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**RECEIVED**

2:18 pm, Sep 28, 2007

Alameda County  
Environmental Health

**Jennifer C. Sedlachek**  
Project Manager

**ExxonMobil**  
*Refining & Supply*

September 28, 2007

Mr. Steven Plunkett  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, 2<sup>nd</sup> Floor  
Alameda, California 94502

Subject: Former Mobil Station 04-334, 2492 Castro Valley Boulevard, Castro Valley, California

Dear Mr. Plunkett:

Attached for your review and comment is a copy of the *Report of Groundwater Monitoring, Third Quarter 2007* for the above-referenced site. The report, prepared by ETIC Engineering, Inc. of Pleasant Hill, California, details the results of the August 2007 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.

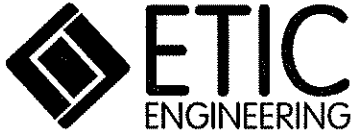
Sincerely,



Jennifer C. Sedlachek  
Project Manager

Attachment: ETIC Groundwater Monitoring Report dated September 2007

- 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 2007**

**Former Mobil Station 04-334  
2492 Castro Valley Boulevard  
Castro Valley, California**

Prepared for

ExxonMobil Oil Corporation  
4096 Piedmont Avenue #194  
Oakland, California 94611

Prepared by

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

Jamie Lynn Peters  
Staff Geologist

9/26/07

Date

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



9/26/07

Date

September 2007

## **SITE CONTACTS**

Station Number: Former Mobil Station 04-334

Station Address: 2492 Castro Valley Boulevard  
Castro Valley, California

ExxonMobil Project Manager: Jennifer C. Sedlachek  
ExxonMobil Refining and Supply 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: Steven Plunkett  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, 2<sup>nd</sup> Floor  
Alameda, California 94502  
(510) 567-6700

## INTRODUCTION

At the request of ExxonMobil Oil Corporation, ETIC Engineering, Inc. has prepared this report of groundwater monitoring for former Mobil Station 04-334. 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 1 May 2007, the date of the previous monitoring event to 1 August 2007, 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

<b>Site name:</b>	Former Mobil Station 04-334
<b>Site address:</b>	2492 Castro Valley Boulevard, Castro Valley, California
<b>Current property owner:</b>	Cal Lube Real Estate Limited Partnership
<b>Current site use:</b>	Jiffy Lube Oil Change facility
<b>Current phase of project:</b>	Groundwater monitoring
<b>Tanks at site:</b>	Four former underground storage tanks removed 1983
<b>Number of wells:</b>	4 (3 onsite, 1 offsite)

## GROUNDWATER MONITORING SUMMARY

<b>Gauging and sampling date:</b>	1 August 2007
<b>Wells gauged and sampled:</b>	MW1-MW4
<b>Wells gauged only:</b>	None
<b>Groundwater flow direction:</b>	Northeast
<b>Groundwater gradient:</b>	0.0217
<b>Well screens submerged:</b>	None
<b>Well screens not submerged:</b>	MW1-MW4
<b>Liquid-phase hydrocarbons:</b>	Not observed or detected
<b>Laboratory:</b>	TestAmerica, Inc., Nashville, Tennessee

### Analyses performed:

- Total Petroleum Hydrocarbons as gasoline and as diesel by EPA Method 8015B
- Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8021B
- Methyl tertiary butyl ether by EPA Method 8260B

## **ADDITIONAL ACTIVITIES PERFORMED**

No additional activities were performed this quarter.

## **WORK PROPOSED FOR NEXT QUARTER**

Groundwater will be monitored in accordance with the attached groundwater monitoring plan. The advancement of direct-push drilling is planned per the Subsurface Investigation Work Plan.

### **Attachments:**

Figure 1: Site Map 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

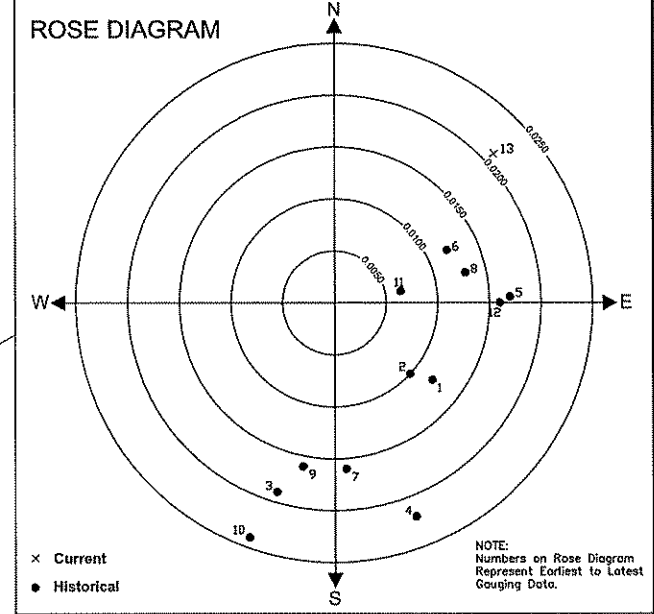
## **Figures**

Benzene	3.02
Toluene	4.18
Ethylbenzene	0.89
Xylenes	3.96
TPH-g	90.8
TPH-d	<47
MTBE (8260)	1.54

Benzene	1.26
Toluene	0.60
Ethylbenzene	<0.50
Xylenes	<0.50
TPH-g	89.2
TPH-d	<47
MTBE (8260)	<0.500

Benzene	0.85
Toluene	<0.50
Ethylbenzene	<0.50
Xylenes	0.97
TPH-g	<50.0
TPH-d	<47
MTBE (8260)	0.870

Benzene	<0.50
Toluene	<0.50
Ethylbenzene	<0.50
Xylenes	<0.50
TPH-g	<50.0
TPH-d	<47
MTBE (8260)	<0.500

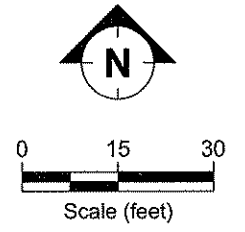


**GW** Groundwater Flow Direction  
Gradient = 0.0217

**LEGEND:**

- ⊕ Groundwater monitoring well
- ⊕ Former Thrifty oil station groundwater monitoring well
- Soil boring
- (165.51) Groundwater elevation (feet)
- TPH-g Total Petroleum Hydrocarbons as gasoline
- TPH-d Total Petroleum Hydrocarbons as diesel
- MTBE Methyl tertiary butyl ether
- \* Not used for the calculation of the groundwater flow direction or gradient

Notes:  
Concentrations in micrograms per liter (ug/L).



FILENAME: 302007.DWG 08/20/2007



SITE MAP SHOWING GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS  
FORMER MOBIL STATION 04-334  
2492 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA  
1 AUGUST 2007

## **Tables**



TABLE 1 WELL CONSTRUCTION DETAILS, FORMER MOBIL STATION 04-334, 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

Notes:

a Well surveyed on 12 July 2004 by Morrow Surveying.

PVC Polyvinyl chloride.

TOC Top of casing.

