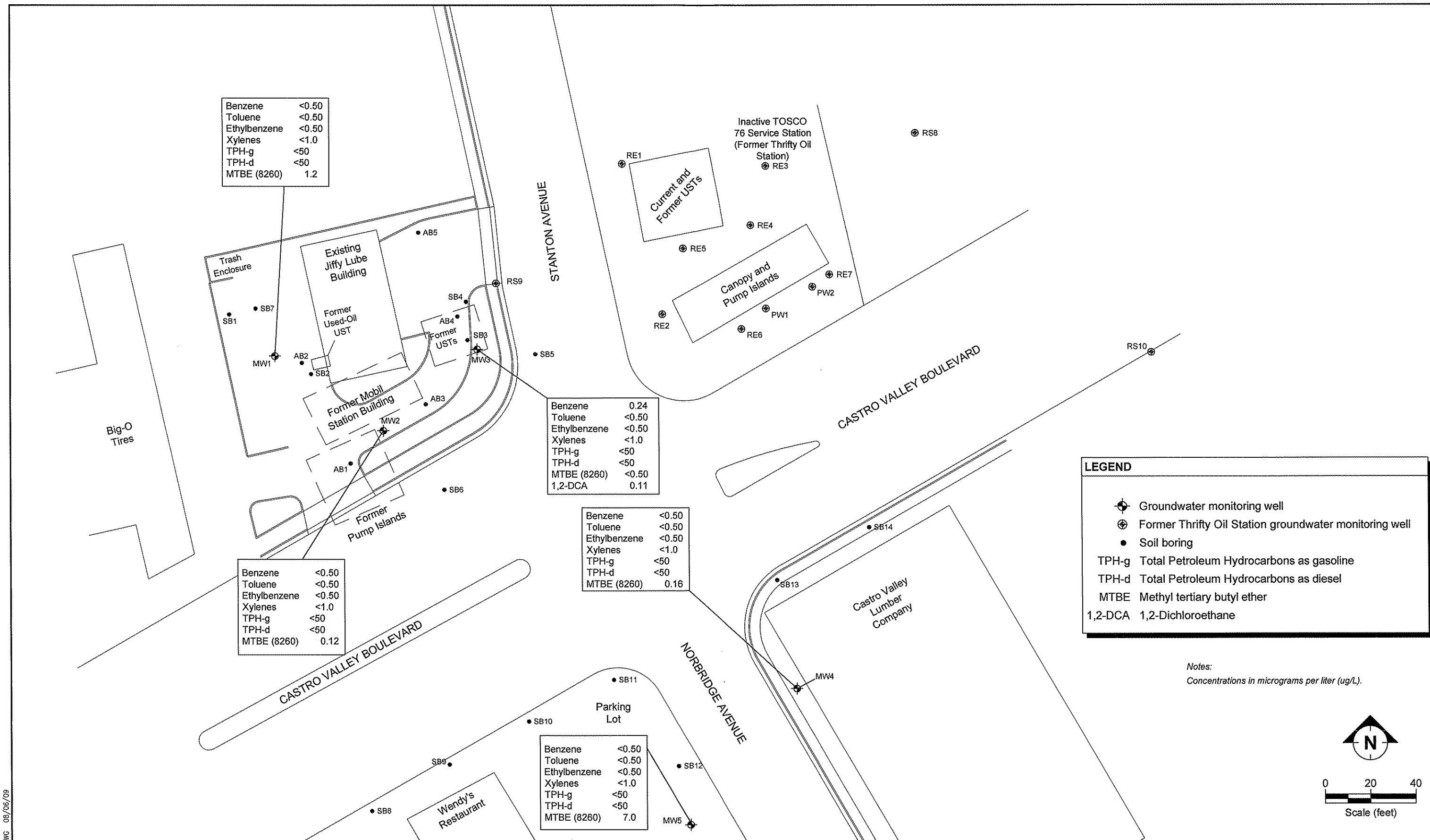
FILENAME: 302009.DWG 08/06/09



SITE MAP SHOWING GROUNDWATER ANALYTICAL RESULTS
FORMER MOBIL STATION 04334
2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA
21 JULY 2009

FIGURE:

2



Tables

TABLE 1 WELL CONSTRUCTION DETAILS, FORMER MOBIL STATION 04334, 2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, 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	a 06/24/04	173.23	PVC	20	20	8.25	2	5 - 20	0.010	4.5 - 20	#2/12 Sand
MW2	a 06/25/04	173.63	PVC	20	20	8.25	2	5 - 20	0.010	4.5 - 20	#2/12 Sand
MW3	a 06/25/04	171.91	PVC	20	20	8.25	2	5 - 20	0.010	4.5 - 20	#2/12 Sand
MW4	a 06/24/04	170.48	PVC	15	14	8.25	2	4 - 14	0.010	3.5 - 15	#2/12 Sand
MW5	b 01/30/09	173.80	PVC	15	15	8.25	2	5 - 15	0.010	4.0 - 15	#2/12 Sand

Notes:

- a Well surveyed on 12 July 2004 by Morrow Surveying.
- b Well surveyed on 10 February 2009 by Morrow Surveying.

- PVC Polyvinyl chloride.
- TOC Top of casing.

TABLE 2 GROUNDWATER MONITORING DATA, FORMER MOBIL STATION 04334, 2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	Concentration (µg/L)							Other Oxygenates and Additives
					Benzene	Toluene	Ethyl- benzene	Total Xylenes	TPH-g	TPH-d	MTBE	
MW1	a 08/13/04	173.23	7.32	165.91	<0.5	0.7	<0.5	1.0	<50	71	1.20 ^b	--
MW1	11/09/04	173.23	6.96	166.27	<0.5	0.9	<0.5	0.9	<50	63	1.50 ^b	--
MW1	02/16/05	173.23	6.10	167.13	<0.5	1.0	<0.5	1.5	<50	78	1.30 ^b	--
MW1	05/16/05	173.23	5.81	167.42	<0.5	<0.5	<0.5	<0.5	<50	<50	1.40 ^b	--
MW1	08/17/05	173.23	6.70	166.53	<0.5	<0.5	<0.5	<0.5	<50	<50	1.19 ^b	--
MW1	11/15/05	173.23	7.55	165.68	<0.5	<0.5	<0.5	<0.5	<50	<50	1.13 ^b	--
MW1	02/06/06	173.23	6.40	166.83	<0.5	<0.5	<0.5	<0.5	<50	160	<0.5 ^b	--
MW1	05/03/06	173.23	6.95	166.28	<1.00	<1.00	<1.00	<3.00	<50.0	78	<0.50 ^b	--
MW1	08/04/06	173.23	7.71	165.52	<0.50	<0.50	<0.50	<0.50	<50.0	167	<0.500 ^b	--
MW1	11/06/06	173.23	7.57	165.66	<0.50	<0.50	<0.50	<0.50	<50.0	<47.2	0.880 ^b	--
MW1	02/21/07	173.23	7.19	166.04	<0.50	<0.50	<0.50	<0.50	<50.0	<46.9	2.42 ^b	--
MW1	08/01/07	173.23	8.00	165.23	3.02	4.18	0.89	3.96	90.8	<47	1.54 ^b	--
MW1	10/25/07	173.23	7.90	165.33	<0.50	<0.50	<0.50	<0.50	<50.0	<47.2	1.63 ^b	--
MW1	01/31/08	173.23	6.60	166.63	<0.50	<0.50	<0.50	<0.50	<50	<50	1.8 ^b	--
MW1	05/01/08	173.23	7.80	165.43	<1.00	<1.00	<1.00	<3.00	<50.0	<47.2	1.67 ^b	--
MW1	07/31/08	173.23	8.15	165.08	<0.50	<0.50	<0.50	<0.50	<50	<47	1.7 ^b	--
MW1	11/07/08	173.23	8.11	165.12	<0.50	<0.50	<0.50	<0.50	<50	<47	1.4 ^b	--
MW1	01/29/09	173.23	7.75	165.48	<0.50	0.21 ^{e,f}	<0.50	0.30 ^{e,f}	<50	<50	1.6 ^b	--
MW1	04/15/09	173.23	7.55	165.68	<0.50	<0.50	<0.50	<1.0	<50	<50	1.6 ^b	19 ^g , 22 ^{h,c}
MW1	07/21/09	173.23	8.14	165.09	<0.50	<0.50	<0.50	<1.0	<50	<50	1.2^b	ND
MW2	a 08/13/04	173.63	6.96	166.67	<0.5	0.8	<0.5	1.0	<50	57	<0.5 ^b	--
MW2	11/09/04	173.63	6.44	167.19	<0.5	1.1	<0.5	1.2	<50	<50	<0.5 ^b	--
MW2	02/16/05	173.63	5.21	168.42	<0.5	0.9	<0.5	1.4	<50	55	<0.5 ^b	--
MW2	05/16/05	173.63	5.86	167.77	<0.5	<0.5	<0.5	<0.5	<50	<50	<0.5 ^b	--
MW2	08/17/05	173.63	5.72	167.91	<0.5	<0.5	<0.5	<0.5	<50	<50	<0.5 ^b	--
MW2	11/15/05	173.63	7.65	165.98	<0.5	<0.5	<0.5	<0.5	<50	<50	<0.5 ^b	--
MW2	02/06/06	173.63	6.24	167.39	<0.5	<0.5	<0.5	<0.5	<50	<50	<0.5 ^b	--
MW2	05/03/06	173.63	6.53	167.10	<1.00	<1.00	<1.00	<3.00	<50.0	<50	<0.50 ^b	--

