

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

By Alameda County Environmental Health 2:14 pm, Jul 26, 2016

26 July 2016

ExxonMobil

Mr. Keith Nowell
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Report of Groundwater Monitoring, Second Quarter 2016
Former Exxon RAS #70234
3450 35th Avenue, Oakland, California
ACHCSA File No. RO0002515

Dear Mr. Nowell:

Attached for your review and comment is a copy of the *Report of Groundwater Monitoring, Second Quarter 2016* for the above-referenced site. The document, prepared by ETIC Engineering, Inc. of Pasadena, California, details the results of the June 2016 sampling event.

Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document 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's Second Quarter 2016 Groundwater Monitoring Report

- c: w/ attachment:
Mr. Zack Spencer, FWS Highland LLC, 99 South Hill Drive, Brisbane, CA 94005
Mr. Shay Wideman, The Valero Companies, Environ. Liability Mgt., P.O. Box 696000, San Antonio, TX 78269
- c: w/o attachment:
Mr. Sean Bowen, ETIC Engineering, Inc.

**Report of Groundwater Monitoring
Second Quarter 2016**

**Former Exxon Service Station 70234
3450 35th Avenue
Oakland, California**

Prepared for

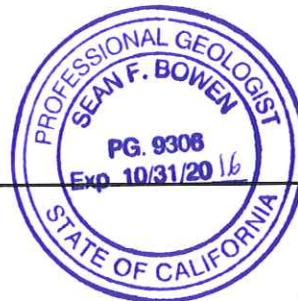
ExxonMobil Oil Corporation

Prepared by

ETIC Engineering, Inc.
898 North Fair Oaks Avenue, Suite A
Pasadena, California 91103
(626) 432-5999



Sean Bowen, P.G. #9306
Project Manager



7-26-16

Date



Ryan Haughy, P.G. #7851
Senior Project Manager

7-26-16

Date

July 2016

SITE CONTACTS

Site Name: Former Exxon Service Station 70234

Site Address: 3450 35th Avenue
Oakland, 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.
898 North Fair Oaks Avenue, Suite A
Pasadena, California 91103
(626) 432-5999

ETIC Project Manager: Sean Bowen

Regulatory Oversight: Keith Nowell
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577
(510) 567-6764

INTRODUCTION

ETIC Engineering, Inc. (ETIC) has prepared this semiannual groundwater monitoring report for ExxonMobil Environmental Services Company on behalf of ExxonMobil Oil Corporation (ExxonMobil) for Former Exxon Service Station 70234. 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 conducted between 17 December 2016, the date of the previous monitoring event, and 15 June 2016, 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, including groundwater data for Unocal No. 6129, located across Quigley Street southwest of site 70234.

GENERAL SITE INFORMATION

Site name:	Former Exxon Service Station 70234
Site address:	3450 35 th Avenue, Oakland, California
Current property owner:	Mr. Zack Spencer
Current site use:	Vacant
Current phase of project:	Groundwater monitoring
Number of groundwater monitoring wells:	7

GROUNDWATER MONITORING SUMMARY

Gauging and sampling date:	15 June 2016
Wells gauged and sampled:	MW4, MW5, MW6, MW7, MW8, MW9, and RW1
Wells gauged only:	None
Wells inaccessible:	None
Groundwater flow direction:	Southwest
Hydraulic gradient:	0.015
Well screens submerged:	MW4
Well screens not submerged:	MW5, MW6, MW7, MW8, MW9, and RW1
Liquid-phase hydrocarbons:	Not observed or detected
Laboratory:	Eurofins Calscience Environmental Laboratories, Inc., Garden Grove, California
Concurrently sampled:	Unocal No. 6129, 3420 35 th Avenue
Unocal Data provided by:	AECOM, Sacramento, California

Analyses performed:

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

Waste disposal:

- 41 gallons of purge water was stored in a 55-gallon drum and was then delivered to Instrat, Inc. of Rio Vista, California on 17 June 2016.

ADDITIONAL ACTIVITIES PERFORMED

None.

WORK PROPOSED FOR NEXT QUARTER

In accordance with ACHCSA directives, groundwater monitoring will not be conducted in the third quarter of 2016. The next semiannual groundwater monitoring event will be conducted in the fourth quarter of 2016.

Attachments:

Figure 1: Site Location and Topographic Map

Figure 2: Site Map

Figure 3: Groundwater Elevation Contour Map

Figure 4: Groundwater Analytical Data

Table 1: Well Construction Details

Table 2: Current Groundwater Monitoring Data

Table 3: Historical Groundwater Monitoring Data

Table 4: Groundwater Analytical Results for Detected VOCs

Table 5: Groundwater Monitoring Plan

Appendix A: Field Protocols

Appendix B: Field Documents

Appendix C: Waste Manifests

Appendix D: Laboratory Analytical Reports and Chain-of-Custody Documentation

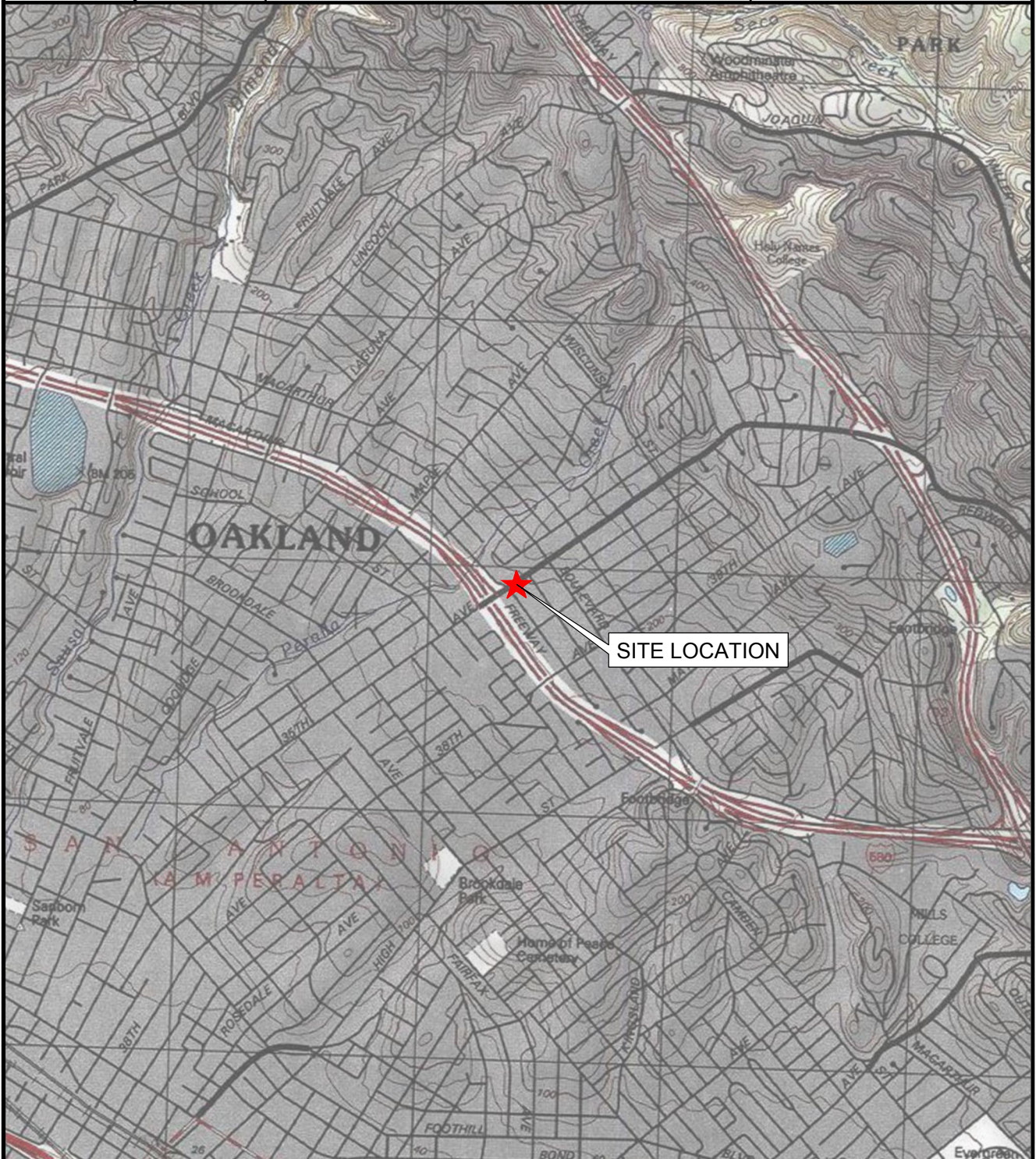
Appendix E: Groundwater Monitoring and Sampling Data for Unocal No. 6129

Figures



COORDINATE SYSTEM: NAD 1983 HARN CALIFORNIA TEALE ALBERS
 PROJECTION: ALBERS
 DATUM: NORTH AMERICAN 1983 HARN
 FALSE EASTING: 0.0000
 FALSE NORTHING: -4,000,000.0000
 CENTRAL MERIDIAN: -120.0000
 STANDARD PARALLEL 1: 34.0000
 STANDARD PARALLEL 2: 40.5000
 LATITUDE OF ORIGIN: 0.0000
 UNITS: METER

0 1000 2000
 Feet
 1 inch = 2,000 feet



SITE LOCATION

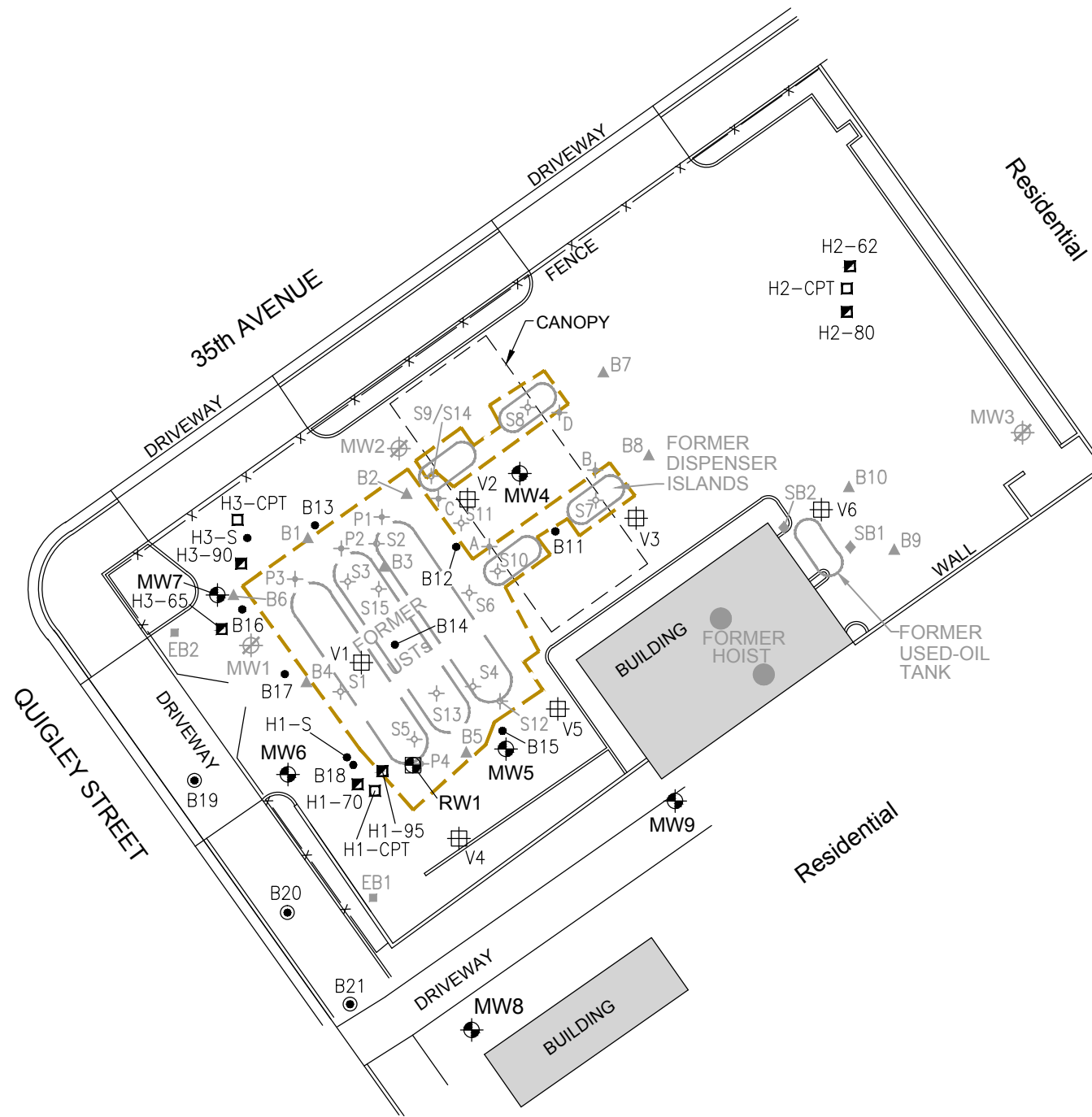
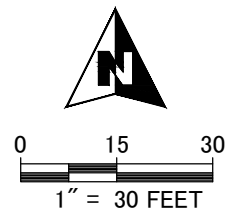
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2285 MORELLO AVENUE
 PLEASANT HILL, CA 94523
 (925) 602-4710
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16-070234-UP	EXXONMOBIL OIL CORPORATION		FIGURE: 1
OR: AF	SITE LOCATION AND TOPOGRAPHIC MAP		
DR: AJW	FORMER EXXON SERVICE STATION 70234		
CK:	3450 35th AVENUE		
FR:	OAKLAND, CALIFORNIA		

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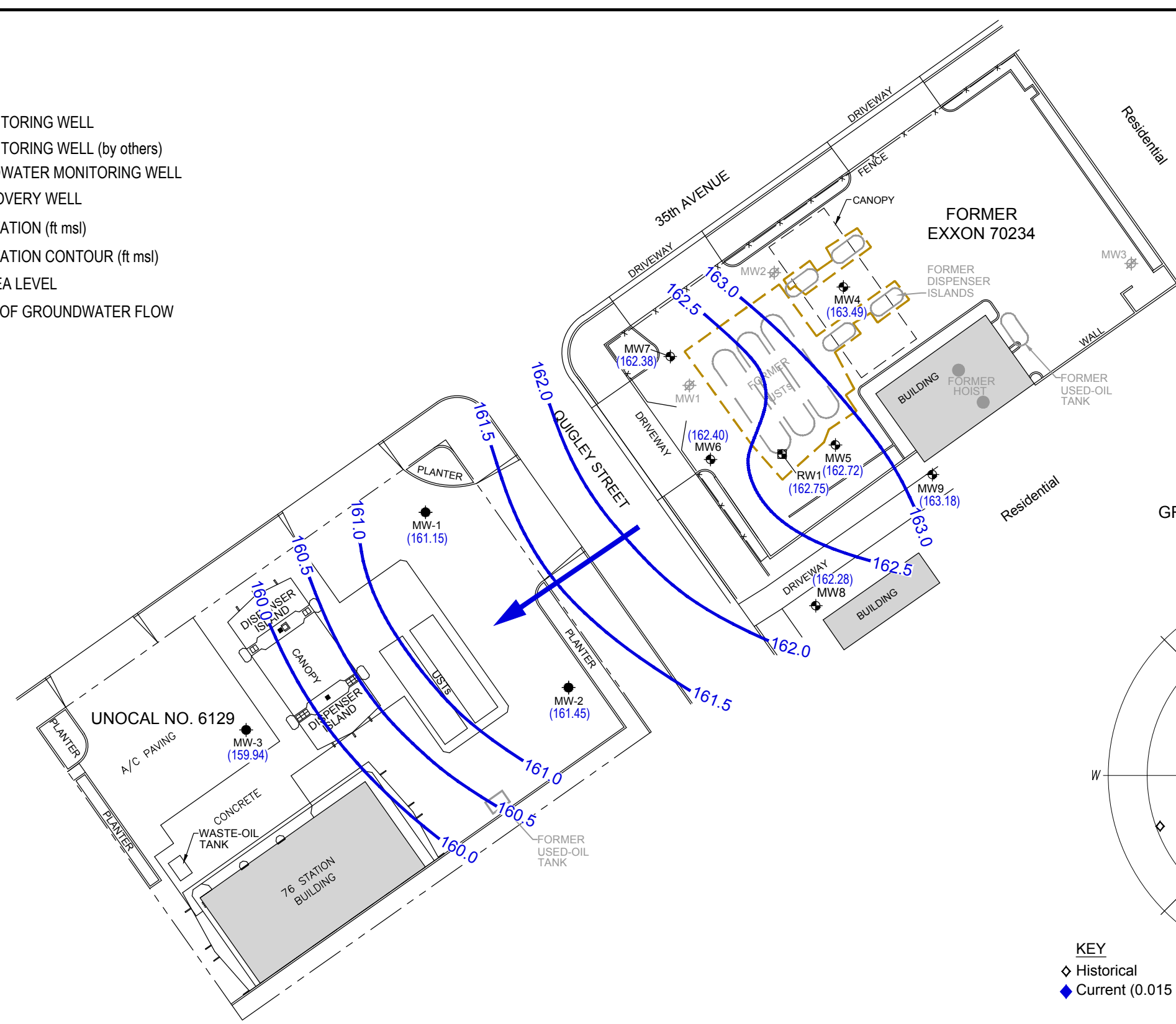


- LEGEND:**
- EXCAVATED AREA
 - GROUNDWATER MONITORING WELL
 - GROUNDWATER MONITORING WELL (by others)
 - DESTROYED GROUNDWATER MONITORING WELL
 - GROUNDWATER RECOVERY WELL
 - V1 SOIL VAPOR MONITORING WELL
 - H3-CPT CONE PENETROMETER TESTING BORING
 - H3-65 HYDROPUNCH GROUNDWATER SAMPLING LOCATION (WITH DEPTH BELOW GROUND SURFACE NOTED)
 - H3-S SOIL BORING
 - SOIL BORING (GTI, 1986)
 - SOIL BORING (HLA, 1988)
 - SOIL BORING (Alton, 1991)
 - SOIL SAMPLE (Alton, 1991)
 - SOIL SAMPLE (TRC, 2002)
 - SOIL BORING (ERI, 2007)
 - SOIL BORING (ERI, 2009)