TABLE 2 GROUNDWATER MONITORING DATA, FORMER MOBIL STATION 04-334, 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)						
					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 <sup>b</sup>
MW1	11/09/04	173.23	6.96	166.27	<0.5	0.9	<0.5	0.9	<50	63	1.50 <sup>b</sup>
MW1	02/16/05	173.23	6.10	167.13	<0.5	1.0	<0.5	1.5	<50	78	1.30 <sup>b</sup>
MW1	05/16/05	173.23	5.81	167.42	<0.5	<0.5	<0.5	<0.5	<50	<50	1.40 <sup>b</sup>
MW1	08/17/05	173.23	6.70	166.53	<0.5	<0.5	<0.5	<0.5	<50	<50	1.19 <sup>b</sup>
MW1	11/15/05	173.23	7.55	165.68	<0.5	<0.5	<0.5	<0.5	<50	<50	1.13 <sup>b</sup>
MW1	02/06/06	173.23	6.40	166.83	<0.5	<0.5	<0.5	<0.5	<50	160	<0.5 <sup>b</sup>
MW1	05/03/06	173.23	6.95	166.28	<1.00	<1.00	<1.00	<3.00	<50.0	78	<0.50 <sup>b</sup>
MW1	08/04/06	173.23	7.71	165.52	<0.50	<0.50	<0.50	<0.50	<50.0	167	<0.500 <sup>b</sup>
MW1	11/06/06	173.23	7.57	165.66	<0.50	<0.50	<0.50	<0.50	<50.0	<47.2	0.880 <sup>b</sup>
MW1	02/21/07	173.23	7.19	166.04	<0.50	<0.50	<0.50	<0.50	<50.0	<46.9	2.42 <sup>b</sup>
<b>MW1</b>	<b>08/01/07</b>	<b>173.23</b>	<b>8.00</b>	<b>165.23</b>	<b>3.02</b>	<b>4.18</b>	<b>0.89</b>	<b>3.96</b>	<b>90.8</b>	<b>&lt;47</b>	<b>1.54<sup>b</sup></b>
MW2	a 08/13/04	173.63	6.96	166.67	<0.5	0.8	<0.5	1.0	<50	57	<0.5 <sup>b</sup>
MW2	11/09/04	173.63	6.44	167.19	<0.5	1.1	<0.5	1.2	<50	<50	<0.5 <sup>b</sup>
MW2	02/16/05	173.63	5.21	168.42	<0.5	0.9	<0.5	1.4	<50	55	<0.5 <sup>b</sup>
MW2	05/16/05	173.63	5.86	167.77	<0.5	<0.5	<0.5	<0.5	<50	<50	<0.5 <sup>b</sup>
MW2	08/17/05	173.63	5.72	167.91	<0.5	<0.5	<0.5	<0.5	<50	<50	<0.5 <sup>b</sup>
MW2	11/15/05	173.63	7.65	165.98	<0.5	<0.5	<0.5	<0.5	<50	<50	<0.5 <sup>b</sup>
MW2	02/06/06	173.63	6.24	167.39	<0.5	<0.5	<0.5	<0.5	<50	<50	<0.5 <sup>b</sup>
MW2	05/03/06	173.63	6.53	167.10	<1.00	<1.00	<1.00	<3.00	<50.0	<50	<0.50 <sup>b</sup>
MW2	08/04/06	173.63	7.65	165.98	<0.50	<0.50	<0.50	<0.50	<50.0	<47.2	<0.500 <sup>b</sup>
MW2	11/06/06	173.63	6.98	166.65	<0.50	<0.50	<0.50	<0.50	<50.0	<46.9	<0.500 <sup>b</sup>
MW2	02/21/07	173.63	6.36	167.27	<0.50	<0.50	<0.50	<0.50	<50.0	<46.9	1.70 <sup>b</sup>
MW2	05/01/07	173.63	7.51	166.12	<0.50	<0.50	<0.50	<0.50	<50.0	<46.9	<0.50 <sup>b</sup>
<b>MW2</b>	<b>08/01/07</b>	<b>173.63</b>	<b>8.12</b>	<b>165.51</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;50.0</b>	<b>&lt;47</b>	<b>&lt;0.500<sup>b</sup></b>
MW3	a 08/13/04	171.91	5.36	166.55	100	2.0	187	59.6	1,440	352	<0.5 <sup>b</sup>

TABLE 2 GROUNDWATER MONITORING DATA, FORMER MOBIL STATION 04-334, 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)						
					Benzene	Toluene	Ethyl- benzene	Total Xylenes	TPH-g	TPH-d	MTBE
MW3	11/09/04	171.91	4.80	167.11	188	3.6	242	20.0	1,690	461	<0.5 <sup>b</sup>
MW3	02/16/05	171.91	3.10	168.81	66.2	1.4	61.1	12.6	575	269	<0.5 <sup>b</sup>
MW3	05/16/05	171.91	3.86	168.05	74.2	1.4	61.0	9.0	592	92	<0.5 <sup>b</sup>
MW3	08/17/05	171.91	4.75	167.16	231 <sup>c</sup>	2.35	102	11.4	1,130	416	<0.5 <sup>b</sup>
MW3	11/15/05	171.91	6.56	165.35	57.4	0.95	62.4	10.5	452	193	<0.5 <sup>b</sup>
MW3	02/06/06	171.91	4.00	167.91	69	<5.0	64	10	830	165	<0.5 <sup>b</sup>
MW3	05/03/06	171.91	5.44	166.47	52.1	<1.00	37.0	4.81	605	140	<0.50 <sup>b</sup>
MW3	08/04/06	171.91	5.25	166.66	15.2	<0.50	5.34	1.25	262	108	<0.500 <sup>b</sup>
MW3	11/06/06	171.91	4.11	167.80	60.0	1.04	47.3	3.09	561	106	<0.500 <sup>b</sup>
MW3	02/21/07	171.91	4.94	166.97	35.1	<0.50	45.4	1.09	483	125	<0.500 <sup>b</sup>
MW3	05/01/07	171.91	5.86	166.05	32.5	1.63	28.7	1.53	539	120	<0.50 <sup>b</sup>
<b>MW3</b>	<b>08/01/07</b>	<b>171.91</b>	<b>7.54</b>	<b>164.37</b>	<b>1.26</b>	<b>0.60</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>89.2</b>	<b>&lt;47</b>	<b>&lt;0.500<sup>b</sup></b>
MW4	a 08/13/04	170.48	6.10	164.38	<0.5	0.8	<0.5	1.1	<50	72	2.80 <sup>b</sup>
MW4	11/09/04	170.48	5.54	164.94	<0.5	2.3	0.7	1.5	<50	<50	2.10 <sup>b</sup>
MW4	02/16/05	170.48	5.11	165.37	<0.5	1.1	<0.5	1.7	<50	<50	<0.5 <sup>b</sup>
MW4	05/16/05	170.48	5.44	165.04	<0.5	<0.5	<0.5	<0.5	<50	<50	<0.5 <sup>b</sup>
MW4	08/17/05	170.48	5.71	164.77	<0.5	<0.5	<0.5	<0.5	<50	<50	1.03 <sup>b</sup>
MW4	11/15/05	170.48	5.80	164.68	<0.5	<0.5	<0.5	<0.5	<50	<50	0.730 <sup>b</sup>
MW4	02/06/06	170.48	5.10	165.38	<0.5	<0.5	<0.5	<0.5	<50	85.2	<0.5 <sup>b</sup>
MW4	05/03/06	170.48	5.54	164.94	<1.00	<1.00	<1.00	<3.00	<50.0	<47	<0.50 <sup>b</sup>
MW4	08/04/06	170.48	5.75	164.73	<0.50	<0.50	<0.50	<0.50	<50.0	52.7	<0.500 <sup>b</sup>
MW4	11/06/06	170.48	5.95	164.53	<0.50	<0.50	<0.50	<0.50	<50.0	<47.2	<0.500 <sup>b</sup>
MW4	02/21/07	170.48	5.56	164.92	<0.50	<0.50	<0.50	<0.50	<50.0	<46.9	<0.500 <sup>b</sup>
MW4	05/01/07	170.48	5.66	164.82	<0.50	<0.50	<0.50	<0.50	<50.0	<46.9	<0.50 <sup>b</sup>
<b>MW4</b>	<b>08/01/07</b>	<b>170.48</b>	<b>6.06</b>	<b>164.42</b>	<b>0.85</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>0.97</b>	<b>&lt;50.0</b>	<b>&lt;47</b>	<b>&lt;0.870<sup>b</sup></b>