TABLE 2 GROUNDWATER MONITORING DATA, FORMER MOBIL STATION 04334, 2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	Concentration (µg/L)							Other Oxygenates and Additives
					Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	TPH-d	MTBE	
MW2	08/04/06	173.63	7.65	165.98	<0.50	<0.50	<0.50	<0.50	<50.0	<47.2	<0.500 ^b	--
MW2	11/06/06	173.63	6.98	166.65	<0.50	<0.50	<0.50	<0.50	<50.0	<46.9	<0.500 ^b	--
MW2	02/21/07	173.63	6.36	167.27	<0.50	<0.50	<0.50	<0.50	<50.0	<46.9	1.70 ^b	--
MW2	05/01/07	173.63	7.51	166.12	<0.50	<0.50	<0.50	<0.50	<50.0	<46.9	<0.50 ^b	--
MW2	08/01/07	173.63	8.12	165.51	<0.50	<0.50	<0.50	<0.50	<50.0	<47	<0.500 ^b	--
MW2	10/25/07	173.63	7.79	165.84	<0.50	<0.50	<0.50	<0.50	<50.0	<47.2	<0.500 ^b	--
MW2	01/31/08	173.63	5.89	167.74	<0.50	<0.50	<0.50	<0.50	<50	<50	0.82 ^b	--
MW2	05/01/08	173.63	7.81	165.82	<1.00	<1.00	<1.00	<3.00	<50.0	<47.2	<0.500 ^b	--
MW2	07/31/08	173.63	8.30	165.33	<0.50	<0.50	<0.50	<0.50	<50	<47	<0.50 ^b	--
MW2	11/07/08	173.63	8.09	165.54	<0.50	<0.50	<0.50	<0.50	<50	<47	<0.50 ^b	--
MW2	01/29/09	173.63	7.65	165.98	<0.50	<0.50	<0.50	<1.0	<50	<50	<0.50 ^b	--
MW2	04/15/09	173.63	7.51	166.12	<0.50	<0.50	<0.50	<1.0	<50	<50	0.50 ^{b,c}	6.5 ^{b,e}
MW2	07/21/09	173.63	8.27	165.36	<0.50	<0.50	<0.50	<1.0	<50	<50	0.12^{b,e}	ND
MW3	a 08/13/04	171.91	5.36	166.55	100	2.0	187	59.6	1,440	352	<0.5 ^b	--
MW3	11/09/04	171.91	4.80	167.11	188	3.6	242	20.0	1,690	461	<0.5 ^b	--
MW3	02/16/05	171.91	3.10	168.81	66.2	1.4	61.1	12.6	575	269	<0.5 ^b	--
MW3	05/16/05	171.91	3.86	168.05	74.2	1.4	61.0	9.0	592	92	<0.5 ^b	--
MW3	08/17/05	171.91	4.75	167.16	231 ^c	2.35	102	11.4	1,130	416	<0.5 ^b	--
MW3	11/15/05	171.91	6.56	165.35	57.4	0.95	62.4	10.5	452	193	<0.5 ^b	--
MW3	02/06/06	171.91	4.00	167.91	69	<5.0	64	10	830	165	<0.5 ^b	--
MW3	05/03/06	171.91	5.44	166.47	52.1	<1.00	37.0	4.81	605	140	<0.50 ^b	--
MW3	08/04/06	171.91	5.25	166.66	15.2	<0.50	5.34	1.25	262	108	<0.500 ^b	--
MW3	11/06/06	171.91	4.11	167.80	60.0	1.04	47.3	3.09	561	106	<0.500 ^b	--
MW3	02/21/07	171.91	4.94	166.97	35.1	<0.50	45.4	1.09	483	125	<0.500 ^b	--
MW3	05/01/07	171.91	5.86	166.05	32.5	1.63	28.7	1.53	539	120	<0.50 ^b	--
MW3	08/01/07	171.91	7.54	164.37	1.26	0.60	<0.50	<0.50	89.2	<47	<0.500 ^b	--
MW3	10/25/07	171.91	6.30	165.61	2.94	<0.50	<0.50	<0.50	50.4	<47.2	<0.500 ^b	--
MW3	01/31/08	171.91	3.75	168.16	10	<0.50	11	<0.50	120	51 ^d	<0.50 ^b	--

TABLE 2 GROUNDWATER MONITORING DATA, FORMER MOBIL STATION 04334, 2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	Concentration (µg/L)							Other Oxygenates and Additives
					Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	TPH-d	MTBE	
MW3	05/01/08	171.91	6.60	165.31	2.38	<1.00	<1.00	<3.00	<50.0	<47.2	<0.50 ^b	--
MW3	07/31/08	171.91	7.77	164.14	<0.50	<0.50	<0.50	<0.50	<50	<47	<0.50 ^b	--
MW3	11/07/08	171.91	6.34	165.57	3.6	<0.50	1.4	<0.50	<50	<47	<0.50 ^b	--
MW3	01/29/09	171.91	5.86	166.05	13	0.33 ^e	13	0.52 ^{e,f}	92	<50	<0.50 ^b	--
MW3	04/15/09	171.91	6.14	165.77	2.2	<0.50	3.2	<1.0	51	<50	<0.50 ^b	3.7 ^{b,c}
MW3	07/21/09	171.91	7.74	164.17	0.24^e	<0.50	<0.50	<1.0	<50	<50	<0.50^b	0.11^{b,c}
MW4	a 08/13/04	170.48	6.10	164.38	<0.5	0.8	<0.5	1.1	<50	72	2.80 ^b	--
MW4	11/09/04	170.48	5.54	164.94	<0.5	2.3	0.7	1.5	<50	<50	2.10 ^b	--
MW4	02/16/05	170.48	5.11	165.37	<0.5	1.1	<0.5	1.7	<50	<50	<0.5 ^b	--
MW4	05/16/05	170.48	5.44	165.04	<0.5	<0.5	<0.5	<0.5	<50	<50	<0.5 ^b	--
MW4	08/17/05	170.48	5.71	164.77	<0.5	<0.5	<0.5	<0.5	<50	<50	1.03 ^b	--
MW4	11/15/05	170.48	5.80	164.68	<0.5	<0.5	<0.5	<0.5	<50	<50	0.730 ^b	--
MW4	02/06/06	170.48	5.10	165.38	<0.5	<0.5	<0.5	<0.5	<50	85.2	<0.5 ^b	--
MW4	05/03/06	170.48	5.54	164.94	<1.00	<1.00	<1.00	<3.00	<50.0	<47	<0.50 ^b	--
MW4	08/04/06	170.48	5.75	164.73	<0.50	<0.50	<0.50	<0.50	<50.0	52.7	<0.500 ^b	--
MW4	11/06/06	170.48	5.95	164.53	<0.50	<0.50	<0.50	<0.50	<50.0	<47.2	<0.500 ^b	--
MW4	02/21/07	170.48	5.56	164.92	<0.50	<0.50	<0.50	<0.50	<50.0	<46.9	<0.500 ^b	--
MW4	05/01/07	170.48	5.66	164.82	<0.50	<0.50	<0.50	<0.50	<50.0	<46.9	<0.50 ^b	--
MW4	08/01/07	170.48	6.06	164.42	0.85	<0.50	<0.50	0.97	<50.0	<47	<0.870 ^b	--
MW4	10/25/07	170.48	5.34	165.14	<0.50	<0.50	<0.50	<0.50	<50.0	<47.2	<0.500 ^b	--
MW4	01/31/08	170.48	5.05	165.43	<0.50	<0.50	<0.50	<0.50	<50	<47	<0.50 ^b	--
MW4	05/01/08	170.48	5.86	164.62	<1.00	<1.00	<1.00	<3.00	<50.0	<47.2	<0.500 ^b	--
MW4	07/31/08	170.48	6.10	164.38	<0.50	<0.50	<0.50	<0.50	<50	<47	<0.50 ^b	--
MW4	11/07/08	170.48	5.65	164.83	<0.50	<0.50	<0.50	<0.50	<50	<47	<0.50 ^b	--
MW4	01/29/09	170.48	5.80	164.68	<0.50	0.19 ^{e,f}	<0.50	<1.0	<50	<50	<0.50 ^b	--
MW4	04/15/09	170.48	5.90	164.58	<0.50	<0.50	<0.50	<1.0	<50	<50	0.15 ^{b,c}	ND
MW4	07/21/09	170.48	6.00	164.48	<0.50	<0.50	<0.50	<1.0	<50	<50	0.16^{b,c}	ND
MW5	i 03/04/09	173.80	4.70	169.10	<0.50	<0.50	<0.50	<1.0	150	--	10 ^b	ND