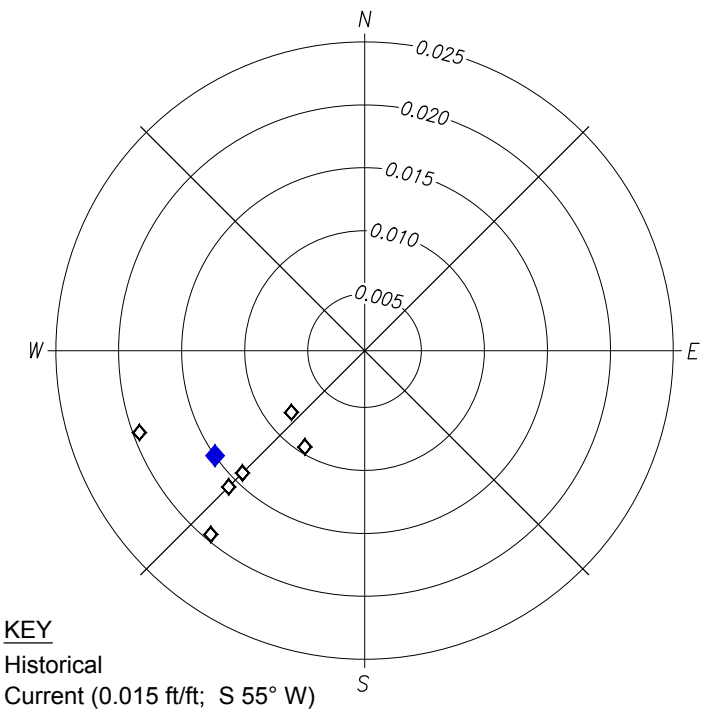
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16-070234-UP	EXXONMOBIL OIL CORPORATION		
OR: AF	SITE MAP FORMER EXXON SERVICE STATION 70234 3450 35th AVENUE		FIGURE: 2
DR: AJW			
CK:	OAKLAND, CALIFORNIA		
FR:			

- LEGEND:**
- EXCAVATED AREA
 - GROUNDWATER MONITORING WELL
 - GROUNDWATER MONITORING WELL (by others)
 - DESTROYED GROUNDWATER MONITORING WELL
 - GROUNDWATER RECOVERY WELL
 - (163.49) GROUNDWATER ELEVATION (ft msl)
 - GROUNDWATER ELEVATION CONTOUR (ft msl)
 - ft msl FEET ABOVE MEAN SEA LEVEL
 - GENERAL DIRECTION OF GROUNDWATER FLOW



GROUNDWATER FLOW DIRECTION AND HYDRAULIC GRADIENT



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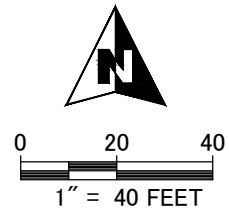
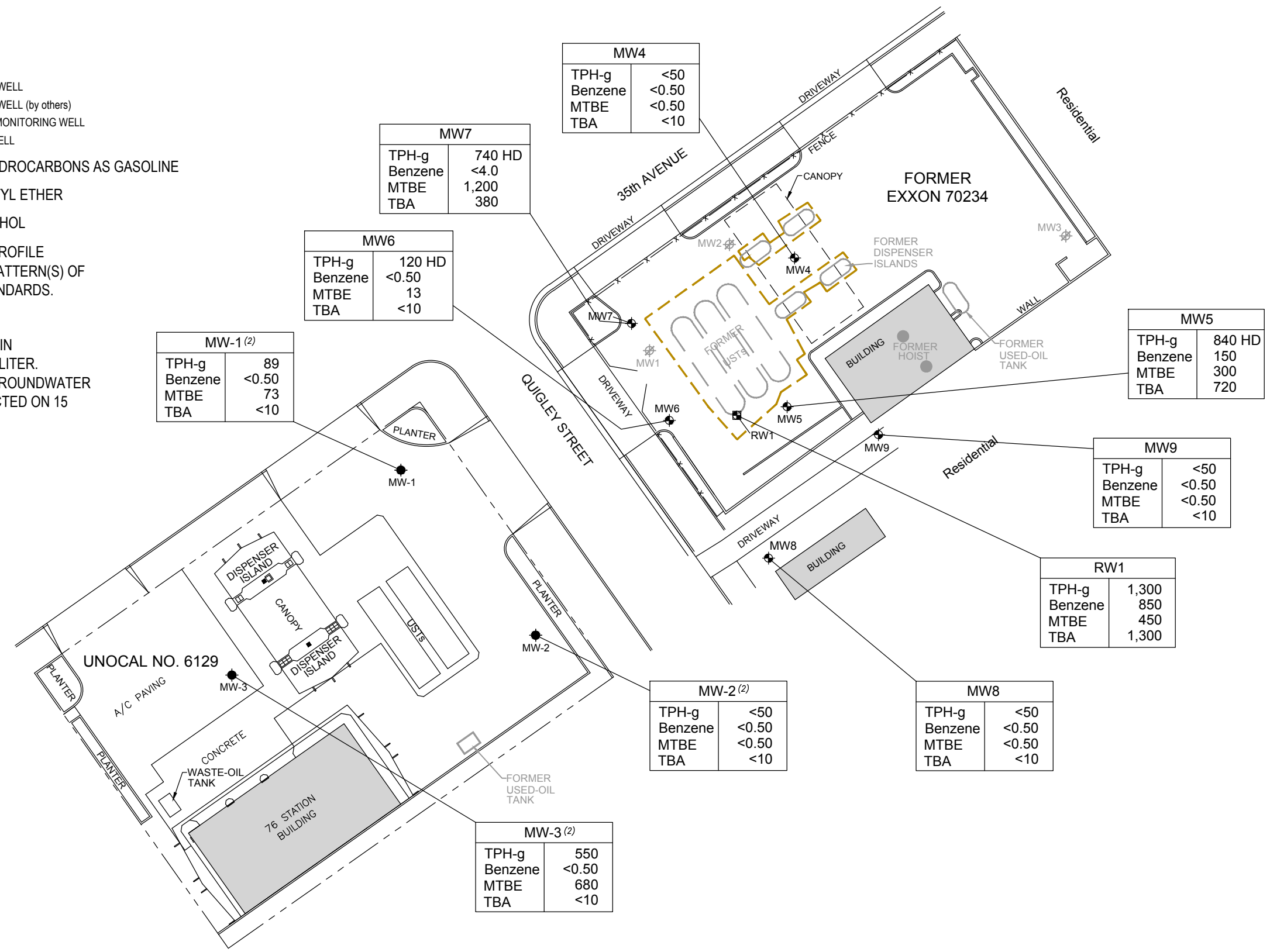
16-070234-UP	EXXONMOBIL OIL CORPORATION	FIGURE: 3
	GROUNDWATER ELEVATION CONTOUR MAP	
OR: AF	15 JUNE 2016	
DR: AJW	FORMER EXXON SERVICE STATION 70234	
CK:	3450 35th AVENUE	
FR:	OAKLAND, CALIFORNIA	

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- LEGEND:**
- EXCAVATED AREA
 - GROUNDWATER MONITORING WELL
 - GROUNDWATER MONITORING WELL (by others)
 - DESTROYED GROUNDWATER MONITORING WELL
 - GROUNDWATER RECOVERY WELL

TPH-g TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
 MTBE METHYL TERTIARY BUTYL ETHER
 TBA TERTIARY BUTYL ALCOHOL
 HD CHROMATOGRAPHIC PROFILE INCONSISTENT WITH PATTERN(S) OF REFERENCE FUEL STANDARDS.

- NOTE:**
1. CONCENTRATIONS IN MICROGRAMS PER LITER.
 2. UNOCAL No. 6129 GROUNDWATER SAMPLING CONDUCTED ON 15 JUNE 2016.



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16-070234-UP	EXXONMOBIL OIL CORPORATION	FIGURE: 4
OR: AF	GROUNDWATER ANALYTICAL DATA	
DR: AJW	15 JUNE 2016	
CK:	FORMER EXXON SERVICE STATION 70234	
FR:	3450 35th AVENUE	
	OAKLAND, CALIFORNIA	

Table

TABLE 1 WELL CONSTRUCTION DETAILS,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date Installed	Date Destroyed	Elevation TOC (feet)	Borehole Diameter (inches)	Total Depth of Boring (feet bgs)	Well Depth (feet bgs)	Casing Diameter (inches)	Casing Material	Screened Interval (feet bgs)	Slot Size (inches)	Filter Pack Interval (feet bgs)	Filter Pack Material
MW1	07/15/92	06/00	192.00	11	45	45	4	Sch. 40 PVC	25-45	0.010	23-45	2/12 Lonestar Sand
MW2	07/15/92	06/00	194.85	11	45	45	4	Sch. 40 PVC	25-45	0.010	23-45	2/12 Lonestar Sand
MW3	07/15/92	06/00	196.90	11	45	45	4	Sch. 40 PVC	25-45	0.010	23-45	2/12 Lonestar Sand
MW4	03/02/09	---	197.62	8	45	45	2	Sch. 40 PVC	35-45	0.020	33-45	#3 Sand
MW5	03/06/09	---	196.35	8	40	40	2	Sch. 40 PVC	30-40	0.020	28-40	#3 Sand
MW6	03/09/09	---	192.41	8	40	39	2	Sch. 40 PVC	29-39	0.020	27-39	#3 Sand
MW7	03/09/09	---	194.34	8	40	40	2	Sch. 40 PVC	30-40	0.020	28-40	#3 Sand
MW8	03/04/09	---	192.96	8	40	40	2	Sch. 40 PVC	30-40	0.020	28-40	#3 Sand
MW9	03/05/09	---	195.16	8	40	40	2	Sch. 40 PVC	30-40	0.020	28-40	#3 Sand
RW1	12/22/11	---	195.15	10	40	40	4	Stainless Steel	25-39.5	0.020	23-40	#2/12 Sand

TOC Top of well casing elevation; datum is mean sea level.
PVC Polyvinyl chloride.
feet bgs Feet below ground surface.
--- Not applicable.

Notes: Data prior to 2013 provided by Cardno ERI.

TABLE 2 CURRENT GROUNDWATER MONITORING DATA,
 FORMER EXXON SERVICE STATION 70234,
 3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date	Elevation TOC (feet)	Depth to Water (feet below TOC)	Groundwater Elevation (feet)	LPH Thickness (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8260B (µg/L)
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- J Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
 - JA Analyte positively identified but quantitation is an estimate.
- Notes: Data prior to 1999 provided by EA Engineering, Science, and Technology. Data prior to 2013 provided by Cardno ERI.

TABLE 3 HISTORICAL GROUNDWATER MONITORING DATA,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date	Elevation TOC (feet)	Depth to Water (feet below TOC)	Groundwater Elevation (feet)	LPH Thickness (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8260B (µg/L)	Total Pb (µg/L)	Organic Pb (mg/L)
MW1	SCREEN INTERVAL (feet bgs) 25-45												
MW1	07/15/92	---	Well installed.										
MW1	07/17/92	192.00	33.02	158.98	0.00	67	6.6	6.9	2.0	4.5	---	17	---
MW1	10/22/92	192.00	34.07	157.93	0.00	<50	2.9	<0.5	<0.5	<0.5	---	16	---
MW1	02/04/93	192.00	29.43	162.57	0.00	<50	0.8	<0.5	<0.5	<0.5	---	4	---
MW1	05/03/93	192.00	29.72	162.28	0.00	71	2.8	7.2	2.2	22	---	40	---
MW1	07/30/93	192.00	32.95	159.05	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	5	---
MW1	10/19/93	192.00	34.34	157.66	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	12	---
MW1	02/23/94	192.00	31.72	160.28	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	4	---
MW1	06/06/94	192.00	31.77	160.23	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---
MW1	08/18/94	192.00	33.76	158.24	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	130	---
MW1	11/15/94	192.00	34.08	157.92	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3.0	<100
MW1	02/06/95	192.00	28.50	163.50	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
MW1	05/10/95	192.00	29.30	162.70	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
MW1	09/20/99	192.00	33.30	158.70	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<75	<50
MW1	Well destroyed in June 2000.												
MW2	SCREEN INTERVAL (feet bgs) 25-45												
MW2	07/15/92	---	Well installed.										
MW2	07/17/92	194.85	34.65	160.20	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---
MW2	10/22/92	194.85	35.64	159.21	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	--	---
MW2	02/04/93	194.85	31.13	163.72	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---
MW2	05/03/93	194.85	31.08	163.77	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	3	---
MW2	07/30/93	194.85	34.34	160.51	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	14	---
MW2	10/19/93	194.85	36.00	158.85	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---
MW2	02/23/94	194.85	33.92	160.93	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---
MW2	06/06/94	194.85	33.50	161.35	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---
MW2	08/18/94	194.85	35.38	159.47	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3.0	---
MW2	11/15/94	194.85	35.93	158.92	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3.0	<100
MW2	02/06/95	194.85	30.38	164.47	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
MW2	05/10/95	194.85	30.77	164.08	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
MW2	09/20/99	194.85	35.15	159.70	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<75	<0.5
MW2	Well destroyed in June 2000.												
MW3	SCREEN INTERVAL (feet bgs) 25-45												
MW3	07/15/92	---	Well installed.										
MW3	07/17/92	196.90	37.24	159.66	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	50	---
MW3	10/22/92	196.90	35.95	160.95	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	9	---
MW3	02/04/93	196.90	29.85	167.05	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---
MW3	05/03/93	196.90	29.87	167.03	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	3	---

TABLE 3 HISTORICAL GROUNDWATER MONITORING DATA,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date	Elevation TOC (feet)	Depth to Water (feet below TOC)	Groundwater Elevation (feet)	LPH Thickness (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8260B (µg/L)	Total Pb (µg/L)	Organic Pb (mg/L)
MW3	07/30/93	196.90	33.85	163.05	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	22	---
MW3	10/19/93	196.90	35.89	161.01	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	12	---
MW3	02/23/94	196.90	32.88	164.02	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	25	---
MW3	06/06/94	196.90	32.40	164.50	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---
MW3	08/18/94	196.90	35.07	161.83	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3.0	---
MW3	11/15/94	196.90	35.97	160.93	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3.0	<100
MW3	02/06/95	196.90	28.39	168.51	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
MW3	05/10/95	196.90	28.90	168.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
MW3	09/20/99	196.90	34.68	162.22	0.00	75.0	<0.5	11.5	1.8	18.0	1.87	<75	<0.5
MW3	Well destroyed in June 2000.												
MW4	SCREEN INTERVAL (feet bgs) 35-45												
MW4	03/02/09	---	Well installed.										
MW4	03/30/09	197.62	30.94	166.68	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW4	04/02/09	197.62	Well surveyed.										
MW4	05/28/09	197.62	32.00	165.62	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW4	08/31/09	197.62	35.43	162.19	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW4	12/11/09	197.62	35.01	162.61	0.00	<50	<0.50	0.83	<0.50	1.1	<0.50	---	---
MW4	05/07/10	197.62	29.11	168.51	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW4	11/01/10	197.62	34.95	162.67	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW4	05/27/11 a	197.62	30.65	166.97	0.00	---	---	---	---	---	---	---	---
MW4	11/23/11	197.62	33.49	164.13	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW4	05/24/12	197.62	30.02	167.60	0.00	58	0.84	4.4	0.64c	3.5	<0.50	---	---
MW4	10/31/12	197.62	35.14	162.48	0.00	110	5.3	45	4.2	21	<0.50	---	---
MW4	05/02/13 e	197.62	32.03	165.59	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW4	11/09/13	197.62	36.53	161.09	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW4	05/12/14 a	197.62	33.51	164.11	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW4	11/19/14 a	197.62	36.96	160.66	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW4	05/13/15 a	197.62	34.01	163.61	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW4	12/16/15 a	197.62	37.31	160.31	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW4	06/15/16 a	197.62	34.13	163.49	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW5	SCREEN INTERVAL (feet bgs) 30-40												
MW5	03/06/09	---	Well installed.										
MW5	03/30/09	196.35	30.05	166.30	0.00	4,200	540	140	<12	310	1,900	---	---
MW5	04/02/09	196.35	Well surveyed.										
MW5	05/28/09	196.35	31.45	164.90	0.00	5,300	890	150	<25	140	3,600	---	---
MW5	08/31/09	196.35	34.70	161.65	0.00	5,800	550	<100	<100	<100	3,500	---	---
MW5	12/11/09	196.35	34.52	161.83	0.00	4,000b	230	<100	<100	<100	3,800	---	---
MW5	05/07/10	196.35	30.84	165.51	0.00	2,700b	73	5.3	3.6	6.5	1,700	---	---