TABLE 2 GROUNDWATER MONITORING DATA, FORMER MOBIL STATION 04-334, 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)					
					Benzene	Toluene	Ethyl- benzene	Total Xylenes	TPH-g	TPH-d

Notes: Depth-to-water-level measurements in feet from top-of-casing.

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

b Analyzed by EPA Method 8260.

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

µg/L Micrograms per liter.

MTBE Methyl tertiary butyl ether.

TPH-d Total Petroleum Hydrocarbons as diesel.

TPH-g Total Petroleum Hydrocarbons as gasoline.

TABLE 3 GROUNDWATER MONITORING PLAN, FORMER MOBIL STATION 04-334,  
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	Q	Q	Q
MW2	Q	Q	Q
MW3	Q	Q	Q
MW4	Q	Q	Q

Notes:

- BTEX Benzene, toluene, ethylbenzene, and xylenes.
- MTBE Methyl tertiary butyl ether.
- Q Quarterly
- 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**







Engineering, Inc.

**GROUNDWATER PURGE AND SAMPLE**

Project Name: **FORMER EXXON 04-334** Well No: **MW1** Date: **08-01-07**  
 Project No: **UP04334.1** Personnel: **BINDER**

**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)
		19.71	- 8.00	= 11.71	X 1 0.04	2 0.16	4 0.64	6 1.44	1.87

**PURGING DATA**

Purge Method: **WATERRA** / BAILER / SUB

Purge Depth: \_\_\_\_\_

Screen \_\_\_\_\_

Purge Rate: \_\_\_\_\_

(gpm)

Time	08:35	08:37	08:39			
Volume Purge (gal)	200	4.00	6.00			
Temperature (C)	20.9	19.9	20.1			
pH	7.27	7.34	7.35			
Spec. Cond. (umhos)	756	750	760			
Turbidity/Color	SIFT CLEAR	SIFT CLEAR	SIFT CLEAR			
Odor (Y/N)	N	N	N			
Casing Volumes	1	2	3			
Dewatered (Y/N)	N	N	N			

Comments/Observations:

**SAMPLING DATA**

Time Sampled: **08:45**

Approximate Depth to Water During Sampling: **9.** (feet)

Comments:

Sample Number	Number of Containers	Container Type	Preservative	Volume Filled (mL or L)	Turbidity/Color	Analysis Method
<b>MW1</b>	<b>6</b>	<b>VOA</b>	<b>HCL</b>	<b>40ML</b>		<b>SEE COC</b>
<b>MW1</b>	<b>2</b>	<b>AMBER</b>	<b>NONE</b>	<b>1L</b>		<b>SEE COC</b>

Total Purge Volume: **6.** (gallons)

Disposal:

**ROMIC**

Weather Conditions: **ok**

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



Engineering, Inc.

**GROUNDWATER PURGE AND SAMPLE**

Project Name: **FORMER EXXON 04-334** Well No: **MW2** Date: **08.01.07**  
 Project No: **UP04334.1** Personnel: **BINDER**

**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)
		20.20	- 8.10	= 12.08	X 1	(2)	4	6	1.93
				0.04	0.16	0.64	1.44		

**PURGING DATA**

Purge Method: WATERRA / BAILER / SUB

Purge Depth:

Screen

Purge Rate:

(gpm)

Time	09:18	09:20	09:22			
Volume Purge (gal)	2.00	4.00	6.00			
Temperature (C)	19.3	20.3	20.1			
pH	7.36	7.30	7.29			
Spec. Cond. (umhos)	666	685	681			
Turbidity/Color	<u>CLEAR</u> NONE	<u>CLEAR</u> NONE	<u>CLEAR</u> NONE			
Odor (Y/N)	N	N	N			
Casing Volumes	1	2	3			
Dewatered (Y/N)	N	N	N			

Comments/Observations:

**SAMPLING DATA**

Time Sampled: **09:30**

Approximate Depth to Water During Sampling: **9**, (feet)

Comments:

Sample Number	Number of Containers	Container Type	Preservative	Volume Filled (mL or L)	Turbidity/ Color	Analysis Method
<b>MW2</b>	<b>6</b>	<b>VOA</b>	<b>HCL</b>	<b>40ML</b>		<b>SEE COC</b>
<b>MW2</b>	<b>2</b>	<b>AMBER</b>	<b>NONE</b>	<b>1L</b>		<b>SEE COC</b>

Total Purge Volume: **6**, (gallons)

Disposal:

ROMIC

Weather Conditions: **OK**

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



Engineering, Inc.

**GROUNDWATER PURGE AND SAMPLE**

Project Name: **FORMER EXXON 04-334** Well No: **MW3** Date: **07.01.07**  
 Project No: **UP04334.1** Personnel: **BINDER**

**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)
		19.97	7.54	12.43	1 0.04	2 0.16	4 0.64	6 1.44	1.98

**PURGING DATA**

Purge Method: **WATERRA** / BAILER / SUB

Purge Depth:

Screen

Purge Rate:

(gpm)

Time	10:03	10:05	10:07			
Volume Purge (gal)	2.00	4.00	6.00			
Temperature (C)	20.5	20.8	20.7			
pH	7.89	7.43	7.25			
Spec Cond (umhos)	749	744	755			
Turbidity/Color	SLIGHT CLEAR	SLIGHT CLEAR	SLIGHT CLEAR			
Odor (Y/N)	N	N	N			
Casing Volumes	1	2	3			
Dewatered (Y/N)	N	N	N			

Comments/Observations:

**SAMPLING DATA**

Time Sampled: **10:15**

Approximate Depth to Water During Sampling: **8** (feet)

Comments:

Sample Number	Number of Containers	Container Type	Preservative	Volume Filled (mL or L)	Turbidity/ Color	Analysis Method
<b>MW3</b>	<b>6</b>	<b>VOA</b>	<b>HCL</b>	<b>40ML</b>		<b>SEE COC</b>
<b>MW3</b>	<b>2</b>	<b>AMBER</b>	<b>NONE</b>	<b>1L</b>		<b>SEE COC</b>

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

Disposal:

**ROMIC**

Weather Conditions: **OK**

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



Engineering, Inc.