TABLE 2 GROUNDWATER MONITORING DATA, FORMER MOBIL STATION 04334, 2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	Concentration (µg/L)						Other Oxygenates and Additives	
					Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	TPH-d		MTBE
MW5	04/15/09	173.80	5.17	168.63	<0.50	<0.50	<0.50	<1.0	<50	<50	9.3 ^b	24 ^{n,c}
MW5	07/21/09	173.80	5.05	168.75	<0.50	<0.50	<0.50	<1.0	<50	<50	7.0^b	ND

Notes: Depth-to-water-level measurements in feet from top-of-casing.
 Other Oxygenates and Additives include ethyl tertiary butyl ether, tertiary amyl methyl ether, tertiary butyl alcohol, 1,2-dibromoethane, 1,2-dichloroethane, diisopropyl ether, and ethanol which are individually identified only if detected above the laboratory reporting limit. Analyzed by EPA Method 8260B.

a Top-of-casing elevation surveyed by Morrow Surveying on 12 July 2004.

b Analyzed by EPA Method 8260 or 8260B.

c Concentration estimated. Analyte exceeded calibration range. Reanalysis not performed due to holding time requirements.

d Does not match typical pattern.

e Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.

f Analyte presence was not confirmed by second column or GC/MS analysis.

g Tertiary butyl alcohol.

h Ethanol.

i Top-of-casing elevation surveyed by Morrow Surveying on 10 February 2009.

j 1,2-Dichloroethane.

MTBE Methyl tertiary butyl ether.

TPH-d Total Petroleum Hydrocarbons as diesel.

TPH-g Total Petroleum Hydrocarbons as gasoline.

ND Not detected at or above laboratory reporting limits.

µg/L Micrograms per liter.

-- Not sampled or not analyzed.

TABLE 3 GROUNDWATER MONITORING PLAN, FORMER MOBIL STATION 04334,
2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

Well Number	Groundwater Gauging Frequency	Groundwater Sampling and Analysis Frequency	
		BTEX, TPH-g, and TPH-d	MTBE
MW1	SA	SA	SA
MW2	SA	SA	SA
MW3	SA	SA	SA
MW4	SA	SA	SA
MW5	SA	SA	SA

Notes:

BTEX Benzene, toluene, ethylbenzene, and xylenes.
 MTBE Methyl tertiary butyl ether.
 SA Semi-annually (During the second and fourth quarters of each year).
 TPH-d Total Petroleum Hydrocarbons as diesel.
 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



MONITORING WELL DATA FORM

Client: Former Exxon 04334

Date: 07-21-09

Project Number: UP04334.1.6

Station Number: 04334

Site Location: 2492 Castro Valley Boulevard,
Castro Valley, California

Samplers: Alex

MONITORING WELL NUMBER	DEPTH TO WATER (TOC) FT.	DEPTH TO PRODUCT (TOC) FT.	APPARENT PRODUCT THICKNESS (FT.)	AMOUNT OF PRODUCT REMOVED(L)	MONITORING WELL INTEGRITY	DEPTH TO BOTTOM (TOC)	WELL CASING DIAMETER
MW1	8.14					19.78	2"
MW2	8.27					20.18	2"
MW3	7.74					19.90	2"
MW4	6.00					14.18	2"
MW5	5.05					15.15	2"

Project Name: Exxon 04334 Well No: MW1 Date: 07-21-09
 Project No: UP04-334.1.6 Personnel: AUX

GAUGING DATA

Water Level Measuring Method: WLM / IP 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)			
	19.78	-	8.14	=	11.64	X	1	2	4	6	1.86	=
						0.04	0.16	0.64	1.44			

PURGING DATA

Purge Method: WATERRA / BAILER / SUB Purge Rate: GPM

Time	0725	0727	0729		
Volume Purge (gal)	2	4	6		
Temperature (C)	19.5	20.4	20.1		
pH	6.88	7.10	7.29		
Spec. Cond. (umhos)	930	938	936		
Turbidity/Color	SILTY / BRN	SILTY / BRN	SILTY / BRN		
Odor (Y/N)	N	N	N		
Casing Volumes	1	2	3		
Dewatered (Y/N)	N	N	N		

Comments/Observations:

SAMPLING DATA

Time Sampled: 0735 Approximate Depth to Water During Sampling: 9.0 (feet)

Comments:

Sample Number	Number of Containers	Container Type	Preservative	Volume Filled (mL or L)	Turbidity/ Color	Analysis Method
MW1	6	Voa	HCL	40 ml	/	TPH-g, BTEX, MTBE
MW1	2	AMBERS	HCL	1L	/	TPH-D
					/	

Total Purge Volume: 6 (gallons) Disposal: SYSTEM

Weather Conditions: OK BOLTS Y / N

Condition of Well Box and Casing at Time of Sampling: OK CAP & LOCK Y / N

Well Head Conditions Requiring Correction: NONE GROUT Y / N

Problems Encountered During Purging and Sampling: NONE WELL BOX. Y / N

Comments: SECURED Y / N

Project Name: Exxon 04334	Well No: <i>MW2</i>	Date: <i>07-21-09</i>
Project No: UP04-334.1.6	Personnel: <i>ACX</i>	

GAUGING DATA
Water Level Measuring Method: WLM / IP 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)
		<i>20.18</i>	<i>8.27</i>	<i>11.91</i>	<i>X</i> $\frac{1}{0.04}$	$\frac{2}{0.16}$	$\frac{4}{0.64}$	$\frac{6}{1.44}$	<i>190</i>

PURGING DATA
Purge Method: WATER / BAILER / SUB Purge Rate: GPM

Time	<i>0751</i>	<i>0753</i>	<i>0755</i>			
Volume Purge (gal)	<i>2</i>	<i>4</i>	<i>6</i>			
Temperature (C)	<i>19.2</i>	<i>19.6</i>	<i>19.7</i>			
pH	<i>6.84</i>	<i>7.14</i>	<i>7.21</i>			
Spec. Cond. (umhos)	<i>792</i>	<i>803</i>	<i>768</i>			
Turbidity/Color	<i>CLEAR/NONE</i>	<i>CLEAR/NONE</i>	<i>CLEAR/NONE</i>			
Odor (Y/N)	<i>N</i>	<i>N</i>	<i>N</i>			
Casing Volumes	<i>1</i>	<i>2</i>	<i>3</i>			
Dewatered (Y/N)	<i>N</i>	<i>N</i>	<i>N</i>			

Comments/Observations:

SAMPLING DATA
 Time Sampled: *0805* Approximate Depth to Water During Sampling: *9.0* (feet)
 Comments:

Sample Number	Number of Containers	Container Type	Preservative	Volume Filled (mL or L)	Turbidity/ Color	Analysis Method
<i>MW2</i>	<i>6</i>	<i>Voa</i>	<i>HCL</i>	<i>40 ml</i>	<i>/</i>	<i>TPH-g, BTEX, MTBE</i>
<i>MW2</i>	<i>2</i>	<i>AMBERS</i>	<i>HCL</i>	<i>1L</i>	<i>/</i>	<i>TPH-D</i>
					<i>/</i>	

Total Purge Volume: <i>6</i> (gallons)	Disposal: <i>SYSTEM</i>
Weather Conditions: <i>OK</i>	BOLTS <input checked="" type="checkbox"/> / N
Condition of Well Box and Casing at Time of Sampling: <i>OK</i>	CAP & LOCK <input checked="" type="checkbox"/> / N
Well Head Conditions Requiring Correction: <i>NONE</i>	GROUT <input checked="" type="checkbox"/> / N
Problems Encountered During Purging and Sampling: <i>NONE</i>	WELL BOX: <input checked="" type="checkbox"/> / N
Comments:	SECURED <input checked="" type="checkbox"/> / N