TABLE 3 HISTORICAL GROUNDWATER MONITORING DATA,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date	Elevation TOC (feet)	Depth to Water (feet below TOC)	Groundwater Elevation (feet)	LPH Thickness (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8260B (µg/L)	Total Pb (µg/L)	Organic Pb (mg/L)
MW5	11/01/10	196.35	33.93	162.42	0.00	2,400b	320	71	21	40	3,400	---	---
MW5	05/27/11 a	196.35	31.65	164.70	0.00	---	---	---	---	---	---	---	---
MW5	11/23/11	196.35	32.58	163.77	0.00	1,900b	72	2.7	3.1	8.1	3,200	---	---
MW5	05/24/12	196.35	30.26	166.09	0.00	2,900b	54	31	5.2	17	1,700	---	---
MW5	10/31/12	196.35	33.94	162.41	0.00	2,200b	220	72	8.7	47	2,700	---	---
MW5	05/02/13 c	196.35	31.33	165.02	0.00	2,200b	61	<0.50	3.8	7.9	1,300	---	---
MW5	11/09/13	196.35	35.69	160.66	0.00	1,300b	120	<5.0	<5.0	8.8	370	---	---
MW5	05/12/14 a	196.35	32.64	163.71	0.00	1,200	120	<5.0	<5.0	<5.0	490	---	---
MW5	11/19/14 a	196.35	36.05	160.30	0.00	1,400 HD	140	2.0 J	<2.5	4.7	120	---	---
MW5	05/13/15 a	196.35	33.31	163.04	0.00	1,100 HD	74	<2.5	<2.5	2.7	310	---	---
MW5	12/16/15 a	196.35	36.34	160.01	0.00	760	150	2.0 J	1.8 J	4.6	94	---	---
MW5	06/15/16 a	196.35	33.63	162.72	0.00	840 HD	150	1.4 J	1.8 J	4.1	300	---	---
MW6	SCREEN INTERVAL (feet bgs) 29-39												
MW6	03/09/09	---	Well installed.										
MW6	03/30/09	192.41	26.94	165.47	0.00	2,800	0.91	<0.50	<0.50	<0.50	4,800	---	---
MW6	04/02/09	192.41	Well surveyed.										
MW6	05/28/09	192.41	28.04	164.37	0.00	2,800	<100	<100	<100	<100	6,000	---	---
MW6	08/31/09	192.41	30.57	161.84	0.00	4,900	<100	<100	<100	<100	6,600	---	---
MW6	12/11/09	192.41	30.78	161.63	0.00	4,900b	<100	<100	<100	<100	6,200	---	---
MW6	05/07/10	192.41	25.42	166.99	0.00	2,900b	2.7	<0.50	0.74c	<1.0	3,700	---	---
MW6	11/01/10	192.41	30.68	161.73	0.00	850b	2.1	<0.50	<0.50	<1.0	6,100	---	---
MW6	05/27/11 a	192.41	27.07	165.34	0.00	---	---	---	---	---	---	---	---
MW6	11/23/11	192.41	29.25	163.16	0.00	1,600b	<0.50	<0.50	<0.50	<1.0	6,400	---	---
MW6	05/24/12	192.41	26.36	166.05	0.00	2,000b	1.3c	9.7	0.97c	5.5	3,400	---	---
MW6	10/31/12	192.41	30.74	161.67	0.00	1,400b	3.8	28	2.2	11	5,400	---	---
MW6	05/02/13	192.41	27.91	164.50	0.00	1,900b	<0.50	<0.50	<0.50	<0.50	2,600	---	---
MW6	11/09/13	192.41	32.15	160.26	0.00	3,600b	<40	<40	<40	<40	4,800	---	---
MW6	05/12/14 a	192.41	29.28	163.13	0.00	190 HD	<5.0	<5.0	<5.0	<5.0	280	---	---
MW6	11/19/14 a	192.41	32.49	159.92	0.00	420 HD	<10	<10	<10	<10	530	---	---
MW6	05/13/15 a	192.41	29.81	162.60	0.00	200 HD	<10	<10	<10	<10	26	---	---
MW6	12/16/15 a	192.41	32.76	159.65	0.00	62 HD	<2.5	<2.5	<2.5	<2.5	36	---	---
MW6	06/15/16 a	192.41	30.01	162.40	0.00	120 HD	<0.50	<0.50	<0.50	<0.50	13	---	---
MW7	SCREEN INTERVAL (feet bgs) 30-40												
MW7	03/09/09	---	Well installed.										
MW7	03/30/09	194.34	29.15	165.19	0.00	55	<0.50	<0.50	<0.50	<0.50	66	---	---
MW7	04/02/09	194.34	Well surveyed.										
MW7	05/28/09	194.34	30.16	164.18	0.00	50	<1.0	<1.0	<1.0	<1.0	67	---	---
MW7	08/31/09	194.34	33.31	161.03	0.00	<50	<0.50	0.60	<0.50	<0.50	12	---	---

TABLE 3 HISTORICAL GROUNDWATER MONITORING DATA,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date	Elevation TOC (feet)	Depth to Water (feet below TOC)	Groundwater Elevation (feet)	LPH Thickness (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8260B (µg/L)	Total Pb (µg/L)	Organic Pb (mg/L)
MW7	12/11/09	194.34	32.71	161.63	0.00	<50	0.78	1.7	0.62	2.4	31	---	---
MW7	05/07/10	194.34	27.54	166.80	0.00	510b	<0.50	<0.50	<0.50	<1.0	700	---	---
MW7	11/01/10	194.34	32.82	161.52	0.00	68b	<0.50	<0.50	<0.50	<1.0	140	---	---
MW7	05/27/11	a 194.34	28.85	165.49	0.00	---	---	---	---	---	---	---	---
MW7	11/23/11	194.34	31.39	162.95	0.00	190b	<0.50	<0.50	<0.50	<1.0	300	---	---
MW7	05/24/12	a 194.34	28.31	166.03	0.00	---	---	---	---	---	---	---	---
MW7	10/31/12	194.34	32.86	161.48	0.00	230b	2.9	21	1.8	9.2	290	---	---
MW7	05/02/13	194.34	29.93	164.41	0.00	570b	<0.50	<0.50	<0.50	<0.50	790	---	---
MW7	11/09/13	194.34	34.23	160.11	0.00	370b	<10	<10	<10	<10	460	---	---
MW7	05/12/14	a 194.34	31.33	163.01	0.00	310 HD	<10	<10	<10	<10	980	---	---
MW7	11/19/14	a 194.34	34.31	160.03	0.00	400 HD	<12	<12	<12	<12	660	---	---
MW7	05/13/15	a 194.34	31.65	162.69	0.00	660 HD	<20	<20	<20	<20	870	---	---
MW7	12/16/15	a 194.34	34.62	159.72	0.00	110 HD	<4.0	<4.0	<4.0	<4.0	220	---	---
MW7	06/15/16	a 194.34	31.96	162.38	0.00	740 HD	<4.0	<4.0	<4.0	<4.0	1,200	---	---
MW8	SCREEN INTERVAL (feet bgs) 30-40												
MW8	03/04/09	---	Well installed.										
MW8	03/30/09	192.96	27.35	165.61	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW8	04/02/09	192.96	Well surveyed.										
MW8	05/28/09	192.96	28.72	164.24	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW8	08/31/09	192.96	31.93	161.03	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW8	12/11/09	192.96	31.24	161.72	0.00	<50	0.74	1.6	0.59	2.3	<0.50	---	---
MW8	05/07/10	192.96	25.68	167.28	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW8	11/01/10	192.96	31.18	161.78	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW8	05/27/11	192.96	27.55	165.41	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW8	11/23/11	192.96	29.74	163.22	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW8	05/24/12	192.96	26.93	166.03	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW8	10/31/12	192.96	31.35	161.61	0.00	75	2.5	19	1.7	8.7	<0.50	---	---
MW8	05/02/13	192.96	28.44	164.52	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW8	11/09/13	192.96	32.89	160.07	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW8	05/12/14	a 192.96	30.27	162.69	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW8	11/19/14	a 192.96	33.16	159.80	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW8	05/13/15	a 192.96	30.35	162.61	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW8	12/16/15	a 192.96	33.41	159.55	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW8	06/15/16	a 192.96	30.68	162.28	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW9	SCREEN INTERVAL (feet bgs) 30-40												
MW9	03/05/09	---	Well installed.										
MW9	03/30/09	195.16	28.31	166.85	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW9	04/02/09	195.16	Well surveyed.										

TABLE 3 HISTORICAL GROUNDWATER MONITORING DATA,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date	Elevation TOC (feet)	Depth to Water (feet below TOC)	Groundwater Elevation (feet)	LPH Thickness (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8260B (µg/L)	Total Pb (µg/L)	Organic Pb (mg/L)
MW9	05/28/09	195.16	29.69	165.47	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW9	08/31/09	195.16	33.20	161.96	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW9	12/11/09	195.16	32.62	162.54	0.00	<50	0.73	1.7	0.54	2.2	<0.50	---	---
MW9	05/07/10	195.16	26.59	168.57	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW9	11/01/10	195.16	32.45	162.71	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW9	05/27/11	195.16	29.62	165.54	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW9	11/23/11	195.16	30.56	164.60	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW9	05/24/12	195.16	27.94	167.22	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW9	10/31/12	195.16	32.66	162.50	0.00	140	6.9	38	2.7	13	<0.50	---	---
MW9	05/02/13	195.16	29.58	165.58	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW9	11/09/13	195.16	Well inaccessible.										
MW9	05/12/14	b 195.16	Well inaccessible.										
MW9	11/19/14	a 195.16	34.60	160.56	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW9	05/13/15	a 195.16	31.66	163.50	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW9	12/16/15	a 195.16	34.84	160.32	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW9	06/15/16	a 195.16	31.98	163.18	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
RW1	SCREEN INTERVAL (feet bgs) 29-39.5												
RW1	12/22/11	---	Well installed.										
RW1	12/30/11	195.15	Well surveyed.										
RW1	05/24/12	195.15	28.55	166.60	0.00	5,500b	920	5.9c	51	14	2,500	---	---
RW1	10/31/12	a 195.15	---	---	---	---	---	---	---	---	---	---	---
RW1	05/02/13	c 195.15	30.27	164.88	0.00	4,300b	1,200	<2.5	41	14	2,300	---	---
RW1	11/09/13	195.15	34.64	160.51	0.00	810b	210	<10	<10	<10	520	---	---
RW1	05/12/14	a 195.15	31.54	163.61	0.00	830 HD	450	<10	13	<10	490	---	---
RW1	11/19/14	a 195.15	34.94	160.21	0.00	910 HD	450	<10	<10	<10	590	---	---
RW1	05/13/15	a 195.15	32.26	162.89	0.00	1,300 HD	560	<5.0	8.1	2.4 JA	480	---	---
RW1	12/16/15	a 195.15	35.22	159.93	0.00	310 HD	150	<5.0	<5.0	<5.0	110	---	---
RW1	06/15/16	a 195.15	32.4	162.75	0.00	1300	850	3.6 J	17	5.5	450	---	---
Grab Groundwater Samples													
Pit Water	06/14/02	---	---	---	---	5,600	140	840	100	530	12,000	---	---
UST Pit	06/19/02	---	---	---	---	680	2.7	36	18	130	640	---	---
W-38-B11	11/14/07	---	---	---	---	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
W-15-B12	11/13/07	---	---	---	---	8,400	67	<5.0	140	150	78	---	---
W-40-B13	11/12/07	---	---	---	---	<50	<0.50	<0.50	<0.50	<0.50	0.53	---	---
W-15-B14	11/13/07	---	---	---	---	2,500	1.7	3.0	26	13	16	---	---
W-38-B15	11/15/07	---	---	---	---	18,000	3,400	2,500	330	2,000	12,000	---	---

TABLE 3 HISTORICAL GROUNDWATER MONITORING DATA,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date	Elevation TOC (feet)	Depth to Water (feet below TOC)	Groundwater Elevation (feet)	LPH Thickness (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8260B (µg/L)	Total Pb (µg/L)	Organic Pb (mg/L)
W-40-B16	11/15/07	---	---	---	---	<50	<0.50	<0.50	<0.50	<0.50	7.7	---	---
W-37-B17	11/13/07	---	---	---	---	630	1.8	<0.50	4.1	1.4	2,200	---	---
W-38-B18	11/12/07	---	---	---	---	4,300	52	<12	56	96	1,400	---	---
W-35-B19	03/03/09	---	---	---	---	4,400	<0.50	<0.50	<0.50	<1.0	7,100	---	---
W-35-B20	03/03/09	---	---	---	---	640	<0.50	<0.50	<0.50	<1.0	440	---	---
W-35-B21	03/03/09	---	---	---	---	<50	<0.50	<0.50	<0.50	<1.0	1.4	---	---

TOC Top of casing. bgs Below ground surface.
LPH Liquid-phase hydrocarbons. µg/L Micrograms per liter.
TPH-g Total Petroleum Hydrocarbons as gasoline. -- Not sampled or not analyzed.
MTBE Methyl tertiary butyl ether. NA Not available.
NM Not measured. NC Not calculated.

Total Pb Total lead analyzed using EPA Method 6010.
Organic Pb Organic lead analyzed using CA DHS LUFT method.
a Well purged prior to sampling.
b Well inaccessible.
c Well sampled the following day.
HD Chromat. profile inconsistent with the ref. fuel stnds.
J Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA Analyte positively identified but quantitation is an estimate.

Notes: Data prior to 1999 provided by EA Engineering, Science, and Technology. Data prior to 2013 provided by Cardno ERI.

TABLE 4 GROUNDWATER ANALYTICAL RESULTS FOR DETECTED VOCs,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date	Depth (feet)	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Ethanol (µg/L)	Naphthalene (µg/L)	
MW1	7/17/1992 - 09/20/1999		Not analyzed for these analytes.								
MW1	Well destroyed in June 2000.										
MW2	7/17/1992 - 09/20/1999		Not analyzed for these analytes.								
MW2	Well destroyed in June 2000.										
MW3	7/17/1992 - 09/20/1999		Not analyzed for these analytes.								
MW3	Well destroyed in June 2000.										
MW4	03/30/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---	
MW4	05/28/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---	
MW4	08/31/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---	
MW4	12/11/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---	
MW4	05/07/10	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---	
MW4	11/01/10	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---	
MW4	05/27/11	d	---	---	---	---	---	---	---	---	
MW4	11/23/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---	
MW4	05/24/12	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---	
MW4	10/31/12	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---	
MW4	05/03/13	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---	
MW4	11/09/13	---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	---	
MW4	05/12/14	---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	<1.0	
MW4	11/19/14	---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	---	
MW4	05/13/15	---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	---	
MW4	12/16/15	---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	---	
MW4	06/15/16	---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	---	
MW5	03/30/09	---	<12	17	<12	450	<12	<12	---	---	
MW5	05/28/09	---	<25	<25	<25	530	<25	<25	---	---	
MW5	08/31/09	---	<100	<100	<100	<1,000	<100	<100	---	---	
MW5	12/11/09	---	<100	<100	<100	2,000	<100	<100	---	---	
MW5	05/07/10	---	<25	<25	<25	400	<25	<25	---	---	
MW5	11/01/10	---	<50	<50	<50	1,500	<50	<50	---	---	
MW5	05/27/11	d	---	---	---	---	---	---	---	---	
MW5	11/23/11	---	<50	<50	<50	<500	<50	<50	---	---	
MW5	05/24/12	---	<50	<50	<50	1,400	<50	<50	---	---	
MW5	10/31/12	---	<50	<50	<50	730	<50	<50	---	---	
MW5	05/03/13	---	<20	<20	<20	590	<20	<20	---	---	
MW5	11/09/13	---	<5.0	<5.0	<5.0	1,100	<5.0	<5.0	---	---	
MW5	05/12/14	---	<5.0	<5.0	<5.0	1,000	<5.0	<5.0	---	<10	
MW5	11/19/14	---	<2.5	<2.5	<2.5	600	<2.5	<2.5	---	---	
MW5	05/13/15	---	<2.5	<2.5	<2.5	950	<2.5	<2.5	---	---	
MW5	12/16/15	---	<2.5	<2.5	<2.5	790	<2.5	<2.5	---	---	
MW5	06/15/16	---	<2.5	<2.5	<2.5	720	<2.5	<2.5	---	---	
MW6	03/30/09	---	<0.50	<0.50	1.3	410	<0.50	0.82	---	---	
MW6	05/28/09	---	<100	<100	<100	<1,000	<100	<100	---	---	
MW6	08/31/09	---	<100	<100	<100	1,100	<100	<100	---	---	
MW6	12/11/09	---	<100	<100	<100	2,600	<100	<100	---	---	
MW6	05/07/10	---	<100	<100	<100	<1,000	<100	<100	---	---	
MW6	11/01/10	---	<50	<50	<50	2,400	<50	<50	---	---	
MW6	05/27/11	d	---	---	---	---	---	---	---	---	
MW6	11/23/11	---	<100	<100	<100	<1,000	<100	<100	---	---	
MW6	05/24/12	---	<100	<100	<100	2,700	<100	<100	---	---	

TABLE 4 GROUNDWATER ANALYTICAL RESULTS FOR DETECTED VOCs,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date	Depth (feet)	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Ethanol (µg/L)	Naphthalene (µg/L)
MW6	10/31/12	---	<100	<100	<100	<1,000	<100	<100	---	---
MW6	05/02/13	---	<40	<40	<40	570	<40	<40	---	---
MW6	11/09/13	---	<40	<40	<40	2,100	<40	<40	---	---
MW6	05/12/14	---	<5.0	<5.0	<5.0	1,700	<5.0	<5.0	---	<10
MW6	11/19/14	---	<10	<10	<10	2,100	<10	<10	---	---
MW6	05/13/15	---	<10	<10	<10	2,400	<10	<10	---	---
MW6	12/16/15	---	<2.5	<2.5	<2.5	530	<2.5	<2.5	---	---
MW6	06/15/16	---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	---
MW7	03/30/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW7	05/28/09	---	<1.0	<1.0	<1.0	<10	<1.0	<1.0	---	---
MW7	08/31/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW7	12/11/09	---	<0.50	<0.50	<0.50	12	<0.50	<0.50	---	---
MW7	05/07/10	---	<0.50	<0.50	<0.50	130	<0.50	<0.50	---	---
MW7	11/01/10	---	<2.5	<2.5	<2.5	27	<2.5	<2.5	---	---
MW7	05/27/11	d	---	---	---	---	---	---	---	---
MW7	11/23/11	---	<5.0	<5.0	<5.0	<50	<5.0	<5.0	---	---
MW7	05/24/12	d	---	---	---	---	---	---	---	---
MW7	10/31/12	---	<5.0	<5.0	<5.0	<50	<5.0	<5.0	---	---
MW7	05/02/13	---	<5.0	<5.0	<5.0	57	<5.0	<5.0	---	---
MW7	11/09/13	---	<10	<10	<10	<200	<10	<10	---	---
MW7	05/12/14	---	<10	<10	<10	<200	<10	<10	---	<20
MW7	11/19/14	---	<12	<12	<12	<250	<12	<12	---	---
MW7	05/13/15	---	<20	<20	<20	<400	<20	<20	---	---
MW7	12/16/15	---	<4.0	<4.0	<4.0	<80	<4.0	<4.0	---	---
MW7	06/15/16	---	<4.0	<4.0	<4.0	380	<4.0	<4.0	---	---
MW8	03/30/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	05/28/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	08/31/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	12/11/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	05/07/10	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	11/01/10	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	05/27/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	11/23/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	05/24/12	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	10/31/12	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	05/02/13	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	11/09/13	---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	---
MW8	05/12/14	---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	<1.0
MW8	11/19/14	---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	---
MW8	05/13/15	---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	---
MW8	12/16/15	---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	---
MW8	06/15/16	---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	---
MW9	03/30/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	05/28/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	08/31/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	12/11/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	05/07/10	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	11/01/10	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	05/27/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	11/23/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	05/24/12	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---