**GROUNDWATER PURGE AND SAMPLE**

Project Name: **FORMER EXXON 04-334** Well No: **MW4** Date: *08-01-07*  
 Project No: **UP04334.1** Personnel: *BRAD*

**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)
		14.20	- 6.06	= 8.14	X 1	2	4	6	1.30
				0.04	0.16	0.64	1.44		

**PURGING DATA**

Purge Method: WATERRA / BAILER / SUB

Purge Depth:

Screen

Purge Rate:

(gpm)

Time	10:47	10:49	10:51			
Volume Purge (gal)	1.50	3.00	4.50			
Temperature (C)	24.0	21.8	22.0			
pH	7.87	7.44	7.36			
Spec Cond. (umhos)	817	798	796			
Turbidity/Color	<i>Slight Brown</i>	<i>Slight Brown</i>	<i>Slight Brown</i>			
Odor (Y/N)	N	N	N			
Casing Volumes	1	2	3			
Dewatered (Y/N)	N	N	N			

Comments/Observations:

**SAMPLING DATA**

Time Sampled: *10:55*

Approximate Depth to Water During Sampling: *7* (feet)

Comments:

Sample Number	Number of Containers	Container Type	Preservative	Volume Filled (mL or L)	Turbidity/ Color	Analysis Method
<b>MW4</b>	<b>6</b>	<b>VOA</b>	<b>HCL</b>	<b>40ML</b>		<b>SEE COC</b>
<b>MW4</b>	<b>2</b>	<b>AMBER</b>	<b>NONE</b>	<b>1L</b>		<b>SEE COC</b>

Total Purge Volume: *4.5* (gallons)

Disposal:

ROMIC

Weather Conditions: *OK*

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

## **Appendix C**

### **Laboratory Analytical Reports**

August 17, 2007 4:46:44PM

Client: ETIC Engineering Pleasant Hill (10236)  
2285 Morello Avenue  
Pleasant Hill, CA 94523  
Attn: Erik Appel

Work Order: NQH0559  
Project Name: Exxon 04-334  
Project Nbr: 04-334  
P/O Nbr: 4508105068  
Date Received: 08/04/07

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
MW1	NQH0559-01	08/01/07 08:45
MW2	NQH0559-02	08/01/07 09:30
MW3	NQH0559-03	08/01/07 10:15
MW4	NQH0559-04	08/01/07 10:55

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. 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.

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.

SW846 8015B analysis performed at Lab ID: 1210, 01117CA  
California Certification Number: 01168CA

The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

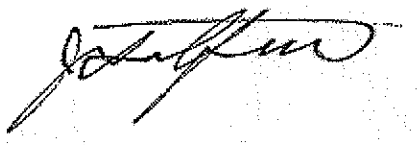
These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

All solids results are reported in wet weight unless specifically stated.

Estimated uncertainty is available upon request.

This report has been electronically signed.

Report Approved By:



Jim Hatfield

Project Management

Client ETIC Engineering Pleasant Hill (10236)  
 2285 Morello Avenue  
 Pleasant Hill, CA 94523  
 Attn Erik Appel

Work Order: NQH0559  
 Project Name: Exxon 04-334  
 Project Number: 04-334  
 Received: 08/04/07 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NQH0559-01 (MW1 - Ground Water) Sampled: 08/01/07 08:45</b>								
Volatile Organic Compounds by EPA Method 8021B								
Benzene	3.02		ug/L	0.50	1	08/07/07 10:28	SW846 8021B	7081086
Ethylbenzene	0.89		ug/L	0.50	1	08/07/07 10:28	SW846 8021B	7081086
Toluene	4.18		ug/L	0.50	1	08/07/07 10:28	SW846 8021B	7081086
Xylenes, total	3.96		ug/L	0.50	1	08/07/07 10:28	SW846 8021B	7081086
<i>Surr: a,a,a-Trifluorotoluene (46-153%)</i>	106 %					08/07/07 10:28	SW846 8021B	7081086
Selected Volatile Organic Compounds by EPA Method 8260B								
Methyl tert-Butyl Ether	1.54		ug/L	0.500	1	08/10/07 02:01	SW846 8260B	7081549
<i>Surr: 1,2-Dichloroethane-d4 (62-142%)</i>	104 %					08/10/07 02:01	SW846 8260B	7081549
<i>Surr: Dibromofluoromethane (78-123%)</i>	110 %					08/10/07 02:01	SW846 8260B	7081549
<i>Surr: Toluene-d8 (79-120%)</i>	72 %	Z10				08/10/07 02:01	SW846 8260B	7081549
<i>Surr: 4-Bromofluorobenzene (75-133%)</i>	98 %					08/10/07 02:01	SW846 8260B	7081549
Purgeable Petroleum Hydrocarbons								
GRO as Gasoline	90.8		ug/L	50.0	1	08/07/07 10:28	SW846 8015B	7081086
<i>Surr: a,a,a-Trifluorotoluene (63-134%)</i>	106 %					08/07/07 10:28	SW846 8015B	7081086
Extractable Hydrocarbons with Silica Gel cleanup by EPA 8015B								
Diesel Range Organics (C10-C28)	ND		ug/l	47	1	08/09/07 12:21	EPA 8015B-SVO/	7H08020
<i>Surr: n-Octacosane (30-115%)</i>	72 %					08/09/07 12:21	EPA 8015B-SVO/	7H08020
<b>Sample ID: NQH0559-02RE1 (MW2 - Ground Water) Sampled: 08/01/07 09:30</b>								
Volatile Organic Compounds by EPA Method 8021B								
Benzene	ND		ug/L	0.50	1	08/08/07 11:19	SW846 8021B	7081387
Ethylbenzene	ND		ug/L	0.50	1	08/08/07 11:19	SW846 8021B	7081387
Toluene	ND		ug/L	0.50	1	08/08/07 11:19	SW846 8021B	7081387
Xylenes, total	ND		ug/L	0.50	1	08/08/07 11:19	SW846 8021B	7081387
<i>Surr: a,a,a-Trifluorotoluene (46-153%)</i>	111 %					08/08/07 11:19	SW846 8021B	7081387
Selected Volatile Organic Compounds by EPA Method 8260B								
Methyl tert-Butyl Ether	ND		ug/L	0.500	1	08/10/07 02:30	SW846 8260B	7081549
<i>Surr: 1,2-Dichloroethane-d4 (62-142%)</i>	92 %					08/10/07 02:30	SW846 8260B	7081549
<i>Surr: Dibromofluoromethane (78-123%)</i>	93 %					08/10/07 02:30	SW846 8260B	7081549
<i>Surr: Toluene-d8 (79-120%)</i>	85 %					08/10/07 02:30	SW846 8260B	7081549
<i>Surr: 4-Bromofluorobenzene (75-133%)</i>	84 %					08/10/07 02:30	SW846 8260B	7081549
Purgeable Petroleum Hydrocarbons								
GRO as Gasoline	ND		ug/L	50.0	1	08/08/07 11:19	SW846 8015B	7081387
<i>Surr: a,a,a-Trifluorotoluene (63-134%)</i>	111 %					08/08/07 11:19	SW846 8015B	7081387
Extractable Hydrocarbons with Silica Gel cleanup by EPA 8015B								
Diesel Range Organics (C10-C28)	ND		ug/l	47	1	08/09/07 09:54	EPA 8015B-SVO/	7H08020
<i>Surr: n-Octacosane (30-115%)</i>	81 %					08/09/07 09:54	EPA 8015B-SVO/	7H08020
<b>Sample ID: NQH0559-03 (MW3 - Ground Water) Sampled: 08/01/07 10:15</b>								
Volatile Organic Compounds by EPA Method 8021B								
Benzene	1.26		ug/L	0.50	1	08/07/07 11:04	SW846 8021B	7081086
Ethylbenzene	ND		ug/L	0.50	1	08/07/07 11:04	SW846 8021B	7081086