Project Name: Exxon 04334	Well No: MW3	Date: 07-21-09
Project No: UP04-334.1.6	Personnel: HCY	

GAUGING DATA

Water Level Measuring Method: WLM / IP 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)
	19.90	- 7.74	= 12.16	X 1	(2) 4	6
				0.04	0.16	0.64
					1.94	= 5.83

PURGING DATA

Purge Method: WATER RABBIT / BAILER / SUB Purge Rate: GPM

Time	0820	0822	0824			
Volume Purge (gal)	2	4	6			
Temperature (C)	18.7	19.3	19.3			
pH	6.79	6.82	6.89			
Spec Cond. (umhos)	963	977	981			
Turbidity/Color	SILTY / PEN	SILTY / PEN	SILTY / PEN			
Odor (Y/N)	N	N	N			
Casing Volumes	1	2	3			
Dewatered (Y/N)	N	N	N			

Comments/Observations:

SAMPLING DATA

Time Sampled: 0835 Approximate Depth to Water During Sampling: 8-0 (feet)

Comments:

Sample Number	Number of Containers	Container Type	Preservative	Volume Filled (ml or L)	Turbidity/ Color	Analysis Method
MW3	6	Voa	HCL	40 ml	/	TPH-g, BTEX, MTBE
MW3	2	AMBERS	HCL	1L	/	TPH-D
					/	

Total Purge Volume: 6 (gallons) Disposal: SYSTEM

Weather Conditions: OK BOLTS (Y) / N

Condition of Well Box and Casing at Time of Sampling: OK CAP & LOCK (Y) / N

Well Head Conditions Requiring Correction: NONE GROUT (Y) / N

Problems Encountered During Purging and Sampling: NONE WELL BOX (Y) / N

Comments: SECURED (Y) / N



GROUNDWATER PURGE AND SAMPLE FORM

Engineering, Inc.

Project Name: Exxon 04334	Well No: MW4	Date: 07-21-09
Project No: UP04-334.1.6	Personnel: ALX	

GAUGING DATA

Water Level Measuring Method: WLM / IP 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)
		14.18	= 6.00	= 8.18	X 1	2	4	6	1.30
				0.04	0.16	0.64	1.44		

PURGING DATA

Purge Method: WATERRA / BAILER / SUB Purge Rate: GPM

Time	0955	1001	1007			
Volume Purge (gal)	1.5	3	4.5			
Temperature (C)	18.9	19.2	18.9			
pH	7.24	7.39	7.42			
Spec. Cond. (umhos)	913	918	922			
Turbidity/Color	S170 / RW	S179 / RW	S149 / RW			
Odor (Y/N)	N	N	N			
Casing Volumes	1	2	3			
Dewatered (Y/N)	N	N	N			

Comments/Observations:

SAMPLING DATA

Time Sampled: 1020 Approximate Depth to Water During Sampling: 6.00 (feet)

Comments:

Sample Number	Number of Containers	Container Type	Preservative	Volume Filled (mL or L)	Turbidity/ Color	Analysis Method
MW4	6	Voa	HCL	40 ml	/	TPH-g, BTEX, MTBE
MW4	2	AMBERS	HCL	1L	/	TPH-D
					/	

Total Purge Volume: 4.5 (gallons) Disposal: SYSTEM

Weather Conditions: K BOLTS / N

Condition of Well Box and Casing at Time of Sampling: OK CAP & LOCK / N

Well Head Conditions Requiring Correction: NONE GROUT / N

Problems Encountered During Purging and Sampling: NONE WELL BOX / N

Comments: SECURED / N

Project Name: Exxon 04334	Well No: <i>MWS</i>	Date: <i>07-21-09</i>
Project No: UP04-334.1.6	Personnel: <i>AK</i>	

GAUGING DATA
 Water Level Measuring Method: WLM / IP 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)
	<i>15.15</i>	<i>5.05</i>	<i>10.1</i>	<i>X</i> $\begin{matrix} 1 & 2 & 4 & 6 \\ 0.04 & 0.16 & 0.64 & 1.44 \end{matrix}$	<i>1.61</i>	<i>4.84</i>

PURGING DATA
 Purge Method: WATERRA BAILER / SUB Purge Rate: GPM

Time	<i>0902</i>	<i>0905</i>	<i>0908</i>			
Volume Purge (gal)	<i>2</i>	<i>4</i>	<i>6</i>			
Temperature (C)	<i>20.7</i>	<i>22.0</i>	<i>21.8</i>			
pH	<i>7.18</i>	<i>7.26</i>	<i>7.39</i>			
Spec. Cond. (umhos)	<i>1067</i>	<i>1106</i>	<i>1103</i>			
Turbidity/Color	<i>SILTY/PKN</i>	<i>SILTY/PKN</i>	<i>SILTY/PKN</i>			
Odor (Y/N)	<i>N</i>	<i>N</i>	<i>N</i>			
Casing Volumes	<i>1</i>	<i>2</i>	<i>3</i>			
Dewatered (Y/N)	<i>N</i>	<i>N</i>	<i>N</i>			

Comments/Observations:

SAMPLING DATA *0915* Approximate Depth to Water During Sampling: *6.0* (feet)

Time Sampled: _____

Comments: _____

Sample Number	Number of Containers	Container Type	Preservative	Volume Filled (mL or L)	Turbidity/ Color	Analysis Method
<i>MWS</i>	<i>6</i>	<i>Voa</i>	<i>HCL</i>	<i>40 ml</i>		<i>TPH-g, BTEX, MTBE</i>
<i>MWS</i>	<i>2</i>	<i>AMBERS</i>	<i>HCL</i>	<i>1L</i>		<i>TPH-D</i>

Total Purge Volume: *6* (gallons) Disposal: **SYSTEM**

Weather Conditions: *R* BOLTS / N

Condition of Well Box and Casing at Time of Sampling: *R* CAP & LOCK / N

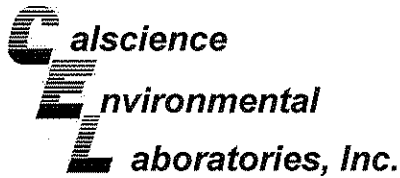
Well Head Conditions Requiring Correction: *NONE* GROUT / N

Problems Encountered During Purging and Sampling: *NONE* WELL BOX. / N

Comments: SECURED / N

Appendix C

Laboratory Analytical Reports and Chain-of-Custody Documentation



July 29, 2009

Erik Appel
ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, CA 94523-1850

Subject: **Calscience Work Order No.: 09-07-1856**
Client Reference: **ExxonMobil 04334 / 2492 Castro Valley, CA**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 7/23/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

Note that the Chain-of-Custody Record and Sample Receipt Form are integral parts of this report.

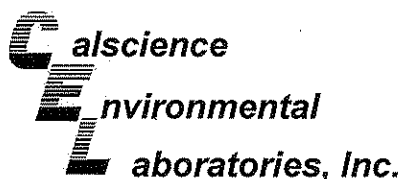
If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to read "Cecile deGuia".

Calscience Environmental
Laboratories, Inc.
Cecile deGuia
Project Manager

A handwritten signature in black ink, appearing to read "Cecile deGuia".



Analytical Report



ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, CA 94523-1850

Date Received: 07/23/09
Work Order No: 09-07-1856
Preparation: EPA 3510C
Method: EPA 8015B (M)

Project: ExxonMobil 04334 / 2492 Castro Valley, CA

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW1	09-07-1856-1-G	07/21/09 07:35	Aqueous	GC 47	07/23/09	07/23/09 22:58	090723B12

Comment(s): -The sample extract was subjected to Silica Gel treatment prior to analysis.

-Results were evaluated to the MDL, concentrations \geq to the MDL but $<$ RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
TPH as Diesel	ND	50	47	1		ug/L
Surrogates:	REC (%)	Control Limits			Qual	
Decachlorobiphenyl	110	68-140				

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW2	09-07-1856-2-G	07/21/09 08:05	Aqueous	GC 47	07/23/09	07/23/09 23:14	090723B12

Comment(s): -The sample extract was subjected to Silica Gel treatment prior to analysis.

-Results were evaluated to the MDL, concentrations \geq to the MDL but $<$ RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
TPH as Diesel	ND	50	47	1		ug/L
Surrogates:	REC (%)	Control Limits			Qual	
Decachlorobiphenyl	106	68-140				

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW3	09-07-1856-3-G	07/21/09 08:35	Aqueous	GC 47	07/23/09	07/23/09 23:30	090723B12

Comment(s): -The sample extract was subjected to Silica Gel treatment prior to analysis.