TABLE 4 GROUNDWATER ANALYTICAL RESULTS FOR DETECTED VOCs,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date	Depth (feet)	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Ethanol (µg/L)	Naphthalene (µg/L)
MW9	10/31/12	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	05/02/13	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	11/09/13	d	Well inaccessible.							
MW9	11/19/14	---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	---
MW9	05/13/15	---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	---
MW9	12/16/15	---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	---
MW9	06/15/16	---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	---
RW1	05/24/12	---	<50	<50	<50	1,900	<50	<50	---	---
RW1	10/31/12	d	---	---	---	---	---	---	---	---
RW1	05/03/13	---	<40	<40	<40	880	<40	<40	---	---
RW1	11/09/13	---	<10	<10	<10	1,100	<10	<10	---	---
RW1	05/12/14	---	<10	<10	<10	840	<10	<10	---	<20
RW1	11/19/14	---	<10	<10	<10	1,300	<10	<10	---	<20
RW1	05/13/15	---	<5.0	<5.0	<5.0	880	<5.0	<5.0	---	---
RW1	12/16/15	---	<5.0	<5.0	<5.0	1,300	<5.0	<5.0	---	---
RW1	06/15/16	---	<5.0	<5.0	<5.0	1,300	<5.0	<5.0	---	---
Grab Groundwater Samples										
Pit Water	06/14/02	11.5a	---	---	---	---	---	---	---	---
UST Pit	06/19/02	13.5a	---	---	---	---	---	---	---	---
W-38-B11	11/14/07	38	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<50	---
W-15-B12	11/13/07	15	<5.0	<5.0	<5.0	<100	<5.0	<5.0	<500	---
W-40-B13	11/12/07	40	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<50	---
W-15-B14	11/13/07	15	<1.0	<1.0	<1.0	<20	<1.0	<1.0	<100	---
W-38-B15	11/15/07	38	<25	<25	<25	1,900	<25	<25	<2,500	---
W-40-B16	11/15/07	40	<0.50	<0.50	<0.50	<10	<0.50	<0.50	85	---
W-37-B17	11/13/07	37	<0.50	<0.50	<0.50	58	<0.50	<0.50	<50	---
W-38-B18	11/12/07	38	<12	<12	<12	<250	<12	<12	<1,200	---
W-35-B19	03/03/09	35	<50	<50	<50	<500	<50	<50	<5,000	---
W-35-B20	03/03/09	35	<0.50	<0.50	<0.50	12	<0.50	<0.50	<50	---
W-35-B21	03/03/09	35	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<50	---

EDB 1,2-Dibromoethane analyzed using EPA Method 8260B.
1,2-DCA 1,2-Dichloroethane analyzed using EPA Method 8260B.
TBA Tertiary butyl alcohol analyzed using EPA Method 8260B.
TAME Tertiary amyl methyl ether analyzed using EPA Method 8260B.
ETBE Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
DIPE Di-isopropyl ether analyzed using EPA Method 8260B.
Ethanol Ethanol analyzed using EPA Method 8260B.
µg/L Micrograms per liter.
--- Not sampled/Not analyzed/Not measured/Not applicable.
a Approximate depth to groundwater surface at time of sampling.
d Well inaccessible.

Notes: Data prior to 1999 provided by EA Engineering, Science, and Technology, data prior to 2013 provided by Cardno ERI.

B Analyte was present in the associated method blank.
J Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.

TABLE 4 GROUNDWATER ANALYTICAL RESULTS FOR DETECTED VOCs,
 FORMER EXXON SERVICE STATION 70234,
 3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date	Depth (feet)	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Ethanol (µg/L)	Naphthalene (µg/L)
QO	Compound did not meet method-described identification guidelines. Identification was based on additional GC/MS characteristics.									

TABLE 5 NATURAL ATTENUATION PARAMETER ANALYTICAL RESULTS,
FORMER MOBIL SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number Date			Laboratory Parameters					Field Parameters					
			Alkalinity as CaCO3 (mg/L)	Ferrous Iron (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Methane (µg/L)	Temperature (Celsius)	pH	EC (µS/cm)	Total Dissolved Solids (mg/L)	ORP (mV)	DO (mg/L)
MW4	05/13/15	a	172	<0.100	68	2.4	0.173 J	18.1	7.12	584.1	645.6	--	5.11
MW4	12/16/15	a	169	<0.100	65	2.5	0.358 J	18.4	7.18	540.2	365.7	--	--
MW4	06/15/16	a	170	<0.100	63	2.2	0.0470 J	18.8	6.97	545.9	371.6	--	--
MW5	05/13/15	a	324	2.15	32	0.76	28.1	17.8	7.03	870.1	593.8	--	3.98
MW5	12/16/15	a	352	2.69	28	0.36	25.0	17.5	6.66	839.2	584.1	--	--
MW5	06/15/16	a	356	1.97	30	0.59	28.1	18.5	6.45	861.8	599.3	--	--
MW6	05/13/15	a	427	<0.100	42	0.35	5.09	18.0	7.00	945.4	660.1	--	4.32
MW6	12/16/15	a	484	<0.100	43	0.14	2.71	18.4	6.89	963.5	669.3	--	--
MW6	06/15/16	a	471	<0.100	38	0.26	7.05	19.4	6.65	972.4	681.4	--	--
MW7	05/13/15	a	254	<0.100	61	1.6	1.67	18.5	7.16	719.1	510.2	--	4.34
MW7	12/16/15	a	222	<0.100	64	1.8	8.51	19.4	6.72	637.0	437.9	--	--
MW7	06/15/16	a	270	<0.100	58	1.3	7.54	19.8	6.71	726.0	499.3	--	--
MW8	05/13/15	a	208	<0.100	42	7.3	0.983 J	17.7	7.16	595.3	410.1	--	5.07
MW8	12/16/15	a	229	<0.100	42	8.3	0.182	17.5	7.09	769.7	533.4	--	--
MW8	06/15/16	a	198	<0.100	38	7.5	0.152 J	18.0	6.74	573.2	396.4	--	--
MW9	05/13/15	a	252	<0.100	41	6.0	0.0530	17.9	7.09	835.3	582.4	--	4.79
MW9	12/16/15	a	258	<0.100	39	5.6	0.0510	17.4	6.89	876.9	605.8	--	--
MW9	06/15/16	a	257	<0.100	39	6.3	0.0610 J	18.5	7.02	824.2	572.3	--	--
RW1	05/13/15	a	359	<0.100	43	0.77	1.85	18.4	7.05	849.1	590.7	--	4.11
RW1	12/16/15	a	301	<0.100	40	0.85	1.62	17.4	6.98	819.0	569.2	--	--
RW1	06/15/16	a	379	<0.100	37	0.64	3.26	18.6	6.92	873.4	608.0	--	--

DO Dissolved oxygen. mg/L Milligrams per liter.
 ORP Oxidation/reduction potential. mV Millivolts.
 EC Conductivity. -- Not sampled or not analyzed.

μS/cm MicroSiemens per centimeter.

μg/L Micrograms per liter.

a Well purged prior to sampling.

<0.100 Concentration not detected above reporting limit (e.g. Reporting limit is 0.100 μg/L).

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

TABLE 6 GROUNDWATER MONITORING PLAN,
 FORMER EXXON SERVICE STATION 70234,
 3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Groundwater Gauging Frequency	Groundwater Sampling and Analysis Frequency			
		BTEX	TPH-g	MTBE	TBA
MW4	SA	SA	SA	SA	SA
MW5	SA	SA	SA	SA	SA
MW6	SA	SA	SA	SA	SA
MW7	SA	SA	SA	SA	SA
MW8	SA	SA	SA	SA	SA
MW9	SA	SA	SA	SA	SA
RW1	SA	SA	SA	SA	SA

Notes:

- BTEX Benzene, toluene, ethylbenzene, and xylenes.
- TPH-g Total Petroleum Hydrocarbons as gasoline.
- MTBE Methyl tertiary butyl ether.
- TBA Tertiary butyl alcohol.
- SA Semiannually (performed during the second and fourth quarters of each year).

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 foot 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, or if 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



FIELD SUMMARY REPORT

Client: ExxonMobil Site Location: Oakland, CA
 Project Number: 16-070234-UP Task Number: 4.1, 4.2
 On-Site Field Personnel: C. Mitchell

	Water	Soil	Empty	
Number of Waste Drums/ Containers on Site:	1	—	—	Container Size/Number of Total Drums/Containers: <u>55 gal</u> <u>X 1</u>

SUMMARY:

- On site 0530
- opened and gauged wells MW4
+ new MW9 and RW1 with WLM.
- purged and sampled wells MW4
and MW6 thru MW9 with bailers.
purged wells MW5 and RW1 with bailers,
both wells dewatered. sampled MW5 and
RW1 after wells recharged 80%+.
- Closed all wells.
- drummed purge water on site
≈ 41 gal.
- Off site 14:00.

Preparer Name: [Signature] Date: 6/15/16

Office Location: PH MRTZ PAS CM SD



MONITORING WELL DATA FORM

Client: ExxonMobil

Date: 6/15/16

Project Number: UP70234, Activity 4

Station Number: 70234

Site Location: 3450 35th Avenue, Oakland, CA

Sampler: C. M. & Co 11



# MW4	34.13	—	—	—	N	Good	44.91	2"
# MW5	33.63	—	—	—	N	Good	39.97	2"
# MW6	30.01	—	—	—	N	Good	38.42	2"
# MW7	31.96	—	—	—	N	Good	39.39	2"
# MW8	30.68	—	—	—	N	Good	39.85	2"
# MW9	31.98	—	—	—	N	Good	39.82	2"
# RW1	32.40	—	—	—	N	Good	40.37	4"
						Good		

GROUNDWATER PURGE AND SAMPLE

Project Name: ExxonMobil			Well No: MW 4		Date: 6/15/16				
Project No:			Personnel: C. Mitchell						
GAUGING DATA									
Water Level Measuring Method: WLM			Measuring Point Description: TCA North						
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)
	44.91	34.13	10.78	2/4	2	4	6	1.72	5.17
				0.03	0.16	0.64	1.44		
PURGING DATA									
Purge Method: Disp bailer		Purge Depth:		Purge Rate:		(gpm)			
Time	08:15	08:21	08:28						
Volume Purge (gal)	2	4	6						
Temperature (C)	18.9	19.0	18.8						
pH	6.96	6.98	6.97						
Spec. Cond. (umhos)	543.2	551.2	545.9						
Turbidity/Color	Very Low	Very Low	Very Low						
TDS (g/L)	372.8	379.1	371.6						
ORP	-	-	-						
DO (mg/L)	-	-	-						
Odor (Y/N)	N	N	N						
Casing Volumes	1	2	3						
Dewatered (Y/N)	N	N	N						
Comments/Observations:									
SAMPLING DATA									
Time Sampled: 1140		Approximate Depth to Water During Sampling: 35 (feet)							
Comments:									
Sample Number	Number of Containers	Container Type	Preservative	Volume Filled (mL or L)	Turbidity/ Color	Analysis Method			
Total Purge Volume: 6 (gallons)		Disposal:		Onsite Drum(s) No.					
Weather Conditions: Sunny / Dry									
Condition of Well Box and Casing at Time of Sampling: Good									
Well Head Conditions Requiring Correction: None									
Problems Encountered During Purging and Sampling: None									

GROUNDWATER PURGE AND SAMPLE

Project Name: ExxonMobil		Well No: MW 5		Date: 6/15/16				
Project No:		Personnel: C. Michalek						
GAUGING DATA								
Water Level Measuring Method: WLM			Measuring Point Description: TPC North					
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)
	39.97	33.63	6.34	0.03	0.16	0.64	1.44	1.01

PURGING DATA							
Purge Method:	Dial bailer		Purge Depth:	Purge Rate:		(gpm)	
Time	09:20	09:25	/				
Volume Purge (gal)	1.5	3.0		4.5			
Temperature (C)	18.6	18.5					
pH	6.46	6.45					
Spec. Cond. (umhos)	875.0	861.8					
Turbidity/Color	1.1 6.4	1.1 6.4					
TDS (g/L)	608.7	599.3					
ORP	—	—		—			
DO (mg/L)	—	—		—			
Odor (Y/N)	Y	Y					
Casing Volumes	1	2	3				
Dewatered (Y/N)	N	N	Y				

Comments/Observations: Dewatered at 24 gal.

SAMPLING DATA	
Time Sampled: 1230	Approximate Depth to Water During Sampling: 34 (feet)

Comments:

Sample Number	Number of Containers	Container Type	Preservative	Volume Filled (mL or L)	Turbidity/ Color	Analysis Method

Total Purge Volume: 4.0 (gallons)	Disposal:	Onsite Drum(s) No.
-----------------------------------	-----------	--------------------

Weather Conditions: Sunny / Dry

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

Well Head Conditions Requiring Correction: None

Problems Encountered During Purging and Sampling: None



GROUNDWATER PURGE AND SAMPLE

Project Name: ExxonMobil Well No: MW6 Date: 6/15/16
 Project No: Personnel: C. Mitchell
GAUGING DATA
 Water Level Measuring Method: WLM Measuring Point Description: TOC North

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)
	...	38.42	30.01	8.41	2/4	(2)	4	6	1.35
				0.03	0.18	0.64	1.44		

PURGING DATA

Purge Method: *Disc Method* Purge Depth: _____ Purge Rate: _____ (gpm)

Time	09:00	09:05	09:10			
Volume Purge (gal)	1.5	3.0	4.5			
Temperature (C)	19.3	19.4	19.4			
pH	6.89	6.69	6.65			
Spec. Cond. (umhos)	898.0	963.7	972.4			
Turbidity/Color	1.2 NTU	1.2 NTU	1.2 NTU			
TDS (g/L)	625.2	673.1	681.4			
ORP	—	—	—			
DO (mg/L)	—	—	—			
Odor (Y/N)	N	N	N			
Casing Volumes	1	2	3			
Dewatered (Y/N)	N	N	N			

Comments/Observations:

SAMPLING DATA
 Time Sampled: 1215 Approximate Depth to Water During Sampling: 30 (feet)
 Comments:

Sample Number	Number of Containers	Container Type	Preservative	Volume Filled (mL or L)	Turbidity/ Color	Analysis Method
					/	
					/	
					/	

Total Purge Volume: 4.5 (gallons) Disposal: _____ Onsite Drum(s) No. _____
 Weather Conditions: Sunny / D / 12
 Condition of Well Box and Casing at Time of Sampling: Good
 Well Head Conditions Requiring Correction: None
 Problems Encountered During Purging and Sampling: None



GROUNDWATER PURGE AND SAMPLE

Project Name: ExxonMobil			Well No: MW7		Date: 6/15/16				
Project No:			Personnel: C. Mitchell						
GAUGING DATA									
Water Level Measuring Method: WLM			Measuring Point Description: TOC North						
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)
	39.39	31.96	7.43	0.03	0.16	0.64	1.44	1.19	3.57
PURGING DATA									
Purge Method: Disp Boiler		Purge Depth:		Purge Rate:		(gpm)			
Time	08:38	08:42	08:47						
Volume Purge (gal)	1.5	3.0	4.5						
Temperature (C)	19.4	19.6	19.8						
pH	6.85	6.70	6.71						
Spec. Cond. (umhos)	694.2	716.0	726.0						
Turbidity/Color	Very Turb	Very Turb	Very Turb						
TDS (g/L)	477.1	492.6	499.3						
ORP	—	—	—						
DO (mg/L)	—	—	—						
Odor (Y/N)	N	N	N						
Casing Volumes	1	2	3						
Dewatered (Y/N)	N	N	N						
Comments/Observations:									
SAMPLING DATA									
Time Sampled: 1200		Approximate Depth to Water During Sampling:				(feet)			
Comments:									
Sample Number	Number of Containers	Container Type	Preservative	Volume Filled (mL or L)	Turbidity/ Color	Analysis Method			
Total Purge Volume: 4.5 (gallons)			Disposal:		Onsite Drum(s) No.				
Weather Conditions: Sunny W/ W									
Condition of Well Box and Casing at Time of Sampling: Good									
Well Head Conditions Requiring Correction: None									
Problems Encountered During Purging and Sampling: None									



GROUNDWATER PURGE AND SAMPLE

Project Name: ExxonMobil			Well No: <i>MW5</i>			Date: <i>8/15/16</i>			
Project No:			Personnel: <i>C. Mitchell</i>						
GAUGING DATA									
Water Level Measuring Method: <i>WLM</i>				Measuring Point Description: <i>TDC-North</i>					
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>39.85</i>	<i>30.68</i>	<i>9.17</i>	<i>2/4</i>	<i>2</i>	<i>4</i>	<i>6</i>	<i>1.47</i>	<i>4.40</i>
				0.03	0.16	0.64	1.44		
PURGING DATA									
Purge Method: <i>Disp bailer</i>			Purge Depth:		Purge Rate:		(gpm)		
Time	<i>07:51</i>	<i>07:56</i>	<i>08:01</i>						
Volume Purge (gal)	<i>1.5</i>	<i>3.0</i>	<i>4.5</i>						
Temperature (C)	<i>17.6</i>	<i>17.9</i>	<i>18.0</i>						
pH	<i>6.75</i>	<i>6.61</i>	<i>6.74</i>						
Spec. Cond. (umhos)	<i>547.6</i>	<i>566.1</i>	<i>573.2</i>						
Turbidity/Color	<i>light brown</i>	<i>light brown</i>	<i>light brown</i>						
TDS (g/L)	<i>376.7</i>	<i>389.0</i>	<i>390.4</i>						
ORP	<i>—</i>	<i>—</i>	<i>—</i>						
DO (mg/L)	<i>—</i>	<i>—</i>	<i>—</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: <i>10:45</i>			Approximate Depth to Water During Sampling: <i>31</i> (feet)						
Comments:									
Sample Number	Number of Containers	Container Type	Preservative	Volume Filled (mL or L)	Turbidity/ Color	Analysis Method			
Total Purge Volume: <i>4.5</i> (gallons)			Disposal:		Onsite Drum(s) No.				
Weather Conditions: <i>partly sunny / dry</i>									
Condition of Well Box and Casing at Time of Sampling: <i>Good</i>									
Well Head Conditions Requiring Correction: <i>None</i>									
Problems Encountered During Purging and Sampling: <i>None</i>									



GROUNDWATER PURGE AND SAMPLE

Project Name: ExxonMobil Well No: MW9 Date: 6/15/16

Project No: Personnel: C. Mitchell

GAUGING DATA

Water Level Measuring Method: WLM Measuring Point Description: TDC North

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)
	39.82	31.98	7.84	3/4	2	4	6	1.25	3.76
				0.03	0.16	0.64	1.44		

PURGING DATA

Purge Method: Disp Bailed Purge Depth: Purge Rate: (gpm)

Time	10:54	10:56	11:04			
Volume Purge (gal)	1.5	3.0	4.5			
Temperature (C)	18.2	18.4	18.5			
pH	7.43	7.15	7.02			
Spec. Cond. (umhos)	796.2	825.9	824.2			
Turbidity/Color	1.0 NT 5.0	1.4 NT 6.0	1.0 NT 6.0			
TDS (g/L)	552.5	573.6	572.3			
ORP	-	-	-			
DO (mg/L)	-	-	-			
Odor (Y/N)	N	N	N			
Casing Volumes	1	2	3			
Dewatered (Y/N)	N	N	N			

Comments/Observations:

SAMPLING DATA

Time Sampled: 1:15 Approximate Depth to Water During Sampling: 32 (feet)

Comments:

Sample Number	Number of Containers	Container Type	Preservative	Volume Filled (mL or L)	Turbidity/ Color	Analysis Method

Total Purge Volume: 4.5 (gallons) Disposal: Onsite Drum(s) No.