Client ETIC Engineering Pleasant Hill (10236)  
 2285 Morello Avenue  
 Pleasant Hill, CA 94523  
 Attn Erik Appel

Work Order: NQH0559  
 Project Name: Exxon 04-334  
 Project Number: 04-334  
 Received: 08/04/07 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NQH0559-03 (MW3 - Ground Water) - cont. Sampled: 08/01/07 10:15</b>								
Volatile Organic Compounds by EPA Method 8021B - cont.								
Toluene	0.60		ug/L	0.50	1	08/07/07 11:04	SW846 8021B	7081086
Xylenes, total	ND		ug/L	0.50	1	08/07/07 11:04	SW846 8021B	7081086
<i>Surr: a,a,a-Trifluorotoluene (46-153%)</i>	96 %					08/07/07 11:04	SW846 8021B	7081086
Selected Volatile Organic Compounds by EPA Method 8260B								
Methyl tert-Butyl Ether	ND		ug/L	0.500	1	08/10/07 02:58	SW846 8260B	7081549
<i>Surr: 1,2-Dichloroethane-d4 (62-142%)</i>	108 %					08/10/07 02:58	SW846 8260B	7081549
<i>Surr: Dibromofluoromethane (78-123%)</i>	114 %					08/10/07 02:58	SW846 8260B	7081549
<i>Surr: Toluene-d8 (79-120%)</i>	87 %					08/10/07 02:58	SW846 8260B	7081549
<i>Surr: 4-Bromofluorobenzene (75-133%)</i>	82 %					08/10/07 02:58	SW846 8260B	7081549
Purgeable Petroleum Hydrocarbons								
GRO as Gasoline	89.2		ug/L	50.0	1	08/07/07 11:04	SW846 8015B	7081086
<i>Surr: a,a,a-Trifluorotoluene (63-134%)</i>	96 %					08/07/07 11:04	SW846 8015B	7081086
Extractable Hydrocarbons with Silica Gel cleanup by EPA 8015B								
Diesel Range Organics (C10-C28)	ND		ug/l	47	1	08/09/07 10:31	PA 8015B-SVO/	7H08020
<i>Surr: n-Octacosane (30-115%)</i>	76 %					08/09/07 10:31	PA 8015B-SVO/	7H08020
<b>Sample ID: NQH0559-04 (MW4 - Ground Water) Sampled: 08/01/07 10:55</b>								
Volatile Organic Compounds by EPA Method 8021B								
Benzene	0.85		ug/L	0.50	1	08/07/07 11:22	SW846 8021B	7081086
Ethylbenzene	ND		ug/L	0.50	1	08/07/07 11:22	SW846 8021B	7081086
Toluene	ND		ug/L	0.50	1	08/07/07 11:22	SW846 8021B	7081086
Xylenes, total	0.97		ug/L	0.50	1	08/07/07 11:22	SW846 8021B	7081086
<i>Surr: a,a,a-Trifluorotoluene (46-153%)</i>	97 %					08/07/07 11:22	SW846 8021B	7081086
Selected Volatile Organic Compounds by EPA Method 8260B								
Methyl tert-Butyl Ether	0.870		ug/L	0.500	1	08/10/07 03:27	SW846 8260B	7081549
<i>Surr: 1,2-Dichloroethane-d4 (62-142%)</i>	108 %					08/10/07 03:27	SW846 8260B	7081549
<i>Surr: Dibromofluoromethane (78-123%)</i>	114 %					08/10/07 03:27	SW846 8260B	7081549
<i>Surr: Toluene-d8 (79-120%)</i>	86 %					08/10/07 03:27	SW846 8260B	7081549
<i>Surr: 4-Bromofluorobenzene (75-133%)</i>	94 %					08/10/07 03:27	SW846 8260B	7081549
Purgeable Petroleum Hydrocarbons								
GRO as Gasoline	ND		ug/L	50.0	1	08/08/07 15:19	SW846 8015B	7081387
<i>Surr: a,a,a-Trifluorotoluene (63-134%)</i>	107 %					08/08/07 15:19	SW846 8015B	7081387
Extractable Hydrocarbons with Silica Gel cleanup by EPA 8015B								
Diesel Range Organics (C10-C28)	ND		ug/l	47	1	08/09/07 11:08	PA 8015B-SVO/	7H08020
<i>Surr: n-Octacosane (30-115%)</i>	74 %					08/09/07 11:08	PA 8015B-SVO/	7H08020

Client ETIC Engineering Pleasant Hill (10236)  
 2285 Morello Avenue  
 Pleasant Hill, CA 94523  
 Attn Erik Appel

Work Order: NQH0559  
 Project Name: Exxon 04-334  
 Project Number: 04-334  
 Received: 08/04/07 08:00

**PROJECT QUALITY CONTROL DATA**  
**Blank**

Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
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**Volatile Organic Compounds by EPA Method 8021B**

**7081086-BLK1**

Benzene	<0.37		ug/L	7081086	7081086-BLK1	08/07/07 09:01
Ethylbenzene	<0.21		ug/L	7081086	7081086-BLK1	08/07/07 09:01
Toluene	<0.41		ug/L	7081086	7081086-BLK1	08/07/07 09:01
Xylenes, total	<0.44		ug/L	7081086	7081086-BLK1	08/07/07 09:01
Surrogate: a,a,a-Trifluorotoluene	109%			7081086	7081086-BLK1	08/07/07 09:01

**7081086-BLK2**

Benzene	<0.37		ug/L	7081086	7081086-BLK2	08/07/07 09:19
Ethylbenzene	<0.21		ug/L	7081086	7081086-BLK2	08/07/07 09:19
Toluene	<0.41		ug/L	7081086	7081086-BLK2	08/07/07 09:19
Xylenes, total	<0.44		ug/L	7081086	7081086-BLK2	08/07/07 09:19
Surrogate: a,a,a-Trifluorotoluene	114%			7081086	7081086-BLK2	08/07/07 09:19

**7081387-BLK1**

Benzene	<0.37		ug/L	7081387	7081387-BLK1	08/08/07 01:03
Ethylbenzene	<0.21		ug/L	7081387	7081387-BLK1	08/08/07 01:03
Toluene	<0.41		ug/L	7081387	7081387-BLK1	08/08/07 01:03
Xylenes, total	<0.44		ug/L	7081387	7081387-BLK1	08/08/07 01:03
Surrogate: a,a,a-Trifluorotoluene	101%			7081387	7081387-BLK1	08/08/07 01:03