-Results were evaluated to the MDL, concentrations \geq to the MDL but $<$ RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
TPH as Diesel	ND	50	47	1		ug/L
Surrogates:	REC (%)	Control Limits			Qual	
Decachlorobiphenyl	110	68-140				

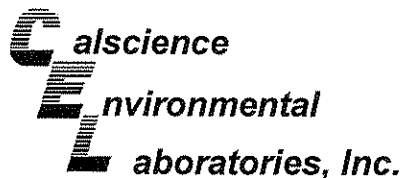
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW4	09-07-1856-4-G	07/21/09 10:20	Aqueous	GC 47	07/23/09	07/23/09 23:46	090723B12

Comment(s): -The sample extract was subjected to Silica Gel treatment prior to analysis.

-Results were evaluated to the MDL, concentrations \geq to the MDL but $<$ RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
TPH as Diesel	ND	50	47	1		ug/L
Surrogates:	REC (%)	Control Limits			Qual	
Decachlorobiphenyl	120	68-140				

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, CA 94523-1850

Date Received: 07/23/09
Work Order No: 09-07-1856
Preparation: EPA 3510C
Method: EPA 8015B (M)

Project: ExxonMobil 04334 / 2492 Castro Valley, CA

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5	09-07-1856-5-G	07/21/09 09:15	Aqueous	GC 47	07/23/09	07/24/09 00:01	090723B12

Comment(s): -The sample extract was subjected to Silica Gel treatment prior to analysis.

-Results were evaluated to the MDL, concentrations \geq to the MDL but $<$ RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
TPH as Diesel	ND	50	47	1		ug/L
Surrogates:	REC (%)	Control Limits			Qual	
Decachlorobiphenyl	105	68-140				

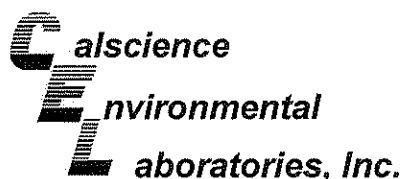
Method Blank	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-330-1,199	N/A	Aqueous	GC 47	07/23/09	07/23/09 20:51	090723B12

Comment(s): -Results were evaluated to the MDL, concentrations \geq to the MDL but $<$ RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
TPH as Diesel	ND	50	47	1		ug/L
Surrogates:	REC (%)	Control Limits			Qual	
Decachlorobiphenyl	124	68-140				

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

7440 Lincoln Way, Garden Grove, CA 92841-1427 • TEL:(714) 895-5494 • FAX: (714) 894-7501



Analytical Report



ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, CA 94523-1850

Date Received: 07/23/09
Work Order No: 09-07-1856
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: ExxonMobil 04334 / 2492 Castro Valley, CA

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW1	09-07-1856-1-E	07/21/09 07:35	Aqueous	GC 25	07/25/09	07/25/09 15:02	090725B01

Comment(s): -Results were evaluated to the MDL, concentrations \geq to the MDL but $<$ RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
TPH as Gasoline	ND	50	48	1		ug/L
Surrogates:	<u>REC (%)</u>	<u>Control Limits</u>			<u>Qual</u>	
1,4-Bromofluorobenzene	109	38-134				

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW2	09-07-1856-2-E	07/21/09 08:05	Aqueous	GC 25	07/25/09	07/25/09 14:29	090725B01

Comment(s): -Results were evaluated to the MDL, concentrations \geq to the MDL but $<$ RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
TPH as Gasoline	ND	50	48	1		ug/L
Surrogates:	<u>REC (%)</u>	<u>Control Limits</u>			<u>Qual</u>	
1,4-Bromofluorobenzene	110	38-134				

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW3	09-07-1856-3-E	07/21/09 08:35	Aqueous	GC 25	07/25/09	07/25/09 15:36	090725B01

Comment(s): -Results were evaluated to the MDL, concentrations \geq to the MDL but $<$ RL, if found, are qualified with a "J" flag.

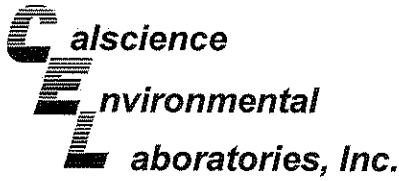
Parameter	Result	RL	MDL	DF	Qual	Units
TPH as Gasoline	ND	50	48	1		ug/L
Surrogates:	<u>REC (%)</u>	<u>Control Limits</u>			<u>Qual</u>	
1,4-Bromofluorobenzene	109	38-134				

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW4	09-07-1856-4-E	07/21/09 10:20	Aqueous	GC 25	07/25/09	07/25/09 16:09	090725B01

Comment(s): -Results were evaluated to the MDL, concentrations \geq to the MDL but $<$ RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
TPH as Gasoline	ND	50	48	1		ug/L
Surrogates:	<u>REC (%)</u>	<u>Control Limits</u>			<u>Qual</u>	
1,4-Bromofluorobenzene	111	38-134				

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, CA 94523-1850

Date Received: 07/23/09
Work Order No: 09-07-1856
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: ExxonMobil 04334 / 2492 Castro Valley, CA

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5	09-07-1856-5-E	07/21/09 09:15	Aqueous	GC 25	07/25/09	07/25/09 16:42	090725B01

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

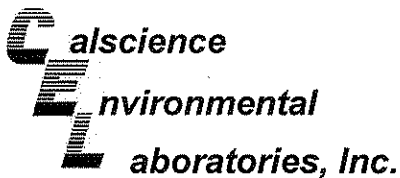
Parameter	Result	RL	MDL	DF	Qual	Units
TPH as Gasoline	ND	50	48	1		ug/L
Surrogates:	<u>REC (%)</u>	<u>Control Limits</u>			<u>Qual</u>	
1,4-Bromofluorobenzene	109	38-134				

Method Blank	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-436-3,573	N/A	Aqueous	GC 25	07/25/09	07/25/09 11:41	090725B01

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
TPH as Gasoline	ND	50	48	1		ug/L
Surrogates:	<u>REC (%)</u>	<u>Control Limits</u>			<u>Qual</u>	
1,4-Bromofluorobenzene	109	38-134				

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, CA 94523-1850

Date Received: 07/23/09
Work Order No: 09-07-1856
Preparation: EPA 5030B
Method: EPA 8021B
Units: ug/L

Project: ExxonMobil 04334 / 2492 Castro Valley, CA

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW1	09-07-1856-1-D	07/21/09 07:35	Aqueous	GC 8	07/25/09	07/25/09 17:38	090725B01

Comment(s): -Results were evaluated to the MDL, concentrations \geq to the MDL but $<$ RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		Ethylbenzene	ND	0.50	0.17	1	
Toluene	ND	0.50	0.17	1		Xylenes (total)	ND	1.0	0.26	1	
Surrogates:	REC (%)	Control Limits			Qual						
1,4-Bromofluorobenzene	100	70-130									

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW2	09-07-1856-2-D	07/21/09 08:05	Aqueous	GC 8	07/25/09	07/25/09 18:12	090725B01

Comment(s): -Results were evaluated to the MDL, concentrations \geq to the MDL but $<$ RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		Ethylbenzene	ND	0.50	0.17	1	
Toluene	ND	0.50	0.17	1		Xylenes (total)	ND	1.0	0.26	1	
Surrogates:	REC (%)	Control Limits			Qual						
1,4-Bromofluorobenzene	105	70-130									

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW3	09-07-1856-3-D	07/21/09 08:35	Aqueous	GC 8	07/25/09	07/25/09 18:45	090725B01

Comment(s): -Results were evaluated to the MDL, concentrations \geq to the MDL but $<$ RL, if found, are qualified with a "J" flag.