Weather Conditions: Partly sunny / Day

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

Well Head Conditions Requiring Correction: None

Problems Encountered During Purging and Sampling: None

GROUNDWATER PURGE AND SAMPLE

Project Name: ExxonMobil Well No: RW1 Date: 6/15/16
 Personnel: C. Mitchell

GAUGING DATA

Water Level Measuring Method: WLM Measuring Point Description: TPC North

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)
		40.37	32.40	7.97	3/4	2	4	6	5.10
				0.03	0.16	0.64	1.44		

PURGING DATA

Purge Method: Displacement Purge Depth: Purge Rate: (gpm)

Time	09:40	09:47			
Volume Purge (gal)	5.5	11.0	16.5		
Temperature (C)	18.4	18.6			
pH	7.21	6.92			
Spec. Cond. (umhos)	886.1	873.4			
Turbidity/Color	1.2 NTU	1.2 NTU			
TDS (g/L)	617.5	608.0			
ORP	—	—	—		
DO (mg/L)	—	—	—		
Odor (Y/N)	N	N			
Casing Volumes	1	2	3		
Dewatered (Y/N)	N	N	Y		

Comments/Observations: Dewatered at 2 1/2 gal.

SAMPLING DATA

Time Sampled: 1250 Approximate Depth to Water During Sampling: 33 (feet)

Comments:

Sample Number	Number of Containers	Container Type	Preservative	Volume Filled (mL or L)	Turbidity/ Color	Analysis Method
					/	
					/	
					/	

Total Purge Volume: 13 (gallons) Disposal: Onsite Drum(s) No.

Weather Conditions: Sunny / Dry

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

Well Head Conditions Requiring Correction: None

Problems Encountered During Purging and Sampling: None

Appendix C
Waste Manifest

GENERATOR
TRANSPORTER INTL
DESIGNATED FACILITY

NON-HAZARDOUS WASTE MANIFEST
 1. Generator ID Number: N/A
 2. Page 1 of 1
 3. Emergency Response Phone: 526-432-5998
 4. Waste Tracking Number: 911233CJM

5. Generator's Name and Mailing Address: ExxonMobil Oil Corp (70234)
 898 N. Fair Oaks Avenue, Suite A
 Pasadena, CA 91103 USA
 Generator's Phone: 714-884-1687 (626) 432-5999
 Generator's Site Address (if different than mailing address): 3450 35th Avenue
 Oakland, CA 94601 USA

6. Transporter 1 Company Name: DILLARD ENVIRONMENTAL SERVICES
 U.S. EPA ID Number: CAD980523433

7. Transporter 2 Company Name: _____
 U.S. EPA ID Number: _____

8. Designated Facility Name and Site Address: INSTRAT INC.
 1105 AIRPORT DRIVE
 RIO VISTA, CA 94571
 Facility's Phone: 520-753-1829
 U.S. EPA ID Number: _____

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit WL/Vol.
	No.	Type		
1. Non Hazardous Waste Liquid (Monitoring Well Purge Water)	1	DM	40	G
2.				
3.				
4.				

13. Special Handling Instructions and Additional Information: DES JOB #911-333
 NSS DM

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: John Haberland
 Signature: [Signature]
 Month Day Year: 6/17/16

15. International Shipments: Import to U.S. Export from U.S.
 Port of entry/exit: _____
 Date leaving U.S.: _____

16. Transporter Acknowledgment of Receipt of Materials
 Transporter 1 Printed/Typed Name: KEN WILSON
 Signature: [Signature]
 Month Day Year: 6/17/16

Transporter 2 Printed/Typed Name: _____
 Signature: _____
 Month Day Year: _____

17. Discrepancy
 17a. Discrepancy Indication Space: Quantity Type Residue Partial Rejection Full Rejection
 Manifest Reference Number: _____

17b. Alternate Facility (or Generator): _____
 U.S. EPA ID Number: _____
 Facility's Phone: _____

17c. Signature of Alternate Facility (or Generator): _____
 Month Day Year: _____

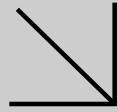
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17a
 Printed/Typed Name: MICHAEL WHITEHEAD
 Signature: [Signature]
 Month Day Year: 6/17/16

Appendix D

Laboratory Analytical Reports and Chain-of-Custody Documentation



Calscience



WORK ORDER NUMBER: 16-06-1163

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ETIC Engineering, Inc.

Client Project Name: ExxonMobil 70234

Attention: Sean Bowen
898 N. Fair Oaks Avenue
Suite A
Pasadena, CA 91103-3065

Cecile de Guia

Approved for release on 06/30/2016 by:
Cecile deGuia
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

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 Work Order Number: 16-06-1163

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Work Order Narrative

Work Order: 16-06-1163

Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 06/16/16. They were assigned to Work Order 16-06-1163.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Please note that the containers for Ferrous iron analysis were received with headspace. Client was notified via email on June 17, 2016.



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Sample Summary

Client: ETIC Engineering, Inc. 898 N. Fair Oaks Avenue, Suite A Pasadena, CA 91103-3065	Work Order: 16-06-1163 Project Name: ExxonMobil 70234 PO Number: 4410385285 Date/Time Received: 06/16/16 08:10 Number of Containers: 70
---	---

Attn: Sean Bowen

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
MW4	16-06-1163-1	06/15/16 11:40	10	Aqueous
MW5	16-06-1163-2	06/15/16 12:30	10	Aqueous
MW6	16-06-1163-3	06/15/16 12:15	10	Aqueous
MW7	16-06-1163-4	06/15/16 12:00	10	Aqueous
MW8	16-06-1163-5	06/15/16 10:45	10	Aqueous
MW9	16-06-1163-6	06/15/16 11:15	10	Aqueous
RW1	16-06-1163-7	06/15/16 12:50	10	Aqueous



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Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: N/A
Method: RSK-175M
Units: ug/L

Project: ExxonMobil 70234

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW4	16-06-1163-1-B	06/15/16 11:40	Aqueous	GC 61	N/A	06/25/16 12:18	160625L01

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

Parameter	Result	RL	MDL	DF	Qualifiers
Methane	0.0470	1.00	0.0400	1.00	J

MW5	16-06-1163-2-G	06/15/16 12:30	Aqueous	GC 61	N/A	06/25/16 12:44	160625L01
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Methane	28.1	1.00	0.0400	1.00	

MW6	16-06-1163-3-G	06/15/16 12:15	Aqueous	GC 61	N/A	06/25/16 13:07	160625L01
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Methane	7.05	1.00	0.0400	1.00	

MW7	16-06-1163-4-G	06/15/16 12:00	Aqueous	GC 61	N/A	06/25/16 13:29	160625L01
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Methane	7.54	1.00	0.0400	1.00	

MW8	16-06-1163-5-G	06/15/16 10:45	Aqueous	GC 61	N/A	06/25/16 13:50	160625L01
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Methane	0.152	1.00	0.0400	1.00	J

MW9	16-06-1163-6-G	06/15/16 11:15	Aqueous	GC 61	N/A	06/25/16 14:21	160625L01
-----	----------------	-------------------	---------	-------	-----	-------------------	-----------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Methane	0.0610	1.00	0.0400	1.00	J

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: N/A
Method: RSK-175M
Units: ug/L

Project: ExxonMobil 70234

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RW1	16-06-1163-7-G	06/15/16 12:50	Aqueous	GC 61	N/A	06/25/16 14:48	160625L01

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

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Methane	3.26	1.00	0.0400	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-663-2596	N/A	Aqueous	GC 61	N/A	06/25/16 11:47	160625L01

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

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Methane	ND	1.00	0.0400	1.00	



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Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: N/A
Method: EPA 300.0
Units: mg/L

Project: ExxonMobil 70234

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW4	16-06-1163-1-I	06/15/16 11:40	Aqueous	IC 10	N/A	06/16/16 19:08	160616L01

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

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Nitrate (as N)	2.2	0.10	0.053	1.00	
Sulfate	63	1.0	0.27	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5	16-06-1163-2-I	06/15/16 12:30	Aqueous	IC 10	N/A	06/16/16 19:26	160616L01

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

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Nitrate (as N)	0.59	0.10	0.053	1.00	
Sulfate	30	1.0	0.27	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW6	16-06-1163-3-I	06/15/16 12:15	Aqueous	IC 10	N/A	06/16/16 19:45	160616L01

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

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Nitrate (as N)	0.26	0.10	0.053	1.00	
Sulfate	38	1.0	0.27	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW7	16-06-1163-4-I	06/15/16 12:00	Aqueous	IC 10	N/A	06/16/16 20:04	160616L01

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

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Nitrate (as N)	1.3	0.10	0.053	1.00	
Sulfate	58	1.0	0.27	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW8	16-06-1163-5-I	06/15/16 10:45	Aqueous	IC 10	N/A	06/16/16 20:23	160616L01

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

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Nitrate (as N)	7.5	0.10	0.053	1.00	
Sulfate	38	1.0	0.27	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: N/A
Method: EPA 300.0
Units: mg/L

Project: ExxonMobil 70234

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW9	16-06-1163-6-I	06/15/16 11:15	Aqueous	IC 10	N/A	06/16/16 20:42	160616L01

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

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Nitrate (as N)	6.3	0.10	0.053	1.00	
Sulfate	39	1.0	0.27	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RW1	16-06-1163-7-I	06/15/16 12:50	Aqueous	IC 10	N/A	06/16/16 21:01	160616L01

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

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Nitrate (as N)	0.64	0.10	0.053	1.00	
Sulfate	37	1.0	0.27	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-906-6749	N/A	Aqueous	IC 10	N/A	06/16/16 12:56	160616L01

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

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Nitrate (as N)	ND	0.10	0.053	1.00	
Sulfate	ND	1.0	0.27	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: N/A
Method: SM 2320B
Units: mg/L

Project: ExxonMobil 70234

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW4	16-06-1163-1-I	06/15/16 11:40	Aqueous	PH1/BUR03	N/A	06/20/16 21:30	G0620ALKB2

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

Parameter	Result	RL	MDL	DF	Qualifiers
Alkalinity, Total (as CaCO ₃)	170	5.00	0.848	1.00	

MW5	16-06-1163-2-I	06/15/16 12:30	Aqueous	PH1/BUR03	N/A	06/20/16 21:30	G0620ALKB2
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alkalinity, Total (as CaCO ₃)	356	5.00	0.848	1.00	

MW6	16-06-1163-3-I	06/15/16 12:15	Aqueous	PH1/BUR03	N/A	06/20/16 21:30	G0620ALKB2
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alkalinity, Total (as CaCO ₃)	471	5.00	0.848	1.00	

MW7	16-06-1163-4-I	06/15/16 12:00	Aqueous	PH1/BUR03	N/A	06/20/16 21:30	G0620ALKB2
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alkalinity, Total (as CaCO ₃)	270	5.00	0.848	1.00	

MW8	16-06-1163-5-I	06/15/16 10:45	Aqueous	PH1/BUR03	N/A	06/20/16 21:30	G0620ALKB2
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alkalinity, Total (as CaCO ₃)	198	5.00	0.848	1.00	

MW9	16-06-1163-6-I	06/15/16 11:15	Aqueous	PH1/BUR03	N/A	06/20/16 21:30	G0620ALKB2
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alkalinity, Total (as CaCO ₃)	257	5.00	0.848	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: N/A
Method: SM 2320B
Units: mg/L

Project: ExxonMobil 70234

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RW1	16-06-1163-7-I	06/15/16 12:50	Aqueous	PH1/BUR03	N/A	06/20/16 21:30	G0620ALKB2

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

Parameter	Result	RL	MDL	DF	Qualifiers
Alkalinity, Total (as CaCO ₃)	379	5.00	0.848	1.00	

Method Blank	099-15-859-1011	N/A	Aqueous	PH1/BUR03	N/A	06/20/16 21:30	G0620ALKB2
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alkalinity, Total (as CaCO ₃)	ND	1.0	0.85	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

ETIC Engineering, Inc.
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Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: N/A
Method: SM 3500-FeB
Units: mg/L

Project: ExxonMobil 70234

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW4	16-06-1163-1-J	06/15/16 11:40	Aqueous	UV 8	06/16/16	06/16/16 09:55	G0616FEL1

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

Parameter	Result	RL	MDL	DF	Qualifiers
Iron (II)	ND	0.100	0.0413	1.00	

MW5	16-06-1163-2-J	06/15/16 12:30	Aqueous	UV 8	06/16/16	06/16/16 09:55	G0616FEL1
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Iron (II)	1.97	0.100	0.0413	1.00	

MW6	16-06-1163-3-J	06/15/16 12:15	Aqueous	UV 8	06/16/16	06/16/16 09:55	G0616FEL1
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Iron (II)	ND	0.100	0.0413	1.00	

MW7	16-06-1163-4-J	06/15/16 12:00	Aqueous	UV 8	06/16/16	06/16/16 09:55	G0616FEL1
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Iron (II)	ND	0.100	0.0413	1.00	

MW8	16-06-1163-5-J	06/15/16 10:45	Aqueous	UV 8	06/16/16	06/16/16 09:55	G0616FEL1
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Iron (II)	ND	0.100	0.0413	1.00	

MW9	16-06-1163-6-J	06/15/16 11:15	Aqueous	UV 8	06/16/16	06/16/16 09:55	G0616FEL1
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Iron (II)	ND	0.100	0.0413	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

ETIC Engineering, Inc.
 898 N. Fair Oaks Avenue, Suite A
 Pasadena, CA 91103-3065

Date Received: 06/16/16
 Work Order: 16-06-1163
 Preparation: N/A
 Method: SM 3500-FeB
 Units: mg/L

Project: ExxonMobil 70234

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RW1	16-06-1163-7-J	06/15/16 12:50	Aqueous	UV 8	06/16/16	06/16/16 09:55	G0616FEL1

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

Parameter	Result	RL	MDL	DF	Qualifiers
Iron (II)	ND	0.100	0.0413	1.00	

Method Blank	099-05-111-5407	N/A	Aqueous	UV 8	06/16/16	06/16/16 09:55	G0616FEL1
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Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Iron (II)	ND	0.100	0.0413	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: EPA 5030C
Method: EPA 8015B (M)
Units: ug/L

Project: ExxonMobil 70234

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW4	16-06-1163-1-F	06/15/16 11:40	Aqueous	GC 42	06/24/16	06/24/16 22:36	160624L047

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

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	ND	50	48	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	60	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5	16-06-1163-2-F	06/15/16 12:30	Aqueous	GC 42	06/24/16	06/25/16 02:07	160624L047

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

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	840	50	48	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	67	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW6	16-06-1163-3-F	06/15/16 12:15	Aqueous	GC 42	06/24/16	06/24/16 23:11	160624L047

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

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	120	50	48	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	60	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW7	16-06-1163-4-F	06/15/16 12:00	Aqueous	GC 42	06/24/16	06/24/16 23:47	160624L047

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

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	740	50	48	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	59	38-134	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: EPA 5030C
Method: EPA 8015B (M)
Units: ug/L

Project: ExxonMobil 70234

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW8	16-06-1163-5-F	06/15/16 10:45	Aqueous	GC 42	06/24/16	06/25/16 00:22	160624L047

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

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	ND	50	48	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	62	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW9	16-06-1163-6-F	06/15/16 11:15	Aqueous	GC 42	06/24/16	06/25/16 00:57	160624L047

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

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	ND	50	48	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	58	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RW1	16-06-1163-7-F	06/15/16 12:50	Aqueous	GC 42	06/24/16	06/25/16 05:02	160624L047