**7081387-BLK2**

Benzene	<0.37		ug/L	7081387	7081387-BLK2	08/08/07 01:21
Ethylbenzene	<0.21		ug/L	7081387	7081387-BLK2	08/08/07 01:21
Toluene	<0.41		ug/L	7081387	7081387-BLK2	08/08/07 01:21
Xylenes, total	<0.44		ug/L	7081387	7081387-BLK2	08/08/07 01:21
Surrogate: a,a,a-Trifluorotoluene	101%			7081387	7081387-BLK2	08/08/07 01:21

**Selected Volatile Organic Compounds by EPA Method 8260B**

**7081549-BLK1**

Methyl tert-Butyl Ether	<0.190		ug/L	7081549	7081549-BLK1	08/10/07 00:34
Surrogate: 1,2-Dichloroethane-d4	111%			7081549	7081549-BLK1	08/10/07 00:34
Surrogate: Dibromofluoromethane	116%			7081549	7081549-BLK1	08/10/07 00:34
Surrogate: Toluene-d8	87%			7081549	7081549-BLK1	08/10/07 00:34
Surrogate: 4-Bromofluorobenzene	86%			7081549	7081549-BLK1	08/10/07 00:34

**Purgeable Petroleum Hydrocarbons**

**7081086-BLK1**

GRO as Gasoline	<33.0		ug/L	7081086	7081086-BLK1	08/07/07 09:01
Surrogate: a,a,a-Trifluorotoluene	109%			7081086	7081086-BLK1	08/07/07 09:01

**7081086-BLK2**

GRO as Gasoline	<33.0		ug/L	7081086	7081086-BLK2	08/07/07 09:19
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Client ETIC Engineering Pleasant Hill (10236)  
 2285 Morello Avenue  
 Pleasant Hill, CA 94523  
 Attn Erik Appel

Work Order: NQH0559  
 Project Name: Exxon 04-334  
 Project Number: 04-334  
 Received: 08/04/07 08:00

**PROJECT QUALITY CONTROL DATA**  
**Blank - Cont.**

Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
<b>Purgeable Petroleum Hydrocarbons</b>						
<b>7081086-BLK2</b>						
<i>Surrogate: a,a,a-Trifluorotoluene</i>	114%			7081086	7081086-BLK2	08/07/07 09:19
<b>7081387-BLK1</b>						
GRO as Gasoline	<33.0		ug/L	7081387	7081387-BLK1	08/08/07 01:03
<i>Surrogate: a,a,a-Trifluorotoluene</i>	101%			7081387	7081387-BLK1	08/08/07 01:03
<b>7081387-BLK2</b>						
GRO as Gasoline	<33.0		ug/L	7081387	7081387-BLK2	08/08/07 01:21
<i>Surrogate: a,a,a-Trifluorotoluene</i>	101%			7081387	7081387-BLK2	08/08/07 01:21
<b>Extractable Hydrocarbons with Silica Gel cleanup by EPA 8015B</b>						
<b>7H08020-BLK1</b>						
Diesel Range Organics (C10-C28)	<21		ug/l	7H08020	7H08020-BLK1	08/09/07 17:16
<i>Surrogate: n-Octacosane</i>	67%			7H08020	7H08020-BLK1	08/09/07 17:16

Client ETIC Engineering Pleasant Hill (10236)  
 2285 Morello Avenue  
 Pleasant Hill, CA 94523  
 Attn Erik Appel

Work Order: NQH0559  
 Project Name: Exxon 04-334  
 Project Number: 04-334  
 Received: 08/04/07 08:00

PROJECT QUALITY CONTROL DATA  
 LCS

Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time
<b>Volatile Organic Compounds by EPA Method 8021B</b>								
<b>7081086-BS1</b>								
Benzene	100	91.4		ug/L	91%	72 - 132	7081086	08/07/07 22:36
Ethylbenzene	100	89.7		ug/L	90%	75 - 119	7081086	08/07/07 22:36
Toluene	100	95.2		ug/L	95%	71 - 121	7081086	08/07/07 22:36
Xylenes, total	200	177		ug/L	88%	73 - 122	7081086	08/07/07 22:36
Surrogate: <i>a,a,a-Trifluorotoluene</i>	30.0	31.6			105%	46 - 153	7081086	08/07/07 22:36
<b>7081086-BS2</b>								
Benzene	100	95.9		ug/L	96%	72 - 132	7081086	08/07/07 22:54
Ethylbenzene	100	94.4		ug/L	94%	75 - 119	7081086	08/07/07 22:54
Toluene	100	84.7		ug/L	85%	71 - 121	7081086	08/07/07 22:54
Xylenes, total	200	188		ug/L	94%	73 - 122	7081086	08/07/07 22:54
Surrogate: <i>a,a,a-Trifluorotoluene</i>	30.0	31.5			105%	46 - 153	7081086	08/07/07 22:54
<b>7081387-BS1</b>								
Benzene	100	86.2		ug/L	86%	72 - 132	7081387	08/08/07 21:33
Ethylbenzene	100	86.7		ug/L	87%	75 - 119	7081387	08/08/07 21:33
Toluene	100	91.5		ug/L	91%	71 - 121	7081387	08/08/07 21:33
Xylenes, total	200	172		ug/L	86%	73 - 122	7081387	08/08/07 21:33
Surrogate: <i>a,a,a-Trifluorotoluene</i>	30.0	31.0			103%	46 - 153	7081387	08/08/07 21:33
<b>7081387-BS2</b>								
Benzene	100	92.5		ug/L	93%	72 - 132	7081387	08/08/07 21:52
Ethylbenzene	100	92.9		ug/L	93%	75 - 119	7081387	08/08/07 21:52
Toluene	100	83.0		ug/L	83%	71 - 121	7081387	08/08/07 21:52
Xylenes, total	200	186		ug/L	93%	73 - 122	7081387	08/08/07 21:52
Surrogate: <i>a,a,a-Trifluorotoluene</i>	30.0	30.6			102%	46 - 153	7081387	08/08/07 21:52
<b>Selected Volatile Organic Compounds by EPA Method 8260B</b>								
<b>7081549-BS1</b>								
Methyl tert-Butyl Ether	50.0	51.0		ug/L	102%	66 - 129	7081549	08/09/07 23:08
Surrogate: <i>1,2-Dichloroethane-d4</i>	50.0	53.5			107%	62 - 142	7081549	08/09/07 23:08
Surrogate: <i>Dibromofluoromethane</i>	50.0	56.5			113%	78 - 123	7081549	08/09/07 23:08
Surrogate: <i>Toluene-d8</i>	50.0	44.6			89%	79 - 120	7081549	08/09/07 23:08
Surrogate: <i>4-Bromofluorobenzene</i>	50.0	36.6	Z10		73%	75 - 133	7081549	08/09/07 23:08
<b>Purgeable Petroleum Hydrocarbons</b>								
<b>7081086-BS3</b>								
GRO as Gasoline	1000	928		ug/L	93%	64 - 130	7081086	08/07/07 23:13
Surrogate: <i>a,a,a-Trifluorotoluene</i>	30.0	32.3			108%	63 - 134	7081086	08/07/07 23:13
<b>7081086-BS4</b>								
GRO as Gasoline	1000	989		ug/L	99%	64 - 130	7081086	08/07/07 23:31