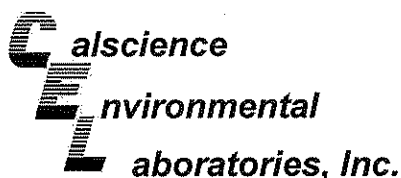
Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	0.24	0.50	0.14	1	J	Ethylbenzene	ND	0.50	0.17	1	
Toluene	ND	0.50	0.17	1		Xylenes (total)	ND	1.0	0.26	1	
Surrogates:	REC (%)	Control Limits			Qual						
1,4-Bromofluorobenzene	103	70-130									

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW4	09-07-1856-4-D	07/21/09 10:20	Aqueous	GC 8	07/25/09	07/25/09 19:19	090725B01

Comment(s): -Results were evaluated to the MDL, concentrations \geq to the MDL but $<$ RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		Ethylbenzene	ND	0.50	0.17	1	
Toluene	ND	0.50	0.17	1		Xylenes (total)	ND	1.0	0.26	1	
Surrogates:	REC (%)	Control Limits			Qual						
1,4-Bromofluorobenzene	104	70-130									

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, CA 94523-1850

Date Received: 07/23/09
Work Order No: 09-07-1856
Preparation: EPA 5030B
Method: EPA 8021B
Units: ug/L

Project: ExxonMobil 04334 / 2492 Castro Valley, CA

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5	09-07-1856-5-D	07/21/09 09:15	Aqueous	GC 8	07/25/09	07/25/09 19:52	090725B01

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		Ethylbenzene	ND	0.50	0.17	1	
Toluene	ND	0.50	0.17	1		Xylenes (total)	ND	1.0	0.26	1	
Surrogates:	REC (%)	Control Limits			Qual						
1,4-Bromofluorobenzene	104	70-130									

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-667-513	N/A	Aqueous	GC 8	07/25/09	07/25/09 12:16	090725B01

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		Ethylbenzene	ND	0.50	0.17	1	
Toluene	ND	0.50	0.17	1		Xylenes (total)	ND	1.0	0.26	1	
Surrogates:	REC (%)	Control Limits			Qual						
1,4-Bromofluorobenzene	115	70-130									

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Analytical Report



ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, CA 94523-1850

Date Received: 07/23/09
Work Order No: 09-07-1856
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 04334 / 2492 Castro Valley, CA

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW1	09-07-1856-1-C	07/21/09 07:35	Aqueous	GC/MS-L	07/28/09	07/28/09 16:42	090728L01

Comment(s): -Results were evaluated to the MDL, concentrations \geq to the MDL but $<$ RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
1,2-Dibromoethane	ND	0.50	0.12	1		Diisopropyl Ether (DIPE)	ND	0.50	0.028	1	
1,2-Dichloroethane	ND	0.50	0.080	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	0.036	1	
Methyl-t-Butyl Ether (MTBE)	1.2	0.50	0.067	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	0.030	1	
Tert-Butyl Alcohol (TBA)	ND	10	2.1	1		Ethanol	ND	50	15	1	
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
1,2-Dichloroethane-d4	106	80-128				Dibromofluoromethane	121	80-127			
Toluene-d8	100	80-120				1,4-Bromofluorobenzene	82	68-120			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW2	09-07-1856-2-C	07/21/09 08:05	Aqueous	GC/MS-L	07/28/09	07/28/09 17:12	090728L01

Comment(s): -Results were evaluated to the MDL, concentrations \geq to the MDL but $<$ RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
1,2-Dibromoethane	ND	0.50	0.12	1		Diisopropyl Ether (DIPE)	ND	0.50	0.028	1	
1,2-Dichloroethane	ND	0.50	0.080	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	0.036	1	
Methyl-t-Butyl Ether (MTBE)	0.12	0.50	0.067	1	J	Tert-Amyl-Methyl Ether (TAME)	ND	0.50	0.030	1	
Tert-Butyl Alcohol (TBA)	ND	10	2.1	1		Ethanol	ND	50	15	1	
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
1,2-Dichloroethane-d4	112	80-128				Dibromofluoromethane	121	80-127			
Toluene-d8	101	80-120				1,4-Bromofluorobenzene	81	68-120			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW3	09-07-1856-3-B	07/21/09 08:35	Aqueous	GC/MS-L	07/27/09	07/27/09 21:25	090727L01

Comment(s): -Results were evaluated to the MDL, concentrations \geq to the MDL but $<$ RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
1,2-Dibromoethane	ND	0.50	0.12	1		Diisopropyl Ether (DIPE)	ND	0.50	0.028	1	
1,2-Dichloroethane	0.11	0.50	0.080	1	J	Ethyl-t-Butyl Ether (ETBE)	ND	0.50	0.036	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	0.067	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	0.030	1	
Tert-Butyl Alcohol (TBA)	ND	10	2.1	1		Ethanol	ND	50	15	1	
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
1,2-Dichloroethane-d4	101	80-128				Dibromofluoromethane	111	80-127			
Toluene-d8	104	80-120				1,4-Bromofluorobenzene	77	68-120			

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, CA 94523-1850

Date Received: 07/23/09
Work Order No: 09-07-1856
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 04334 / 2492 Castro Valley, CA

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW4	09-07-1856-4-C	07/21/09 10:20	Aqueous	GC/MS L	07/28/09	07/28/09 17:42	090728L01

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
1,2-Dibromoethane	ND	0.50	0.12	1		Diisopropyl Ether (DIPE)	ND	0.50	0.028	1	
1,2-Dichloroethane	ND	0.50	0.080	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	0.036	1	
Methyl-t-Butyl Ether (MTBE)	0.16	0.50	0.067	1	J	Tert-Amyl-Methyl Ether (TAME)	ND	0.50	0.030	1	
Tert-Butyl Alcohol (TBA)	ND	10	2.1	1		Ethanol	ND	50	15	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>			<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>			<u>Qual</u>
		<u>Limits</u>						<u>Limits</u>			
1,2-Dichloroethane-d4	108	80-128				Dibromofluoromethane	121	80-127			
Toluene-d8	100	80-120				1,4-Bromofluorobenzene	81	68-120			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5	09-07-1856-5-B	07/21/09 09:15	Aqueous	GC/MS L	07/27/09	07/27/09 19:56	090727L01

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
1,2-Dibromoethane	ND	0.50	0.12	1		Diisopropyl Ether (DIPE)	ND	0.50	0.028	1	
1,2-Dichloroethane	ND	0.50	0.080	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	0.036	1	
Methyl-t-Butyl Ether (MTBE)	7.0	0.50	0.067	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	0.030	1	
Tert-Butyl Alcohol (TBA)	ND	10	2.1	1		Ethanol	ND	50	15	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>			<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>			<u>Qual</u>
		<u>Limits</u>						<u>Limits</u>			
1,2-Dichloroethane-d4	111	80-128				Dibromofluoromethane	121	80-127			
Toluene-d8	101	80-120				1,4-Bromofluorobenzene	82	68-120			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-10-025-1,124	N/A	Aqueous	GC/MS L	07/27/09	07/27/09 13:25	090727L01

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
1,2-Dibromoethane	ND	0.50	0.12	1		Diisopropyl Ether (DIPE)	ND	0.50	0.028	1	
1,2-Dichloroethane	ND	0.50	0.080	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	0.036	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	0.067	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	0.030	1	
Tert-Butyl Alcohol (TBA)	ND	10	2.1	1		Ethanol	ND	50	15	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>			<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>			<u>Qual</u>
		<u>Limits</u>						<u>Limits</u>			
1,2-Dichloroethane-d4	96	80-128				Dibromofluoromethane	100	80-127			
Toluene-d8	97	80-120				1,4-Bromofluorobenzene	82	68-120			

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



ETIC Engineering, Inc.
 2285 Morello Avenue
 Pleasant Hill, CA 94523-1850

Date Received: 07/23/09
 Work Order No: 09-07-1856
 Preparation: EPA 5030B
 Method: EPA 8260B
 Units: ug/L

Project: ExxonMobil 04334 / 2492 Castro Valley, CA

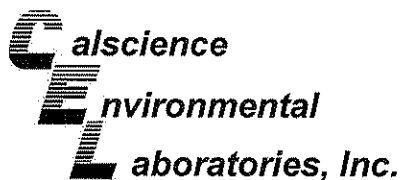
Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-10-025-1,125	N/A	Aqueous	GC/MS L	07/28/09	07/28/09 13:17	090728L01

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
1,2-Dibromoethane	ND	0.50	0.12	1		Diisopropyl Ether (DIPE)	ND	0.50	0.028	1	
1,2-Dichloroethane	ND	0.50	0.080	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	0.036	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	0.067	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	0.030	1	
Tert-Butyl Alcohol (TBA)	ND	10	2.1	1		Ethanol	ND	50	15	1	
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
1,2-Dichloroethane-d4	111	80-128				Dibromofluoromethane	120	80-127			
Toluene-d8	102	80-120				1,4-Bromofluorobenzene	81	68-120			

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Quality Control - Spike/Spike Duplicate



ETIC Engineering, Inc.
 2285 Morello Avenue
 Pleasant Hill, CA 94523-1850

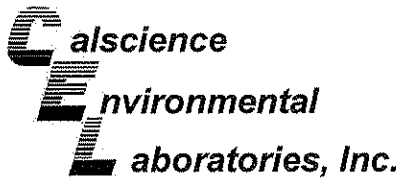
Date Received: 07/23/09
 Work Order No: 09-07-1856
 Preparation: EPA 5030B
 Method: EPA 8015B (M)