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

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	1300	50	48	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	63	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-436-10893	N/A	Aqueous	GC 42	06/24/16	06/24/16 19:06	160624L047

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

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	ND	50	48	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	59	38-134	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 70234

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW4	16-06-1163-1-A	06/15/16 11:40	Aqueous	GC/MS FFF	06/24/16	06/24/16 20:14	160624L018

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

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	0.50	0.32	1.00	
Ethylbenzene	ND	0.50	0.32	1.00	
Toluene	ND	0.50	0.26	1.00	
p/m-Xylene	ND	0.50	0.24	1.00	
o-Xylene	ND	0.50	0.39	1.00	
Xylenes (total)	ND	0.50	0.24	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	0.29	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	4.1	1.00	
Diisopropyl Ether (DIPE)	ND	0.50	0.24	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.50	0.22	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.50	0.24	1.00	
1,2-Dibromoethane	ND	0.50	0.34	1.00	
1,2-Dichloroethane	ND	0.50	0.18	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	96	68-120	
Dibromofluoromethane	108	80-127	
1,2-Dichloroethane-d4	112	80-128	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 70234

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW5	16-06-1163-2-a	06/15/16 12:30	Aqueous	GC/MS FFF	06/24/16	06/24/16 20:46	160624L018

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

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	150	2.5	1.6	5.00	
Ethylbenzene	1.8	2.5	1.6	5.00	J
Toluene	1.4	2.5	1.3	5.00	J
p/m-Xylene	4.1	2.5	1.2	5.00	
o-Xylene	ND	2.5	2.0	5.00	
Xylenes (total)	4.1	2.5	1.2	1.00	
Tert-Butyl Alcohol (TBA)	720	50	20	5.00	
Diisopropyl Ether (DIPE)	ND	2.5	1.2	5.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.5	1.1	5.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.5	1.2	5.00	
1,2-Dibromoethane	ND	2.5	1.7	5.00	
1,2-Dichloroethane	ND	2.5	0.92	5.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	95	68-120	
Dibromofluoromethane	106	80-127	
1,2-Dichloroethane-d4	108	80-128	
Toluene-d8	100	80-120	

MW5	16-06-1163-2-A	06/15/16 12:30	Aqueous	GC/MS FFF	06/24/16	06/25/16 03:14	160624L036
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Methyl-t-Butyl Ether (MTBE)	300	10	5.8	20.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	95	68-120	
Dibromofluoromethane	103	80-127	
1,2-Dichloroethane-d4	102	80-128	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 70234

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW6	16-06-1163-3-B	06/15/16 12:15	Aqueous	GC/MS FFF	06/24/16	06/25/16 03:46	160624L036

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

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	0.50	0.32	1.00	
Ethylbenzene	ND	0.50	0.32	1.00	
Toluene	ND	0.50	0.26	1.00	
p/m-Xylene	ND	0.50	0.24	1.00	
o-Xylene	ND	0.50	0.39	1.00	
Xylenes (total)	ND	0.50	0.24	1.00	
Methyl-t-Butyl Ether (MTBE)	13	0.50	0.29	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	4.1	1.00	
Diisopropyl Ether (DIPE)	ND	0.50	0.24	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.50	0.22	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.50	0.24	1.00	
1,2-Dibromoethane	ND	0.50	0.34	1.00	
1,2-Dichloroethane	ND	0.50	0.18	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	96	68-120	
Dibromofluoromethane	105	80-127	
1,2-Dichloroethane-d4	105	80-128	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 70234

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW7	16-06-1163-4-a	06/15/16 12:00	Aqueous	GC/MS FFF	06/24/16	06/24/16 21:52	160624L018

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

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	4.0	2.6	8.00	
Ethylbenzene	ND	4.0	2.5	8.00	
Toluene	ND	4.0	2.1	8.00	
p/m-Xylene	ND	4.0	1.9	8.00	
o-Xylene	ND	4.0	3.1	8.00	
Xylenes (total)	ND	4.0	1.9	1.00	
Tert-Butyl Alcohol (TBA)	380	80	33	8.00	
Diisopropyl Ether (DIPE)	ND	4.0	1.9	8.00	
Ethyl-t-Butyl Ether (ETBE)	ND	4.0	1.7	8.00	
Tert-Amyl-Methyl Ether (TAME)	ND	4.0	1.9	8.00	
1,2-Dibromoethane	ND	4.0	2.7	8.00	
1,2-Dichloroethane	ND	4.0	1.5	8.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	95	68-120	
Dibromofluoromethane	108	80-127	
1,2-Dichloroethane-d4	110	80-128	
Toluene-d8	98	80-120	

MW7	16-06-1163-4-A	06/15/16 12:00	Aqueous	GC/MS FFF	06/24/16	06/25/16 04:19	160624L036
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Methyl-t-Butyl Ether (MTBE)	1200	50	29	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	94	68-120	
Dibromofluoromethane	105	80-127	
1,2-Dichloroethane-d4	106	80-128	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 70234

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW8	16-06-1163-5-A	06/15/16 10:45	Aqueous	GC/MS FFF	06/24/16	06/25/16 04:52	160624L036

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

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	0.50	0.32	1.00	
Ethylbenzene	ND	0.50	0.32	1.00	
Toluene	ND	0.50	0.26	1.00	
p/m-Xylene	ND	0.50	0.24	1.00	
o-Xylene	ND	0.50	0.39	1.00	
Xylenes (total)	ND	0.50	0.24	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	0.29	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	4.1	1.00	
Diisopropyl Ether (DIPE)	ND	0.50	0.24	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.50	0.22	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.50	0.24	1.00	
1,2-Dibromoethane	ND	0.50	0.34	1.00	
1,2-Dichloroethane	ND	0.50	0.18	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	94	68-120	
Dibromofluoromethane	107	80-127	
1,2-Dichloroethane-d4	108	80-128	
Toluene-d8	98	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 70234

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW9	16-06-1163-6-A	06/15/16 11:15	Aqueous	GC/MS FFF	06/24/16	06/25/16 05:24	160624L036

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

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	0.50	0.32	1.00	
Ethylbenzene	ND	0.50	0.32	1.00	
Toluene	ND	0.50	0.26	1.00	
p/m-Xylene	ND	0.50	0.24	1.00	
o-Xylene	ND	0.50	0.39	1.00	
Xylenes (total)	ND	0.50	0.24	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	0.29	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	4.1	1.00	
Diisopropyl Ether (DIPE)	ND	0.50	0.24	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.50	0.22	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.50	0.24	1.00	
1,2-Dibromoethane	ND	0.50	0.34	1.00	
1,2-Dichloroethane	ND	0.50	0.18	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	94	68-120	
Dibromofluoromethane	108	80-127	
1,2-Dichloroethane-d4	108	80-128	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 70234

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RW1	16-06-1163-7-A	06/15/16 12:50	Aqueous	GC/MS FFF	06/24/16	06/25/16 05:57	160624L036

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

Parameter	Result	RL	MDL	DF	Qualifiers
Ethylbenzene	17	5.0	3.2	10.0	
Toluene	3.6	5.0	2.6	10.0	J
p/m-Xylene	5.5	5.0	2.4	10.0	
o-Xylene	ND	5.0	3.9	10.0	
Xylenes (total)	5.5	5.0	2.4	1.00	
Tert-Butyl Alcohol (TBA)	1300	100	41	10.0	
Diisopropyl Ether (DIPE)	ND	5.0	2.4	10.0	
Ethyl-t-Butyl Ether (ETBE)	ND	5.0	2.2	10.0	
Tert-Amyl-Methyl Ether (TAME)	ND	5.0	2.4	10.0	
1,2-Dibromoethane	ND	5.0	3.4	10.0	
1,2-Dichloroethane	ND	5.0	1.8	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	96	68-120	
Dibromofluoromethane	106	80-127	
1,2-Dichloroethane-d4	107	80-128	
Toluene-d8	98	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RW1	16-06-1163-7-B	06/15/16 12:50	Aqueous	GC/MS FFF	06/27/16	06/27/16 19:38	160627L023

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

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	850	25	16	50.0	
Methyl-t-Butyl Ether (MTBE)	450	25	14	50.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	97	68-120	
Dibromofluoromethane	104	80-127	
1,2-Dichloroethane-d4	108	80-128	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 70234

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-10-025-4128	N/A	Aqueous	GC/MS FFF	06/24/16	06/24/16 13:00	160624L018

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

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	0.50	0.32	1.00	
Ethylbenzene	ND	0.50	0.32	1.00	
Toluene	ND	0.50	0.26	1.00	
p/m-Xylene	ND	0.50	0.24	1.00	
o-Xylene	ND	0.50	0.39	1.00	
Xylenes (total)	ND	0.50	0.24	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	0.29	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	4.1	1.00	
Diisopropyl Ether (DIPE)	ND	0.50	0.24	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.50	0.22	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.50	0.24	1.00	
1,2-Dibromoethane	ND	0.50	0.34	1.00	
1,2-Dichloroethane	ND	0.50	0.18	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	95	68-120	
Dibromofluoromethane	104	80-127	
1,2-Dichloroethane-d4	104	80-128	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 70234

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-10-025-4129	N/A	Aqueous	GC/MS FFF	06/24/16	06/25/16 00:30	160624L036

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

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	0.50	0.32	1.00	
1,2-Dibromoethane	ND	0.50	0.34	1.00	
1,2-Dichloroethane	ND	0.50	0.18	1.00	
Ethylbenzene	ND	0.50	0.32	1.00	
Toluene	ND	0.50	0.26	1.00	
p/m-Xylene	ND	0.50	0.24	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	0.29	1.00	
o-Xylene	ND	0.50	0.39	1.00	
Xylenes (total)	ND	0.50	0.24	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	4.1	1.00	
Diisopropyl Ether (DIPE)	ND	0.50	0.24	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.50	0.22	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.50	0.24	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	94	68-120	
Dibromofluoromethane	106	80-127	
1,2-Dichloroethane-d4	106	80-128	
Toluene-d8	99	80-120	

Method Blank	099-10-025-4130	N/A	Aqueous	GC/MS FFF	06/27/16	06/27/16 17:24	160627L023
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	0.50	0.32	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	0.29	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	97	68-120	
Dibromofluoromethane	103	80-127	
1,2-Dichloroethane-d4	104	80-128	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: N/A
Method: EPA 300.0

Project: ExxonMobil 70234

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
16-06-1227-2	Sample	Aqueous	IC 10	N/A	06/16/16 21:20	160616S01
16-06-1227-2	Matrix Spike	Aqueous	IC 10	N/A	06/16/16 22:17	160616S01
16-06-1227-2	Matrix Spike Duplicate	Aqueous	IC 10	N/A	06/16/16 22:36	160616S01

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Nitrate (as N)	5.985	5.000	11.61	112	11.69	114	80-120	1	0-20	
Sulfate	34.48	50.00	90.08	111	90.26	112	80-120	0	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: N/A
Method: SM 3500-FeB

Project: ExxonMobil 70234

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
RW1	Sample	Aqueous	UV 8	06/16/16	06/16/16 09:55	G0616FES1				
RW1	Matrix Spike	Aqueous	UV 8	06/16/16	06/16/16 09:55	G0616FES1				
RW1	Matrix Spike Duplicate	Aqueous	UV 8	06/16/16	06/16/16 09:55	G0616FES1				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Iron (II)	ND	1.000	0.9300	93	0.9400	94	70-130	1	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



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Quality Control - Spike/Spike Duplicate

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: EPA 5030C
Method: EPA 8260B

Project: ExxonMobil 70234

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
16-06-1727-1	Sample	Aqueous	GC/MS FFF	06/24/16	06/24/16 14:12	160624S007				
16-06-1727-1	Matrix Spike	Aqueous	GC/MS FFF	06/24/16	06/24/16 14:44	160624S007				
16-06-1727-1	Matrix Spike Duplicate	Aqueous	GC/MS FFF	06/24/16	06/24/16 15:17	160624S007				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	48.09	200.0	272.5	112	268.6	110	75-125	1	0-20	
Ethylbenzene	ND	200.0	229.1	115	226.9	113	75-125	1	0-20	
Toluene	ND	200.0	226.4	113	222.9	111	75-125	2	0-20	
p/m-Xylene	ND	400.0	463.8	116	456.2	114	75-125	2	0-20	
o-Xylene	ND	200.0	231.1	116	227.3	114	75-127	2	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	200.0	206.0	103	206.8	103	71-131	0	0-20	
Tert-Butyl Alcohol (TBA)	ND	1000	1217	122	1116	112	20-180	9	0-40	
Diisopropyl Ether (DIPE)	ND	200.0	225.7	113	220.6	110	64-136	2	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	200.0	199.2	100	204.2	102	73-133	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	200.0	196.3	98	200.5	100	75-125	2	0-20	
1,2-Dibromoethane	ND	200.0	217.8	109	216.7	108	75-126	1	0-20	
1,2-Dichloroethane	1404	200.0	1570	83	1541	68	75-127	2	0-20	HX

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: EPA 5030C
Method: EPA 8260B

Project: ExxonMobil 70234

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
16-06-1713-2	Sample	Aqueous	GC/MS FFF	06/24/16	06/25/16 01:36	160624S024				
16-06-1713-2	Matrix Spike	Aqueous	GC/MS FFF	06/24/16	06/25/16 02:08	160624S024				
16-06-1713-2	Matrix Spike Duplicate	Aqueous	GC/MS FFF	06/24/16	06/25/16 02:41	160624S024				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	10.00	10.48	105	10.19	102	75-125	3	0-20	
1,2-Dibromoethane	ND	10.00	10.51	105	10.17	102	75-126	3	0-20	
1,2-Dichloroethane	ND	10.00	10.31	103	9.795	98	75-127	5	0-20	
Ethylbenzene	ND	10.00	10.88	109	10.63	106	75-125	2	0-20	
Toluene	ND	10.00	10.59	106	10.30	103	75-125	3	0-20	
p/m-Xylene	ND	20.00	21.94	110	21.54	108	75-125	2	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	10.00	9.750	98	9.405	94	71-131	4	0-20	
o-Xylene	ND	10.00	11.07	111	10.84	108	75-127	2	0-20	
Tert-Butyl Alcohol (TBA)	ND	50.00	57.18	114	58.94	118	20-180	3	0-40	
Diisopropyl Ether (DIPE)	ND	10.00	10.70	107	10.43	104	64-136	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	10.00	9.672	97	9.395	94	73-133	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	10.00	9.689	97	9.412	94	75-125	3	0-20	

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RPD: Relative Percent Difference. CL: Control Limits



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Quality Control - Spike/Spike Duplicate

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: EPA 5030C
Method: EPA 8260B

Project: ExxonMobil 70234

Page 5 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
16-06-1393-1	Sample	Aqueous	GC/MS FFF	06/27/16	06/27/16 18:00	160627S011
16-06-1393-1	Matrix Spike	Aqueous	GC/MS FFF	06/27/16	06/27/16 18:32	160627S011
16-06-1393-1	Matrix Spike Duplicate	Aqueous	GC/MS FFF	06/27/16	06/27/16 19:05	160627S011

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	56.15	112	55.41	111	75-125	1	0-20	
1,2-Dibromoethane	ND	50.00	52.85	106	52.36	105	75-126	1	0-20	
1,2-Dichloroethane	153.4	50.00	212.0	117	206.2	106	75-127	3	0-20	
Ethylbenzene	ND	50.00	57.41	115	56.74	113	75-125	1	0-20	
Toluene	ND	50.00	56.55	113	55.69	111	75-125	2	0-20	
p/m-Xylene	ND	100.0	114.2	114	113.1	113	75-125	1	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	53.18	106	53.13	106	71-131	0	0-20	
o-Xylene	ND	50.00	57.58	115	56.47	113	75-127	2	0-20	
Tert-Butyl Alcohol (TBA)	53.72	250.0	318.9	106	326.7	109	20-180	2	0-40	
Diisopropyl Ether (DIPE)	ND	50.00	54.81	110	54.89	110	64-136	0	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	50.00	52.87	106	52.99	106	73-133	0	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	50.00	52.95	106	52.46	105	75-125	1	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Sample Duplicate

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: N/A
Method: SM 2320B

Project: ExxonMobil 70234

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
16-06-1257-6	Sample	Aqueous	PH1/BUR03	N/A	06/20/16 21:30	G0620ALKD2
16-06-1257-6	Sample Duplicate	Aqueous	PH1/BUR03	N/A	06/20/16 21:30	G0620ALKD2

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Alkalinity, Total (as CaCO ₃)	590.0	599.0	2	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: N/A
Method: RSK-175M

Project: ExxonMobil 70234

Page 1 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-663-2596	LCS	Aqueous	GC 61	N/A	06/25/16 10:37	160625L01			
099-12-663-2596	LCSD	Aqueous	GC 61	N/A	06/25/16 11:17	160625L01			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Methane	102.0	95.08	93	95.36	93	80-120	0	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: N/A
Method: EPA 300.0

Project: ExxonMobil 70234

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-906-6749	LCS	Aqueous	IC 10	N/A	06/16/16 13:28	160616L01
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Nitrate (as N)		5.000	4.779	96	90-110	
Sulfate		50.00	47.80	96	90-110	



Calscience

Quality Control - LCS/LCSD

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: N/A
Method: SM 2320B

Project: ExxonMobil 70234

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-15-859-1011	LCS	Aqueous	PH1/BUR03	N/A	06/20/16 21:30	G0620ALKB2			
099-15-859-1011	LCSD	Aqueous	PH1/BUR03	N/A	06/20/16 21:30	G0620ALKB2			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Alkalinity, Total (as CaCO ₃)	100.0	98.00	98	97.00	97	80-120	1	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: N/A
Method: SM 3500-FeB

Project: ExxonMobil 70234

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-05-111-5407	LCS	Aqueous	UV 8	06/16/16	06/16/16 09:55	G0616FEL1
099-05-111-5407	LCSD	Aqueous	UV 8	06/16/16	06/16/16 09:55	G0616FEL1

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Iron (II)	1.000	0.9800	98	0.9500	95	80-120	3	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project: ExxonMobil 70234