Client ETIC Engineering Pleasant Hill (10236)  
 2285 Morello Avenue  
 Pleasant Hill, CA 94523  
 Attn Erik Appel

Work Order: NQH0559  
 Project Name: Exxon 04-334  
 Project Number: 04-334  
 Received: 08/04/07 08:00

**PROJECT QUALITY CONTROL DATA**  
**LCS - Cont.**

Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time
<b>Purgeable Petroleum Hydrocarbons</b>								
<b>7081086-BS4</b>								
<i>Surrogate: a,a,a-Trifluorotoluene</i>	30.0	33.0			110%	63 - 134	7081086	08/07/07 23:31
<b>7081387-BS3</b>								
GRO as Gasoline	1000	923		ug/L	92%	64 - 130	7081387	08/08/07 22:10
<i>Surrogate: a,a,a-Trifluorotoluene</i>	30.0	33.7			112%	63 - 134	7081387	08/08/07 22:10
<b>7081387-BS4</b>								
GRO as Gasoline	1000	1060		ug/L	106%	64 - 130	7081387	08/08/07 22:29
<i>Surrogate: a,a,a-Trifluorotoluene</i>	30.0	34.5			115%	63 - 134	7081387	08/08/07 22:29
<b>Extractable Hydrocarbons with Silica Gel cleanup by EPA 8015B</b>								
<b>7H08020-BS1</b>								
Diesel Range Organics (C10-C28)	500	241		ug/l	48%	40 - 115	7H08020	08/09/07 17:53
<i>Surrogate: n-Octacosane</i>	50.0	34.9			70%	30 - 115	7H08020	08/09/07 17:53

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 Received: 08/04/07 08:00

**PROJECT QUALITY CONTROL DATA**  
**LCS Dup**

Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
<b>Selected Volatile Organic Compounds by EPA Method 8260B</b>												
<b>7081549-BSD1</b>												
Methyl tert-Butyl Ether		48.4		ug/L	50.0	97%	66 - 129	5	27	7081549		08/09/07 23:37
Surrogate: 1,2-Dichloroethane-d4		66.4		ug/L	50.0	133%	62 - 142			7081549		08/09/07 23:37
Surrogate: Dibromofluoromethane		64.5	Z10	ug/L	50.0	129%	78 - 123			7081549		08/09/07 23:37
Surrogate: Toluene-d8		42.8		ug/L	50.0	86%	79 - 120			7081549		08/09/07 23:37
Surrogate: 4-Bromofluorobenzene		40.4		ug/L	50.0	81%	75 - 133			7081549		08/09/07 23:37
<b>Extractable Hydrocarbons with Silica Gel cleanup by EPA 8015B</b>												
<b>7H08020-BSD1</b>												
Diesel Range Organics (C10-C28)		249		ug/l	500	50%	40 - 115	3	25	7H08020		08/09/07 18:30
Surrogate: n-Octacosane		34.5		ug/l	50.0	69%	30 - 115			7H08020		08/09/07 18:30

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**PROJECT QUALITY CONTROL DATA**  
**Matrix Spike**

Analyte	Orig. Val.	MS Val	Q	Units	Spike Conc	% Rec.	Target Range	Batch	Sample Spiked	Analyzed Date/Time
<b>Volatile Organic Compounds by EPA Method 8021B</b>										
<b>7081086-MS1</b>										
Benzene	3.02	53.6		ug/L	50.0	101%	72 - 133	7081086	NQH0559-01	08/08/07 08:47
Ethylbenzene	0.887	54.2		ug/L	50.0	107%	75 - 137	7081086	NQH0559-01	08/08/07 08:47
Toluene	4.18	56.7		ug/L	50.0	105%	71 - 127	7081086	NQH0559-01	08/08/07 08:47
Xylenes, total	3.96	107		ug/L	100	103%	73 - 140	7081086	NQH0559-01	08/08/07 08:47
Surrogate: <i>a,a,a-Trifluorotoluene</i>		32.1		ug/L	30.0	107%	46 - 153	7081086	NQH0559-01	08/08/07 08:47
<b>7081086-MS2</b>										
Benzene	0.231	50.0		ug/L	50.0	100%	72 - 133	7081086	NQH0573-05	08/08/07 09:23
Ethylbenzene	0.103	49.8		ug/L	50.0	99%	75 - 137	7081086	NQH0573-05	08/08/07 09:23
Toluene	ND	51.8		ug/L	50.0	104%	71 - 127	7081086	NQH0573-05	08/08/07 09:23
Xylenes, total	0.489	96.9		ug/L	100	96%	73 - 140	7081086	NQH0573-05	08/08/07 09:23
Surrogate: <i>a,a,a-Trifluorotoluene</i>		31.7		ug/L	30.0	106%	46 - 153	7081086	NQH0573-05	08/08/07 09:23
<b>7081387-MS1</b>										
Benzene	8.68	59.5		ug/L	50.0	102%	72 - 133	7081387	NQH0617-04	08/09/07 10:37
Ethylbenzene	0.337	49.1		ug/L	50.0	98%	75 - 137	7081387	NQH0617-04	08/09/07 10:37
Toluene	ND	45.3		ug/L	50.0	91%	71 - 127	7081387	NQH0617-04	08/09/07 10:37
Xylenes, total	1.55	97.9		ug/L	100	96%	73 - 140	7081387	NQH0617-04	08/09/07 10:37
Surrogate: <i>a,a,a-Trifluorotoluene</i>		31.8		ug/L	30.0	106%	46 - 153	7081387	NQH0617-04	08/09/07 10:37
<b>Selected Volatile Organic Compounds by EPA Method 8260B</b>										
<b>7081549-MS1</b>										
Methyl tert-Butyl Ether	1.54	59.9		ug/L	50.0	117%	54 - 143	7081549	NQH0559-01	08/10/07 09:13
Surrogate: <i>1,2-Dichloroethane-d4</i>		55.5		ug/L	50.0	111%	62 - 142	7081549	NQH0559-01	08/10/07 09:13
Surrogate: <i>Dibromofluoromethane</i>		56.6		ug/L	50.0	113%	78 - 123	7081549	NQH0559-01	08/10/07 09:13
Surrogate: <i>Toluene-d8</i>		42.6		ug/L	50.0	85%	79 - 120	7081549	NQH0559-01	08/10/07 09:13
Surrogate: <i>4-Bromofluorobenzene</i>		39.3		ug/L	50.0	79%	75 - 133	7081549	NQH0559-01	08/10/07 09:13
<b>Purgeable Petroleum Hydrocarbons</b>										
<b>7081387-MS1</b>										
GRO as Gasoline	473	1460		ug/L	550	179%	34 - 201	7081387	NQH0617-04	08/09/07 10:37
Surrogate: <i>a,a,a-Trifluorotoluene</i>		31.8		ug/L	30.0	106%	46 - 153	7081387	NQH0617-04	08/09/07 10:37

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Work Order: NQH0559  
 Project Name: Exxon 04-334  
 Project Number: 04-334  
 Received: 08/04/07 08:00