Project ExxonMobil 04334 / 2492 Castro Valley, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW2	Aqueous	GC 25	07/25/09	07/25/09	090725S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	94	91	68-122	3	0-18	

RPD - Relative Percent Difference, CL - Control Limit



Quality Control - Spike/Spike Duplicate



ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, CA 94523-1850

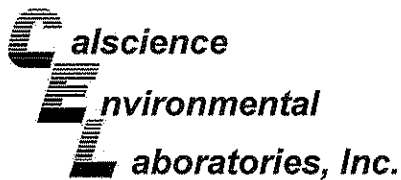
Date Received: 07/23/09
Work Order No: 09-07-1856
Preparation: EPA 5030B
Method: EPA 8021B

Project ExxonMobil 04334 / 2492 Castro Valley, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-07-1998-1	Aqueous	GC 8	07/25/09	07/25/09	090725S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	96	99	57-129	3	0-23	
Toluene	93	97	50-134	4	0-26	
Ethylbenzene	96	98	58-130	2	0-26	
p/m-Xylene	99	101	58-130	2	0-28	
o-Xylene	93	95	57-123	2	0-26	
Methyl-t-Butyl Ether (MTBE)	101	101	44-134	1	0-27	

RPD - Relative Percent Difference, CL - Control Limit



Quality Control - Spike/Spike Duplicate



ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, CA 94523-1850

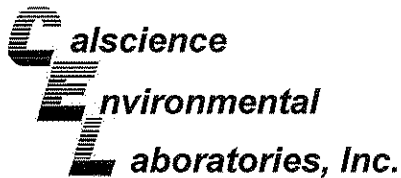
Date Received: 07/23/09
Work Order No: 09-07-1856
Preparation: EPA 5030B
Method: EPA 8260B

Project ExxonMobil 04334 / 2492 Castro Valley, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-07-1639-8	Aqueous	GC/MS L	07/27/09	07/27/09	090727S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	116	107	76-124	8	0-20	
Toluene	109	109	80-120	0	0-20	
Ethylbenzene	105	103	78-126	2	0-20	
Methyl-t-Butyl Ether (MTBE)	66	75	67-121	12	0-49	3
Tert-Butyl Alcohol (TBA)	137	120	36-162	13	0-30	
Diisopropyl Ether (DIPE)	69	74	60-138	7	0-45	
Ethyl-t-Butyl Ether (ETBE)	65	71	69-123	9	0-30	3
Tert-Amyl-Methyl Ether (TAME)	84	78	65-120	8	0-20	
Ethanol	136	111	30-180	20	0-72	
1,1-Dichloroethene	96	106	73-127	10	0-20	
1,2-Dibromoethane	107	110	80-120	3	0-20	
1,2-Dichlorobenzene	97	100	80-120	3	0-20	
Carbon Tetrachloride	106	106	74-134	0	0-20	
Chlorobenzene	115	113	80-120	2	0-20	
Trichloroethene	104	106	77-120	2	0-20	
Vinyl Chloride	87	94	72-126	8	0-20	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - Spike/Spike Duplicate



ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, CA 94523-1850

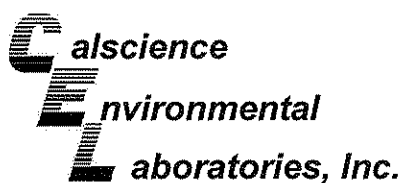
Date Received: 07/23/09
Work Order No: 09-07-1856
Preparation: EPA 5030B
Method: EPA 8260B

Project ExxonMobil 04334 / 2492 Castro Valley, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-07-1640-1	Aqueous	GC/MS L	07/28/09	07/28/09	090728S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	111	102	76-124	8	0-20	
Toluene	105	113	80-120	7	0-20	
Ethylbenzene	101	101	78-126	0	0-20	
Methyl-t-Butyl Ether (MTBE)	76	82	67-121	8	0-49	
Tert-Butyl Alcohol (TBA)	116	97	36-162	18	0-30	
Diisopropyl Ether (DIPE)	83	75	60-138	11	0-45	
Ethyl-t-Butyl Ether (ETBE)	76	74	69-123	4	0-30	
Tert-Amyl-Methyl Ether (TAME)	88	80	65-120	10	0-20	
Ethanol	134	127	30-180	5	0-72	
1,1-Dichloroethene	86	119	73-127	32	0-20	4
1,2-Dibromoethane	113	115	80-120	2	0-20	
1,2-Dichlorobenzene	97	95	80-120	3	0-20	
Carbon Tetrachloride	102	99	74-134	3	0-20	
Chlorobenzene	110	110	80-120	0	0-20	
Trichloroethene	103	105	77-120	2	0-20	
Vinyl Chloride	76	88	72-126	14	0-20	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate



ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, CA 94523-1850

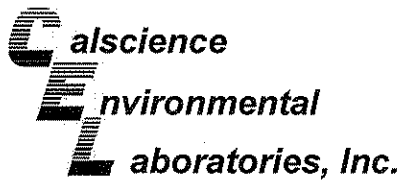
Date Received: N/A
Work Order No: 09-07-1856
Preparation: EPA 3510C
Method: EPA 8015B (M)

Project: ExxonMobil 04334 / 2492 Castro Valley, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-330-1,199	Aqueous	GC-47	07/23/09	07/23/09	090723B12

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Diesel	106	112	75-117	6	0-13	

RPD - Relative Percent Difference, CL - Control Limit



Quality Control - LCS/LCS Duplicate



ETIC Engineering, Inc.
 2285 Morello Avenue
 Pleasant Hill, CA 94523-1850

Date Received: N/A
 Work Order No: 09-07-1856
 Preparation: EPA 5030B
 Method: EPA 8015B (M)

Project: ExxonMobil 04334 / 2492 Castro Valley, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-436-3,573	Aqueous	GC 25	07/25/09	07/25/09	090725B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	98	99	78-120	1	0-10	

RPD - Relative Percent Difference , CL - Control Limit

alscience
Environmental Quality Control - Laboratory Control Sample
Laboratories, Inc.

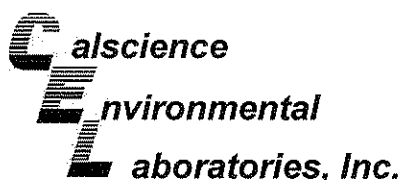


ETIC Engineering, Inc.	Date Received:	N/A
2285 Morello Avenue	Work Order No:	09-07-1856
Pleasant Hill, CA 94523-1850	Preparation:	EPA 5030B
	Method:	EPA 8021B

Project: ExxonMobil 04334 / 2492 Castro Valley, CA

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	Lab File ID	LCS Batch Number
099-12-667-513	Aqueous	GC 8	07/25/09	002F0201	090725B01
Parameter	Conc Added	Conc Recovered	LCS %Rec	%Rec CL	Qualifiers
Benzene	100	105	105	70-118	
Toluene	100	102	102	66-114	
Ethylbenzene	100	105	105	72-114	
p/m-Xylene	200	218	109	74-116	
o-Xylene	100	101	101	72-114	
Methyl-t-Butyl Ether (MTBE)	100	103	103	41-137	

RPD - Relative Percent Difference, CL - Control Limit



Quality Control - LCS/LCS Duplicate



ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, CA 94523-1850

Date Received: N/A
Work Order No: 09-07-1856
Preparation: EPA 5030B
Method: EPA 8260B

Project: ExxonMobil 04334 / 2492 Castro Valley, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number		
099-10-025-1,124	Aqueous	GC/MS L	07/27/09	07/27/09	090727L01		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	112	107	80-120	73-127	5	0-20	
Carbon Tetrachloride	103	98	74-134	64-144	5	0-20	
Chlorobenzene	115	107	80-120	73-127	7	0-20	
1,2-Dibromoethane	112	106	79-121	72-128	5	0-20	
1,2-Dichlorobenzene	103	97	80-120	73-127	6	0-20	
1,1-Dichloroethene	87	80	78-126	70-134	9	0-28	
Ethylbenzene	108	100	80-120	73-127	8	0-20	
Toluene	106	101	80-120	73-127	5	0-20	
Trichloroethene	106	101	79-127	71-135	4	0-20	
Vinyl Chloride	76	83	72-132	62-142	8	0-20	
Methyl-t-Butyl Ether (MTBE)	74	67	69-123	60-132	10	0-20	
Tert-Butyl Alcohol (TBA)	120	108	63-123	53-133	10	0-20	
Diisopropyl Ether (DIPE)	81	67	59-137	46-150	18	0-37	
Ethyl-t-Butyl Ether (ETBE)	81	73	69-123	60-132	9	0-20	
Tert-Amyl-Methyl Ether (TAME)	89	83	70-120	62-128	7	0-20	
Ethanol	131	141	28-160	6-182	7	0-57	