Page 5 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-436-10893	LCS	Aqueous	GC 42	06/24/16	06/24/16 18:31	160624L047
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
TPH as Gasoline		2000	2084	104	78-120	

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: EPA 5030C
Method: EPA 8260B

Project: ExxonMobil 70234

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
099-10-025-4128	LCS	Aqueous	GC/MS FFF	06/24/16	06/24/16 11:34	160624L018	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Benzene		10.00	9.998	100	80-120	73-127	
Ethylbenzene		10.00	10.31	103	80-120	73-127	
Toluene		10.00	9.998	100	80-120	73-127	
p/m-Xylene		20.00	20.81	104	80-120	73-127	
o-Xylene		10.00	10.42	104	80-120	73-127	
Methyl-t-Butyl Ether (MTBE)		10.00	9.002	90	75-123	67-131	
Tert-Butyl Alcohol (TBA)		50.00	47.37	95	80-120	73-127	
Diisopropyl Ether (DIPE)		10.00	9.844	98	73-121	65-129	
Ethyl-t-Butyl Ether (ETBE)		10.00	9.054	91	76-124	68-132	
Tert-Amyl-Methyl Ether (TAME)		10.00	8.879	89	80-120	73-127	
1,2-Dibromoethane		10.00	9.512	95	80-120	73-127	
1,2-Dichloroethane		10.00	9.465	95	80-122	73-129	

Total number of LCS compounds: 12

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: EPA 5030C
Method: EPA 8260B

Project: ExxonMobil 70234

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
099-10-025-4129	LCS	Aqueous	GC/MS FFF	06/24/16	06/24/16 23:20	160624L036	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Benzene		10.00	10.22	102	80-120	73-127	
1,2-Dibromoethane		10.00	9.838	98	80-120	73-127	
1,2-Dichloroethane		10.00	9.912	99	80-122	73-129	
Ethylbenzene		10.00	10.55	106	80-120	73-127	
Toluene		10.00	10.21	102	80-120	73-127	
p/m-Xylene		20.00	21.26	106	80-120	73-127	
Methyl-t-Butyl Ether (MTBE)		10.00	9.503	95	75-123	67-131	
o-Xylene		10.00	10.58	106	80-120	73-127	
Tert-Butyl Alcohol (TBA)		50.00	52.39	105	80-120	73-127	
Diisopropyl Ether (DIPE)		10.00	10.30	103	73-121	65-129	
Ethyl-t-Butyl Ether (ETBE)		10.00	9.614	96	76-124	68-132	
Tert-Amyl-Methyl Ether (TAME)		10.00	9.464	95	80-120	73-127	

Total number of LCS compounds: 12

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 06/16/16
Work Order: 16-06-1163
Preparation: EPA 5030C
Method: EPA 8260B

Project: ExxonMobil 70234

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
099-10-025-4130	LCS	Aqueous	GC/MS FFF	06/27/16	06/27/16 15:49	160627L023	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Benzene		10.00	10.14	101	80-120	73-127	
1,2-Dibromoethane		10.00	9.458	95	80-120	73-127	
1,2-Dichloroethane		10.00	9.554	96	80-122	73-129	
Ethylbenzene		10.00	10.65	106	80-120	73-127	
Toluene		10.00	10.28	103	80-120	73-127	
p/m-Xylene		20.00	21.52	108	80-120	73-127	
Methyl-t-Butyl Ether (MTBE)		10.00	9.346	93	75-123	67-131	
o-Xylene		10.00	10.66	107	80-120	73-127	
Tert-Butyl Alcohol (TBA)		50.00	55.16	110	80-120	73-127	
Diisopropyl Ether (DIPE)		10.00	10.08	101	73-121	65-129	
Ethyl-t-Butyl Ether (ETBE)		10.00	9.770	98	76-124	68-132	
Tert-Amyl-Methyl Ether (TAME)		10.00	9.407	94	80-120	73-127	

Total number of LCS compounds: 12

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

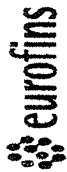
Sample Analysis Summary Report

Work Order: 16-06-1163

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 300.0	N/A	969	IC 10	1
EPA 8015B (M)	EPA 5030C	1063	GC 42	2
EPA 8260B	EPA 5030C	486	GC/MS FFF	2
EPA 8260B	EPA 5030C	849	GC/MS FFF	2
RSK-175M	N/A	1074	GC 61	2
RSK-175M	N/A	1078	GC 61	2
SM 2320B	N/A	650	PH1/BUR03	1
SM 3500-FeB	N/A	990	UV 8	1

<u>Qualifiers</u>	<u>Definition</u>
AZ	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.
B	Analyte was present in the associated method blank.
BA	The MS/MSD RPD was out of control due to suspected matrix interference.
BB	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.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
DF	Reporting limits elevated due to matrix interferences.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
GE	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
HD	Chromat. profile inconsistent with pattern(s) of ref. fuel stdns.
HO	High concentration matrix spike recovery out of limits
HT	Analytical value calculated using results from associated tests.
HX	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS was in control.
IL	Relative percent difference out of control.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
LD	Analyte presence was not confirmed by second column or GC/MS analysis.
LP	The LCS and/or LCSD recoveries for this analyte were above the upper control limit. The associated sample was non-detected. Therefore, the sample data was reported without further clarification.
LQ	LCS recovery above method control limits.
LR	LCS recovery below method control limits.
ND	Parameter not detected at the indicated reporting limit.
QO	Compound did not meet method-described identification guidelines. Identification was based on additional GC/MS characteristics.
RU	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
SG	A silica gel cleanup procedure was performed.
SN	See applicable analysis comment.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
Calsciencia TEL: (714) 895-4494 . FAX: (714) 894-7601

Site Name
Retail Project (MRN)
Major Project (AFE)
Project Name Former Retail Site 70234

CHAIN OF CUSTODY RECORD
DATE: 6/15/16
PAGE: 1 OF 1

ExxonMobil PM: Jennifer Sedlachek

LABORATORY CLIENT:
ExxonMobil CIO ETIC Engineering, Inc.
ADDRESS: 898 N. Fair Oaks Ave, #A
CITY: Pasadena, CA
TEL: 626-432-5999 x 2507 FAX: 626-432-5998
EMAIL: sbowen@eticeng.com
TURNAROUND TIME: SAME DAY 24 HR 48 HR 72 HR 10 DAYS
SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY): RWQB REPORTING ARCHIVE SAMPLES UNTIL _____
SPECIAL INSTRUCTIONS:
edf file required, Global ID #T06019757161
email report to eticlabreports@eticeng.com, aforman@eticeng.com
Fuel Oxygenates and Additives include: MTBE, TBA, ETBE, DIPE, TAME, 1,2-DCA and 1,2-DBA.
Set TBA detection limit at or below 12 ug/L.

GLOBAL ID # COSLT LOG CODE:
T06019757161
PROJECT CONTACT:
Sean Bowen, ETIC Engineering, Inc.
SAMPLER(S) SIGNATURE:

P.O. 4410385285
10-06-1163
CONTAINER TYPE: 8 Voss, 1-250ml HDPE, 1-250ml Amber

SAMPLE ID	LOCATION/DESCRIPTION	SAMPLING		MATRIX	VOL. CONT.	REQUESTED ANALYSIS					CONTAINER TYPE	
		DATE	TIME			Alkalinity	Formaldehyde	Nitrates	Sulfides	Methane		
1	MW4	6/15/16	1140	water	10	X	X	X	X	X	X	8 Voss, 1-250ml HDPE, 1-250ml Amber
2	MW5	6/15/16	1230	water	10	X	X	X	X	X	X	8 Voss, 1-250ml HDPE, 1-250ml Amber
3	MW6	6/15/16	1215	water	10	X	X	X	X	X	X	8 Voss, 1-250ml HDPE, 1-250ml Amber
4	MW7	6/15/16	1200	water	10	X	X	X	X	X	X	8 Voss, 1-250ml HDPE, 1-250ml Amber
5	MW8	6/15/16	1045	water	10	X	X	X	X	X	X	8 Voss, 1-250ml HDPE, 1-250ml Amber
6	MW9	6/15/16	1115	water	10	X	X	X	X	X	X	8 Voss, 1-250ml HDPE, 1-250ml Amber
7	RW1	6/15/16	1230	water	10	X	X	X	X	X	X	8 Voss, 1-250ml HDPE, 1-250ml Amber
Relinquisher by: (Signature)						Received by: (Signature)						Date, & Time: 6/15/16 14:15
Relinquisher by: (Signature)						Received by: (Signature)						Date, & Time: 6/16/16 0810
Relinquisher by: (Signature)						Received by: (Signature)						Date, & Time: 6/16/16 0810



800-322-5555 www.gso.com

1163

Ship From
CAL SCIENCE- CONCORD
ALAN KEMP
5063 COMMERCIAL CIRCLE
#H
CCNCORD, CA 94520

Tracking #: 532275819

EPS



Ship To
CEL
SAMPLE RECEIVING
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

ORC
GARDEN GROVE

A

COD: \$0.00
Weight: 0 lb(s)
Reference:
ETIC, PHILLIPS 66, PORT COSTA
Delivery Instructions:

D92845A



53064745

Signature Type: REQUIRED

Print Date: 6/15/2016 3:14 PM

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.

Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer. Securely attach this label to your package, do not cover the barcode.

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SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: ETC

DATE: 06/16/2016

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)
 Thermometer ID: SC2A (CF: 0.0°C); Temperature (w/o CF): 2.0 °C (w/ CF): 2.0 °C; 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
 Sample(s) received at ambient temperature; placed on ice for transport by courier
 Ambient Temperature: Air Filter

Checked by: ALU

CUSTODY SEAL:
 Cooler Present and Intact Present but Not Intact Not Present N/A
 Sample(s) Present and Intact Present but Not Intact Not Present N/A

Checked by: ALU
 Checked by: SRB

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Container(s) for certain analysis free of headspace	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input checked="" type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE: (Trip Blank Lot Number: _____)
Aqueous: VOA VOAh VOAna₂ 100PJ 100PJna₂ 125AGB 125AGBh 125AGBp 125PB
 125PBz_{anna} 250AGB 250CGB 250CGBs 250PB 250PBn 500AGB 500AGJ 500AGJs
 500PB 1AGB 1AGBna₂ 1AGBs 1PB 1PBna _____ _____ _____
Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (_____) EnCores® (_____) TerraCores® (_____) _____
Air: Tedlar™ Canister Sorbent Tube PUF _____ **Other Matrix** (_____) _____ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag
 Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO₃, **na** = NaOH, **na₂** = Na₂S₂O₃, **p** = H₃PO₄, Labeled/Checked by: SRB
 s = H₂SO₄, u = ultra-pure, z_{anna} = Zn(CH₃CO₂)₂ + NaOH Reviewed by: SRB



SAMPLE ANOMALY REPORT

DATE: 06/16 / 2016

SAMPLES, CONTAINERS, AND LABELS:

- Sample(s) NOT RECEIVED but listed on COC
- Sample(s) received but NOT LISTED on COC
- Holding time expired (list client or ECI sample ID and analysis)
- Insufficient sample amount for requested analysis (list analysis)
- Improper container(s) used (list analysis)
- Improper preservative used (list analysis)
- No preservative noted on COC or label (list analysis and notify lab)
- Sample container(s) not labeled
- Client sample label(s) illegible (list container type and analysis)
- Client sample label(s) do not match COC (comment)
 - Project information
 - Client sample ID
 - Sampling date and/or time
 - Number of container(s)
 - Requested analysis
- Sample container(s) compromised (comment)
 - Broken
 - Water present in sample container
- Air sample container(s) compromised (comment)
 - Flat
 - Very low in volume
 - Leaking (not transferred; duplicate bag submitted)
 - Leaking (transferred into ECI Tedlar™ bags*)
 - Leaking (transferred into client's Tedlar™ bags*)

* Transferred at client's request.

MISCELLANEOUS: (Describe)

Comments

Comments

HEADSPACE:

(Containers with bubble > 6 mm or ¼ inch for volatile organic or dissolved gas analysis)

ECI Sample ID	ECI Container ID	Total Number**	ECI Sample ID	ECI Container ID	Total Number**

(Containers with bubble for other analysis)

ECI Sample ID	ECI Container ID	Total Number**	Requested Analysis
1,3,4,6,7	J	1	Ferrous Iron

Comments: _____

Reported by: 836
 Reviewed by: 15/30

** Record the total number of containers (i.e., vials or bottles) for the affected sample.



Appendix E

Groundwater Monitoring and Sampling Data for Unocal No. 6129

Table 1
Current Groundwater Monitoring Data and Analytical Results
Unocal #6129 (351639)
3420 35th Avenue
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
MW-1	190.79	6/15/2016	29.64	161.15	0	89	<0.50	<0.50	<0.50	<1.0	
MW-2	190.80	6/15/2016	29.35	161.45	0	<50	<0.50	<0.50	<0.50	<1.0	
MW-3	188.58	6/15/2016	28.64	159.94	0	550	<0.50	<0.50	<0.50	<1.0	
QA	--	6/15/2016	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	

NOTES:

* TOC and GWE are in feet above mean sea level.

BTEX compounds analyzed by Environmental Protection Agency Method 8260B

TPH-g analyzed by Leaking underground fuel tank-gas chromatography/mass spectrometry (Luft-GC/MS) method

µg/L = Micrograms per liter

<# = Analyte not detected at or above indicated laboratory practical quantitation limit

-- = Not available

B = Benzene

DTW = Depth to water below TOC

E = Ethylbenzene

ft = Feet

GWE = Groundwater elevation

ID = Identification

LNAPL = Light non-aqueous phase liquid

QA = Quality assurance/trip blank

T = Toluene

TOC = Top of casing

TPH-g = Total petroleum hydrocarbons as gasoline; reported as total purgeable petroleum hydrocarbons by the laboratory

X = Total Xylenes

Table 2
Current Groundwater Analytical Results - Oxygenate Compounds
Unocal #6129 (351639)
3420 35th Avenue
Oakland, California

WELL ID	DATE	MTBE (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)
MW-1	6/15/2016	73	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-2	6/15/2016	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-3	6/15/2016	680	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
QA	6/15/2016	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50

NOTES:

Oxygenate compounds analyzed by Environmental Protection Agency Method 8260B

µg/L = Micrograms per liter

<# = Analyte not detected at or above indicated laboratory practical quantitation limit

ID = Identification

DIPE = Diisopropyl ether

EDB = 1,2-Dibromoethane

EDC = 1,2-Dichloroethane

ETBE = Ethyl t-butyl ether

MTBE = Methyl t-butyl ether

QA = Quality assurance/trip blank

TAME = T-amyl methyl ether

TBA = T-butyl alcohol

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal #6129 (351639)
3420 35th Avenue
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
MW-1	190.79	1/5/1990	32.80	157.99	--	<30	<0.30	<0.30	<0.30	<0.30	
screened	190.79	5/11/1990	31.80	158.99	--	<30	<0.30	7.1	<0.30	<0.30	
24 to 44 ft bgs	190.79	8/9/1990	32.37	158.42	--	<30	<0.30	<0.30	<0.30	<0.30	
	190.79	11/14/1990	33.32	157.47	--	<30	<0.30	<0.30	<0.30	<0.30	
	190.79	2/12/1991	33.02	157.77	--	<30	0.32	<0.30	<0.30	<0.30	
	190.79	5/9/1991	30.95	159.84	--	<30	<0.30	<0.30	<0.30	<0.30	
	190.79	11/13/2003	--	--	--	180	<1.0	<1.0	<1.0	<2.0	
	190.79	8/27/2004	30.65	160.14	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	11/23/2004	29.35	161.44	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	2/9/2005	26.89	163.90	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	5/17/2005	26.56	164.23	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	7/27/2005	27.33	163.46	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	12/6/2005	29.59	161.20	0	<50	<0.50	0.93	<0.50	1.80	
	190.79	2/21/2006	28.27	162.52	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	6/8/2006	26.07	164.72	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	9/15/2006	28.86	161.93	0	<50	<0.50	<0.50	<0.50	<0.50	
	190.79	12/14/2006	29.49	161.30	0	<50	<0.50	<0.50	<0.50	<0.50	
	190.79	3/28/2007	27.24	163.55	0	<50	<0.50	<0.50	<0.50	<0.50	
	190.79	6/25/2007	28.30	162.49	0	<50	<0.50	<0.50	<0.50	<0.50	
	190.79	9/22/2007	30.61	160.18	0	<50	<0.50	<0.50	<0.50	<0.50	
	190.79	12/14/2007	30.30	160.49	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	3/17/2008	27.22	163.57	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	6/20/2008	30.10	160.69	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	9/11/2008	31.04	159.75	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	11/25/2008	30.88	159.91	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	3/9/2009	27.50	163.29	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	5/28/2009	28.25	162.54	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	12/11/2009	30.60	160.19	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	5/7/2010	26.06	164.73	0	67	<0.50	<0.50	<0.50	<1.0	
	190.79	11/1/2010	30.18	160.61	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	5/27/2011	26.87	163.92	0	110	<0.50	<0.50	<0.50	<1.0	
	190.79	11/23/2011	29.14	161.65	0	1,101	<0.50	<0.50	<0.50	<1.0	