**PROJECT QUALITY CONTROL DATA**  
**Matrix Spike Dup**

Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
<b>Volatile Organic Compounds by EPA Method 8021B</b>												
<b>7081086-MSD1</b>												
Benzene	3.02	55.4		ug/L	50.0	105%	72 - 133	3	11	7081086	NQH0559-01	08/08/07 09:05
Ethylbenzene	0.887	56.6		ug/L	50.0	111%	75 - 137	4	18	7081086	NQH0559-01	08/08/07 09:05
Toluene	4.18	50.2		ug/L	50.0	92%	71 - 127	12	15	7081086	NQH0559-01	08/08/07 09:05
Xylenes, total	3.96	113		ug/L	100	109%	73 - 140	6	14	7081086	NQH0559-01	08/08/07 09:05
Surrogate: a,a,a-Trifluorotoluene		35.3		ug/L	30.0	118%	46 - 153			7081086	NQH0559-01	08/08/07 09:05
<b>7081086-MSD2</b>												
Benzene	0.231	52.6		ug/L	50.0	105%	72 - 133	5	11	7081086	NQH0573-05	08/08/07 09:41
Ethylbenzene	0.103	52.4		ug/L	50.0	105%	75 - 137	5	18	7081086	NQH0573-05	08/08/07 09:41
Toluene	ND	47.2		ug/L	50.0	94%	71 - 127	9	15	7081086	NQH0573-05	08/08/07 09:41
Xylenes, total	0.489	103		ug/L	100	102%	73 - 140	6	14	7081086	NQH0573-05	08/08/07 09:41
Surrogate: a,a,a-Trifluorotoluene		31.5		ug/L	30.0	105%	46 - 153			7081086	NQH0573-05	08/08/07 09:41
<b>7081387-MSD1</b>												
Benzene	8.68	67.0	R3	ug/L	50.0	117%	72 - 133	12	11	7081387	NQH0617-04	08/09/07 11:29
Ethylbenzene	0.337	51.3		ug/L	50.0	102%	75 - 137	4	18	7081387	NQH0617-04	08/09/07 11:29
Toluene	ND	46.8		ug/L	50.0	94%	71 - 127	3	15	7081387	NQH0617-04	08/09/07 11:29
Xylenes, total	1.55	102		ug/L	100	100%	73 - 140	4	14	7081387	NQH0617-04	08/09/07 11:29
Surrogate: a,a,a-Trifluorotoluene		33.4		ug/L	30.0	111%	46 - 153			7081387	NQH0617-04	08/09/07 11:29
<b>Selected Volatile Organic Compounds by EPA Method 8260B</b>												
<b>7081549-MSD1</b>												
Methyl tert-Butyl Ether	1.54	48.3		ug/L	50.0	94%	54 - 143	21	27	7081549	NQH0559-01	08/10/07 09:41
Surrogate: 1,2-Dichloroethane-d4		45.2		ug/L	50.0	90%	62 - 142			7081549	NQH0559-01	08/10/07 09:41
Surrogate: Dibromofluoromethane		49.6		ug/L	50.0	99%	78 - 123			7081549	NQH0559-01	08/10/07 09:41
Surrogate: Toluene-d8		41.7		ug/L	50.0	83%	79 - 120			7081549	NQH0559-01	08/10/07 09:41
Surrogate: 4-Bromofluorobenzene		41.9		ug/L	50.0	84%	75 - 133			7081549	NQH0559-01	08/10/07 09:41
<b>Purgeable Petroleum Hydrocarbons</b>												
<b>7081387-MSD1</b>												
GRO as Gasoline	473	1520		ug/L	550	191%	34 - 201	4	28	7081387	NQH0617-04	08/09/07 11:29
Surrogate: a,a,a-Trifluorotoluene		33.4		ug/L	30.0	111%	46 - 153			7081387	NQH0617-04	08/09/07 11:29



Client ETIC Engineering Pleasant Hill (10236)  
2285 Morello Avenue  
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Attn Erik Appel

Work Order: NQH0559  
Project Name: Exxon 04-334  
Project Number: 04-334  
Received: 08/04/07 08:00

### CERTIFICATION SUMMARY

#### TestAmerica - Nashville, TN

Method	Matrix	AIHA	Nelac	California
NA	Water			
SW846 8015B	Water	N/A	X	X
SW846 8021B	Water	N/A	X	X
SW846 8260B	Water	N/A	X	X

#### Subcontracted Laboratories

Sequoia Analytical - Morgan Hill (11658) Arizona Cert #AZ0686, California Cert #1210, 01117CA, Colorado Cert #No Cert. No., Washington Cert #C1657

885 Jarvis Drive - Morgan Hill, CA 95037

Method Performed: EPA 8015B-SVOA

Samples: NQH0559-01, NQH0559-02, NQH0559-03, NQH0559-04

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Project Name: Exxon 04-334  
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Received: 08/04/07 08:00

## NELAC CERTIFICATION SUMMARY

TestAmerica Analytical - Nashville does not hold NELAC certifications for the following analytes included in this report

Method

Matrix

Analyte

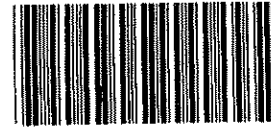
Client ETIC Engineering Pleasant Hill (10236)  
2285 Morello Avenue  
Pleasant Hill, CA 94523  
Attn Erik Appel

Work Order: NQH0559  
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## DATA QUALIFIERS AND DEFINITIONS

**R3** The RPD exceeded the acceptance limit due to sample matrix effects.  
**Z10** Surrogate outside laboratory historical limits but within method guidelines. No effect on data.  
**ND** Not detected at the reporting limit (or method detection limit if shown)

## METHOD MODIFICATION NOTES



NQH0559

Cooler Received/Opened On: 8/04/07 @ 0800

1. Tracking # 0016 (last 4 digits, FedEx)

Courier: FED EX IR Gun ID: 90942856

2. Temperature of rep. sample or temp blank when opened: 3.8 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO... NA

4. Were custody seals on outside of cooler? YES... NO...NA

If yes, how many and where: \_\_\_\_\_

5. Were the seals intact, signed, and dated correctly? YES...NO... NA

6. Were custody papers inside cooler?  YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) JP

7. Were custody seals on containers: YES  NO and Intact YES...NO... NA

Were these signed and dated correctly? YES...NO... NA

8. Packing mat'l used?  Bubblewrap  Plastic bag  Peanuts  Vermiculite  Foam Insert  Paper  Other  None

9. Cooling process:  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

13a. were VOA vials received?  YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES... NO...NA

14. Was there a Trip Blank in this cooler? YES... NO...NA If multiple coolers, sequence # \_\_\_\_\_

I certify that I unloaded the cooler and answered questions 7-14 (initial) JP

15a. on pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO... NA

b. Did the bottle labels indicate that the correct preservatives were used  YES...NO...NA

If preservation in-house was needed, record standard ID of preservative used here \_\_\_\_\_

16. Is residual chlorine present? YES...NO... NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial). JP

17. Were custody papers properly filled out (ink, signed, etc)?  YES...NO...NA

18. Did you sign the custody papers in the appropriate place?  YES...NO...NA

19. Were correct containers used for the analysis requested?  YES...NO...NA

20. Was sufficient amount of sample sent in each container?  YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial). JP

I certify that I attached a label with the unique LIMS number to each container (initial). JP

21. Were there Non-Conformance issues at login? YES... NO Was a PIPE generated?  YES... NO...# 44772

JP  
8/4/07

No liters  
Received