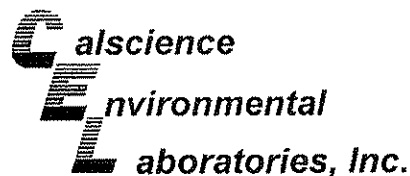
Total number of LCS compounds : 16

Total number of ME compounds : 1

Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate

ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, CA 94523-1850

Date Received: N/A
Work Order No: 09-07-1856
Preparation: EPA 5030B
Method: EPA 8260B

Project: ExxonMobil 04334 / 2492 Castro Valley, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number		
099-10-025-1,125	Aqueous	GC/MS L	07/28/09	07/28/09	090728L01		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	107	106	80-120	73-127	1	0-20	
Carbon Tetrachloride	97	95	74-134	64-144	1	0-20	
Chlorobenzene	107	106	80-120	73-127	1	0-20	
1,2-Dibromoethane	105	106	79-121	72-128	1	0-20	
1,2-Dichlorobenzene	95	95	80-120	73-127	0	0-20	
1,1-Dichloroethene	82	84	78-126	70-134	2	0-28	
Ethylbenzene	97	97	80-120	73-127	0	0-20	
Toluene	102	101	80-120	73-127	1	0-20	
Trichloroethene	100	98	79-127	71-135	2	0-20	
Vinyl Chloride	73	74	72-132	62-142	2	0-20	
Methyl-t-Butyl Ether (MTBE)	83	84	69-123	60-132	1	0-20	
Tert-Butyl Alcohol (TBA)	109	144	63-123	53-133	28	0-20	X
Diisopropyl Ether (DIPE)	83	85	59-137	46-150	2	0-37	
Ethyl-t-Butyl Ether (ETBE)	74	76	69-123	60-132	4	0-20	
Tert-Amyl-Methyl Ether (TAME)	85	86	70-120	62-128	1	0-20	
Ethanol	122	157	28-160	6-182	25	0-57	

Total number of LCS compounds : 16

Total number of ME compounds : 0

Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

X: LCS/LCS Duplicate RPD was out of control (above the upper control limit). The spike and spike duplicate were within control limits and, therefore, the sample data was reported without further clarification.

X: The percent recovery is above acceptable control limits. The samples and method blank associated with this batch are non-detect, and therefore, the results have been reported without further clarification.

RPD - Relative Percent Difference . CL - Control Limit

Work Order Number: 09-07-1856

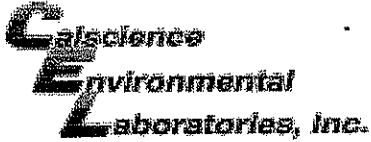
<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
I	Compound did not meet method-described identification guidelines. Identification was based on additional GC/MS characteristics.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis. Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.



LABORATORY CLIENT: ExxonMobil c/o ETIC Engineering				CLIENT PROJECT NAME/NUMBER: 04334, 2492 Castro Valley Blvd., Castro Valley, CA				P.O. NO.: 4510815837																																								
ADDRESS: 2285 Morello Avenue				PROJECT CONTACT: Erik Appel, ETIC Engineering				Project Number: TM04334.1.6																																								
CITY: Pleasant Hill, CA 94523				SAMPLER(S): (SIGNATURE) 				QUOTE NO.:																																								
TEL: 925-602-4710 x21		FAX: 925-602-4720						E-MAIL: see instructions		LAB USE ONLY 071856																																						
TURNAROUND TIME <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 48HR <input type="checkbox"/> 72 HR <input checked="" type="checkbox"/> 5 DAYS <input type="checkbox"/> 10 DAYS								REQUESTED ANALYSIS																																								
SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY) <input type="checkbox"/> RWQCB REPORTING <input type="checkbox"/> ARCHIVE SAMPLES UNTIL ___/___/___				<table border="1" style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <td style="width: 5%;"></td> <td style="width: 5%;"></td> <td style="width: 5%;"></td> <td style="width: 5%;"></td> <td style="width: 5%;"></td> <td style="width: 5%;"></td> <td style="width: 5%;"></td> <td style="width: 5%;"></td> <td style="width: 5%;"></td> <td style="width: 5%;"></td> <td style="width: 5%;"></td> <td style="width: 5%;"></td> <td style="width: 5%;"></td> <td style="width: 5%;"></td> <td style="width: 5%;"></td> <td style="width: 5%;"></td> <td style="width: 5%;"></td> <td style="width: 5%;"></td> </tr> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH-g by EPA Method 8015B</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">ETEX by EPA Method 8021B (M)</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH-d by EPA Method 8015B *</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">MTBE by EPA Method 8260B</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">MTBE, TBA, DIPE, ETBE, TAME, EDB, 1,2-DCA, and ethanol by EPA Method 8260B</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>																						TPH-g by EPA Method 8015B	ETEX by EPA Method 8021B (M)	TPH-d by EPA Method 8015B *	MTBE by EPA Method 8260B	MTBE, TBA, DIPE, ETBE, TAME, EDB, 1,2-DCA, and ethanol by EPA Method 8260B															SPECIAL INSTRUCTIONS edf file required, Global ID #T0600101278 email report to eappel@eticeng.com & eticlabreports@eticeng.com * Use Silica Gel Cleanup for TPH-d analysis			
TPH-g by EPA Method 8015B	ETEX by EPA Method 8021B (M)	TPH-d by EPA Method 8015B *	MTBE by EPA Method 8260B	MTBE, TBA, DIPE, ETBE, TAME, EDB, 1,2-DCA, and ethanol by EPA Method 8260B																																												
LAB USE ONLY	SAMPLE ID	LOCATION/ DESCRIPTION	SAMPLING		Matrix	#Cont	TPH-g by EPA Method 8015B	ETEX by EPA Method 8021B (M)	TPH-d by EPA Method 8015B *	MTBE by EPA Method 8260B	MTBE, TBA, DIPE, ETBE, TAME, EDB, 1,2-DCA, and ethanol by EPA Method 8260B																																					
1	MW1		DATE	TIME	Water	8	X	X	X	X	X																																					
2	MW2			0805	Water	8	X	X	X	X	X																																					
3	MW3			0835	Water	8	X	X	X	X	X																																					
4	MW4			1020	Water	8	X	X	X	X	X																																					
5	MW5			0915	Water	8	X	X	X	X	X																																					

5123 01783

[Signature]



WORK ORDER #: 09-07-1856

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: FTTC

DATE: 07/23/09

TEMPERATURE: (Criteria: 0.0°C - 6.0°C, not frozen)

Temperature 2.4°C - 0.2°C (CF) = 2.2°C [X] Blank [] Sample

- [] Sample(s) outside temperature criteria (PM/APM contacted by: _____).
[] Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

[] Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: [] Air [] Filter [] Metals Only [] PCBs Only

Initial: JF

CUSTODY SEALS INTACT:

- [] Cooler [] _____ [] No (Not Intact) [X] Not Present [] N/A
[] Sample [] _____ [] No (Not Intact) [X] Not Present

Initial: JF

SAMPLE CONDITION:

Table with 4 columns: Item, Yes, No, N/A. Rows include Chain-Of-Custody (COC) document(s) received with samples, COC document(s) received complete, Sampler's name indicated on COC, Sample container label(s) consistent with COC, etc.

CONTAINER TYPE:

- Solid: [] 4ozCGJ [X] 8ozCGJ [] 16ozCGJ [] Sleeve [] EnCores® [] TerraCores® [] _____
Water: [] VOA [X] VOAh [] VOAna2 [] 125AGB [] 125AGBh [] 125AGBp [] 1AGB [] 1AGBna2 [] 1AGBs
[] 500AGB [X] 500AGJ [] 500AGJs [] 250AGB [] 250CGB [] 250CGBs [] 1PB [] 500PB [] 500PBna
[] 250PB [] 250PBn [] 125PB [] 125PBzanna [] 100PJ [] 100PJna2 [] _____ [] _____ [] _____

Air: [] Tedlar® [] Summa® [] _____ Other: [] _____ Checked/Labeled by: SP

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelop Reviewed by: DL

Preservative: h: HCL n: HNO3 na2: Na2S2O3 Na: NaOH p: H3PO4 s: H2SO4 zanna: ZnAc2+NaOH f: Field-filtered Scanned by: SP