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal #6129 (351639)
3420 35th Avenue
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
	190.79	5/24/2012	26.58	164.21	0	140	<0.50	<0.50	<0.50	<1.0	
	190.79	10/23/2012	30.51	160.28	0	130	<0.50	<0.50	<0.50	<1.0	
	190.79	5/2/2013	28.30	162.49	0	150	<0.50	<0.50	<0.50	<1.0	
	190.79	11/13/2013	31.65	159.14	0	240	<0.50	<0.50	<0.50	<1.0	
	190.79	5/12/2014	28.95	161.84	0	98	<0.50	<0.50	<0.50	<1.0	
	190.79	11/19/2014	31.50	159.29	0	130	<0.50	<0.50	<0.50	<1.0	
	190.79	6/17/2015	29.27	161.52	0	52	<0.50	<0.50	<0.50	<1.0	
	190.79	12/15/2015	31.76	159.03	0	60	<0.50	<0.50	<0.50	<1.0	
	190.79	6/15/2016	29.64	161.15	0	89	<0.50	<0.50	<0.50	<1.0	
MW-2	190.80	1/5/1990	33.02	157.78	--	<30	<0.30	<0.30	<0.30	<0.30	
screened	190.80	5/11/1990	31.98	158.82	--	<30	<0.30	<0.30	<0.30	<0.30	
24 to 44 ft bgs	190.80	8/9/1990	32.45	158.35	--	<30	<0.30	<0.30	<0.30	<0.30	
	190.80	11/14/1990	33.47	157.33	--	<30	<0.30	<0.30	<0.30	<0.30	
	190.80	2/12/1991	33.15	157.65	--	<30	<0.30	0.42	<0.30	0.51	
	190.80	5/9/1991	30.88	159.92	--	<30	<0.30	>0.30	<0.30	<0.30	
	190.80	11/13/2003	--	--	--	<2,000	<20	<20	<20	<40	
	190.80	8/27/2004	30.28	160.52	0	950	<5.0	<5.0	<5.0	<10	
	190.80	11/23/2004	28.75	162.05	0	53	<0.50	<0.50	<0.50	<1.0	
	190.80	2/9/2005	26.08	164.72	0	<500	<0.50	<0.50	<0.50	<1.0	
	190.80	5/17/2005	24.53	166.27	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.80	7/27/2005	27.51	163.29	0	<500	<5.0	<5.0	<5.0	<10	
	190.80	12/6/2005	29.13	161.67	0	340	<0.50	<0.50	<0.50	<1.0	
	190.80	2/21/2006	29.23	161.57	0	190	<0.50	<0.50	<0.50	<1.0	
	190.80	6/8/2006	25.76	165.04	0	<500	<5.0	<5.0	<5.0	<10	
	190.80	9/15/2006	29.17	161.63	0	<500	<5.0	<5.0	<5.0	<5.0	
	190.80	12/14/2006	29.11	161.69	0	520	<0.50	<0.50	<0.50	<0.50	
	190.80	3/28/2007	26.68	164.12	0	290	<0.50	<0.50	<0.50	<0.50	
	190.80	6/25/2007	25.91	164.89	0	<50	<0.50	<0.50	<0.50	<0.50	
	190.80	9/22/2007	30.18	160.62	0	400	<0.50	<0.50	<0.50	<0.50	
	190.80	12/14/2007	29.96	160.84	0	400	<0.50	<0.50	<0.50	<1.0	
	190.80	3/17/2008	26.74	164.06	0	570	<5.0	<5.0	<5.0	<10	

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal #6129 (351639)
3420 35th Avenue
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
190.80		6/20/2008	29.78	161.02	0	580	<0.50	<0.50	<0.50	<1.0	
190.80		9/11/2008	30.62	160.18	0	220	<0.50	<0.50	<0.50	<1.0	
190.80		11/25/2008	30.48	160.32	0	500	<0.50	<0.50	<0.50	<1.0	
190.80		3/9/2009	25.75	165.05	0	910	<5.0	<5.0	<5.0	<10	
190.80		5/28/2009	27.71	163.09	0	460	<0.50	<0.50	<0.50	<1.0	
190.80		12/11/2009	29.80	161.00	0	640	<5.0	<5.0	<5.0	<10	
190.80		5/7/2010	25.11	165.69	0	600	<1.0	<1.0	<1.0	<2.0	
190.80		11/1/2010	29.90	160.90	0	140	<0.50	<0.50	<0.50	<1.0	
190.80		5/27/2011	26.44	164.36	0	560	<0.50	<0.50	<0.50	<1.0	
190.80		11/23/2011	28.53	162.27	0	830	<0.50	<0.50	<0.50	<1.0	
190.80		5/24/2012	25.97	164.83	0	1,000	<0.50	<0.50	<0.50	<1.0	
190.80		10/23/2012	30.14	160.66	0	750	<0.50	<0.50	<0.50	<1.0	
190.80		5/2/2013	27.14	163.66	0	290	<0.50	<0.50	<0.50	<1.0	
190.80		11/13/2013	31.37	159.43	0	1,200	<0.50	<0.50	<0.50	<1.0	
190.80		5/12/2014	28.49	162.31	0	260	<0.50	<0.50	<0.50	<1.0	
190.80		11/19/2014	31.46	159.34	0	430	<0.50	<0.50	<0.50	<1.0	
190.80		6/17/2015	29.70	161.10	0	<50	<0.50	<0.50	<0.50	<1.0	
190.80		12/15/2015	31.71	159.09	0	680	<0.50	<0.50	<0.50	<1.0	
190.80		6/15/2016	29.35	161.45	0	<50	<0.50	<0.50	<0.50	<1.0	
MW-3											
screened	188.58	1/5/1990	31.88	156.70	--	<30	<0.30	<0.30	<0.30	<0.30	
23 to 43 ft bgs	188.58	5/11/1990	31.25	157.33	--	<30	<0.30	<0.30	<0.30	<0.30	
	188.58	8/9/1990	31.53	157.05	--	<30	<0.30	<0.30	<0.30	<0.30	
	188.58	11/14/1990	33.30	155.28	--	<30	<0.30	<0.30	<0.30	<0.30	
	188.58	2/12/1991	32.05	156.53	--	<30	<0.30	<0.30	<0.30	<0.30	
	188.58	5/9/1991	30.37	158.21	--	<30	<0.30	<0.30	<0.30	<0.30	
	188.58	11/13/2003	--	--	--	2,600	<20	<20	<20	<40	
	188.58	8/27/2004	29.61	158.97	0	1,700	<10	<10	<10	<20	
	188.58	11/23/2004	28.48	160.10	0	1,500	<10	<10	<10	<20	
	188.58	2/9/2005	26.45	162.13	0	<1,000	<0.50	<0.50	<0.50	<1.0	
	188.58	5/17/2005	25.61	162.97	0	<1,000	<0.50	<0.50	<0.50	<1.0	
	188.58	7/27/2005	27.35	161.23	0	<1,000	<10	<10	<10	<20	

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal #6129 (351639)
3420 35th Avenue
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
188.58		12/6/2005	28.78	159.80	0	430	<0.50	1.6	<0.50	3.6	
188.58		2/21/2006	28.91	159.67	0	420	<0.50	<0.50	<0.50	<1.0	
188.58		6/8/2006	25.97	162.61	0	<1,200	<12	<12	<12	<25	
188.58		9/15/2006	28.73	159.85	0	<1,200	<12	<12	<12	<12	
188.58		12/14/2006	28.62	159.96	0	<1,000	<10	<10	<10	<10	
188.58		3/28/2007	26.69	161.89	0	500	<1.0	<1.0	<1.0	<1.0	
188.58		6/25/2007	26.74	161.84	0	270	<0.50	<0.50	<0.50	<0.50	
188.58		9/22/2007	29.57	159.01	0	500	<0.50	<0.50	<0.50	<0.50	
188.58		12/14/2007	29.30	159.28	0	270	<0.50	<0.50	<0.50	<1.0	
188.58		3/17/2008	26.82	161.76	0	220	<0.50	<0.50	<0.50	<1.0	
188.58		6/20/2008	29.10	159.48	0	490	<0.50	<0.50	<0.50	<1.0	
188.58		9/11/2008	29.89	158.69	0	630	<5.0	<5.0	<5.0	<10	
188.58		11/25/2008	29.74	158.84	0	380	<0.50	<0.50	<0.50	<1.0	
188.58		3/9/2009	25.56	163.02	0	310	<0.50	<0.50	<0.50	<1.0	
188.58		5/28/2009	27.55	161.03	0	410	<0.50	<0.50	<0.50	<1.0	
188.58		12/11/2009	29.10	159.48	0	220	<0.50	<0.50	<0.50	<1.0	
188.58		5/7/2010	25.72	162.86	0	360	<0.50	<0.50	<0.50	<1.0	
188.58		11/1/2010	29.29	159.29	0	120	<0.50	<0.50	<0.50	<1.0	
188.58		5/27/2011	26.53	162.05	0	340	<0.50	<0.50	<0.50	<1.0	
188.58		5/24/2012	25.95	162.63	0	660	<0.50	<0.50	<0.50	<1.0	
188.58		10/23/2012	29.39	159.19	0	480	<0.50	<0.50	<0.50	<1.0	
188.58		5/2/2013	26.98	161.60	0	130	<0.50	<0.50	<0.50	<1.0	
188.58		11/13/2013	30.28	158.30	0	110	<0.50	<0.50	<0.50	<1.0	
188.58		5/12/2014	27.93	160.65	0	98	<0.50	<0.50	<0.50	<1.0	
188.58		11/19/2014	30.22	158.36	0	180	<0.50	<0.50	<0.50	<1.0	
188.58		6/17/2015	28.75	159.83	0	220	<0.50	<0.50	<0.50	<1.0	
188.58		12/15/2015	30.45	159.83	0	220	<0.50	<0.50	<0.50	<1.0	
188.58		6/15/2016	28.64	159.94	0	550	<0.50	<0.50	<0.50	<1.0	
QA	--	12/15/2015	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	
	--	6/15/2016	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal #6129 (351639)
3420 35th Avenue
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
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NOTES:

* TOC and GWE are in feet above mean sea level.

µg/L = Micrograms per liter

<# = Analyte not detected at or above indicated laboratory practical quantitation limit

-- = Not available

B = Benzene

bgs = Below ground surface

DTW = Depth to water below TOC

E = Ethylbenzene

ft = Feet

GWE = Groundwater elevation

ID = Identification

LNAPL = Light Non-Aqueous Phase Liquid

QA = Quality assurance/trip blank

T = Toluene

TOC = Top of casing

TPH-g = Total petroleum hydrocarbons as gasoline; reported as total purgeable petroleum hydrocarbons by the laboratory

X = Total Xylenes

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal #6129 (351639)
3420 35th Avenue
Oakland, California

WELL ID	DATE	MTBE (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)
MW-1	1/5/1990	--	--	--	--	--	--	--	--
	5/11/1990	--	--	--	--	--	--	--	--
	8/9/1990	--	--	--	--	--	--	--	--
	11/14/1990	--	--	--	--	--	--	--	--
	2/12/1991	--	--	--	--	--	--	--	--
	5/9/1991	--	--	--	--	--	--	--	--
	11/13/2003	240	<200	<1,000	<4.0	<4.0	<4.0	<4.0	<4.0
	8/27/2004	<0.50	<5.0	<50	<0.50	<1.0	<0.50	<0.50	<0.50
	11/23/2004	<0.50	<5.0	<50	<0.50	<1.0	<0.50	<0.50	<0.50
	2/9/2005	9.3	<5.0	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	5/17/2005	1.9	<5.0	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	7/27/2005	<0.50	<5.0	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	12/6/2005	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	2/21/2006	2.6	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/8/2006	11	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	9/15/2006	1.4	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	12/14/2006	3.5	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	3/28/2007	0.64	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/25/2007	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	9/22/2007	4.10	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	12/14/2007	0.65	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	3/17/2008	14	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/20/2008	11	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	9/11/2008	1.3	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	11/25/2008	5.8	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	3/9/2009	25	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	5/28/2009	17	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
12/11/2009	18	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	
5/7/2010	64	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	
11/1/2010	92	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	
5/27/2011	220	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal #6129 (351639)
3420 35th Avenue
Oakland, California

WELL ID	DATE	MTBE (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)
	11/23/2011	150	41	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	5/24/2012	190	66	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	10/23/2012	140	47	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	5/2/2013	270	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	11/13/2013	270	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	5/12/2014	170	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	11/19/2014	180	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/17/2015	100	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	12/15/2015	48	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/15/2016	73	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-2	1/5/1990	--	--	--	--	--	--	--	--
	5/11/1990	--	--	--	--	--	--	--	--
	8/9/1990	--	--	--	--	--	--	--	--
	11/14/1990	--	--	--	--	--	--	--	--
	2/12/1991	--	--	--	--	--	--	--	--
	5/9/1991	--	--	--	--	--	--	--	--
	11/13/2003	2,100	<4,000	<20,000	<80	<80	<80	<80	<80
	8/27/2004	1,400	<5.0	<500	<5.0	24	<5.0	<5.0	<5.0
	11/23/2004	4.2	<5.0	<50	<0.50	18	<0.50	<0.50	<0.50
	2/9/2005	400	<5.0	<500	<5.0	19	<5.0	<5.0	<5.0
	5/17/2005	330	<5.0	<50	<0.50	12	<0.50	<0.50	<0.50
	7/27/2005	580	140	<500	<5.0	16	<5.0	<5.0	<5.0
	12/6/2005	780	61	<250	<0.50	15	<0.50	<0.50	<0.50
	2/21/2006	340	<10	<250	<0.50	18	<0.50	<0.50	<0.50
	6/8/2006	440	<100	<2,500	<5.0	14	<5.0	<5.0	<5.0
	9/15/2006	570	<100	<2,500	<5.0	17	<5.0	<5.0	<5.0
	12/14/2006	770	27	<250	<0.50	20	<0.50	<0.50	<0.50
	3/28/2007	460	260	<250	<0.50	23	<0.50	<0.50	<0.50
	6/25/2007	1.2	<10	<250	<0.50	23	<0.50	<0.50	<0.50
	9/22/2007	530	<10	<250	<0.50	35	<0.50	<0.50	<0.50

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal #6129 (351639)
3420 35th Avenue
Oakland, California

WELL ID	DATE	MTBE (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)
	12/14/2007	930	48	<250	<0.50	24	<0.50	<0.50	<0.50
	3/17/2008	630	<100	<2,500	<5.0	18	<5.0	<5.0	<5.0
	6/20/2008	1,200	<10	<250	<0.50	16	<0.50	<0.50	<0.50
	9/11/2008	29	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	11/25/2008	1,500	<10	<250	<0.50	19	<0.50	<0.50	<0.50
	3/9/2009	1,400	<100	<2,500	<5.0	15	<5.0	<5.0	<5.0
	5/28/2009	740	<10	<250	<0.50	20	<0.50	<0.50	<0.50
	12/11/2009	1,300	<100	<2,500	<5.0	19	<5.0	<5.0	<5.0
	5/7/2010	940	<20	<500	<1.0	14	<1.0	<1.0	<1.0
	11/1/2010	730	<10	<250	<0.50	28	<0.50	<0.50	<0.50
	5/27/2011	1,100	210	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	11/23/2011	1,500	400	<250	<0.50	9.00	<0.50	<0.50	<0.50
	5/24/2012	1,200	430	<250	<0.50	8.8	<0.50	<0.50	<0.50
	10/23/2012	1,300	420	<250	<0.50	14	<0.50	<0.50	<0.50
	5/2/2013	460	<10	<250	6.2	<0.50	<0.50	<0.50	<0.50
	11/13/2013	1,300	<10	<250	17	<0.50	<0.50	<0.50	<0.50
	5/12/2014	510	44	<250	12	<0.50	<0.50	<0.50	<0.50
	11/19/2014	980	<10	<250	31	<0.50	<0.50	<0.50	<0.50
	6/17/2015	25	<10	<250	3.1	<0.50	<0.50	<0.50	<0.50
	12/15/2015	1,300	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/15/2016	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-3	1/5/1990	--	--	--	--	--	--	--	--
	5/11/1990	--	--	--	--	--	--	--	--
	8/9/1990	--	--	--	--	--	--	--	--
	11/14/1990	--	--	--	--	--	--	--	--
	2/12/1991	--	--	--	--	--	--	--	--
	5/9/1991	--	--	--	--	--	--	--	--
	11/13/2003	3,700	<4,000	<20,000	<80	<80	<80	<80	<80
	8/27/2004	2,600	<100	<1,000	<10	<20	<10	<10	<10
	11/23/2004	1,800	<100	<1,000	<10	<20	<10	<10	<10

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal #6129 (351639)
3420 35th Avenue
Oakland, California

WELL ID	DATE	MTBE (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)
	2/9/2005	2,100	130	<1,000	<10	<10	<10	<10	<10
	5/17/2005	1,200	<100	<1,000	<10	<10	<10	<10	<10
	7/27/2005	1,400	360	<1,000	<10	<10	<10	<10	<10
	12/6/2005	1,800	160	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	2/21/2006	1,100	88	<250	<0.50	<0.50	0.58	<0.50	<0.50
	6/8/2006	1,000	<250	<6,200	<12	<12	<12	<12	<12
	9/15/2006	1,200	<250	<6,200	<12	<12	<12	<12	<12
	12/14/2006	1,300	<200	<5,000	<10	<10	<10	<10	<10
	3/28/2007	860	500	<500	<1.0	<1.0	<1.0	<1.0	<1.0
	6/25/2007	570	11	<250	<0.50	<0.50	<0.50	<0.50	0.65
	9/22/2007	980	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	12/14/2007	570	26	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	3/17/2008	520	<10	<250	<0.50	<0.50	<0.50	<0.50	0.65
	6/20/2008	1,300	49	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	9/11/2008	1,200	<100	<2,500	<5.0	<5.0	<5.0	<5.0	<5.0
	11/25/2008	870	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	3/9/2009	720	15	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	5/28/2009	750	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	12/11/2009	620	63	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	5/7/2010	660	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	11/1/2010	490	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	5/27/2011	890	73	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	5/24/2012	1,100	300	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	10/23/2012	500	160	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	5/2/2013	220	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	11/13/2013	100	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	5/12/2014	160	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	11/19/2014	250	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/17/2015	570	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	12/15/2015	240	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/15/2016	680	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal #6129 (351639)
3420 35th Avenue
Oakland, California

WELL ID	DATE	MTBE (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)
QA	12/15/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/15/2016	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50

NOTES:

µg/L = Micrograms per liter

<# = Analyte not detected at or above indicated laboratory practical quantitation limit

-- = Not available/not sampled

DIPE = Diisopropyl ether

EDB = 1,2-Dibromoethane

EDC = 1,2-Dichloroethane

ETBE = Ethyl t-butyl ether

MTBE = Methyl t-butyl ether

QA = Quality assurance/trip blank

TAME = T-amyl methyl ether

TBA = T-butyl alcohol