

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

Jennifer C. Sedlachek
Project Manager

ExxonMobil

December 18, 2014

RECEIVED

By Alameda County Environmental Health at 2:09 pm, Dec 24, 2014

Ms. Karel Detterman
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Room 250
Alameda, California 94502-6577

RE: Former Mobil RAS #99105/6301 San Pablo Avenue, Oakland, California.

Dear Ms. Detterman:

Attached for your review and comment is a copy of the letter report entitled ***Groundwater Monitoring Reporting, Fourth Quarter 2014***, dated December 18, 2014, for the above-referenced site. The report was prepared by Cardno ERI of Petaluma, California, and details activities at the subject site.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

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

Sincerely,



Jennifer C. Sedlachek
Project Manager

Attachment: Cardno ERI's ***Groundwater Monitoring Reporting, Fourth Quarter 2014***, dated December 18, 2014
December 18, 2014

cc: w/ attachment
Mr. Leroy Griffin, Oakland Fire Department
Messrs. On Dan and Nathan Lam

w/o attachment
Mr. Greg Gurss, Cardno ERI

December 18, 2014
Cardno ERI 2783C.Q144

Ms. Jennifer C. Sedlachek
ExxonMobil Environmental Services Company
4096 Piedmont Avenue, #194
Oakland, California 94611

Cardno ERI
License A/C10/C36-611383

601 North McDowell Blvd.
Petaluma, CA 94954

Phone +1 707 766 2000
Fax +1 707 789 0414
www.cardno.com

www.cardnoeri.com

SUBJECT **Groundwater Monitoring Report, Fourth Quarter 2014**
Former Mobil Service Station 99105
6301 San Pablo Avenue, Oakland, California

INTRODUCTION

At the request of ExxonMobil Environmental Services (EMES), on behalf of ExxonMobil Oil Corporation, Cardno ERI performed fourth quarter 2014 groundwater monitoring and sampling activities at the subject site. Relevant plates, graphs, tables, and appendices are included at the end of this report. Currently, the site operates as an oil change facility.

GROUNDWATER MONITORING AND SAMPLING SUMMARY

Gauging and sampling date:	11/06/14
Wells gauged and sampled:	MW6 through MW8
Presence of NAPL:	None
Groundwater flow direction:	Southwest
Laboratory:	Eurofins Calscience, Inc., Garden Grove, California
Analyses performed:	EPA Method 8015B TPHd, TPHg EPA Method 8260B BTEX, MTBE, TAME, TBA, DIPE, EDB, 1,2-DCA, ETBE
Waste disposal:	40 gallons purge and decon water delivered to Instrat, Inc. of Rio Vista, California, on 12/17/14

SOIL VAPOR MONITORING AND SAMPLING SUMMARY

Cardno ERI anticipated collecting soil vapor samples in tedlar bags and field screening them with a PID to further evaluate the need for additional high-intensity targeted events. Cardno ERI scheduled this work for December 2014; however, due to weather conditions, the work was not able to be performed. The soil vapor screening will be scheduled as weather permits (five days with less than 0.5 inch of rain).

December 18, 2014
 Cardno ERI 2783C.Q144 Former Mobil Service Station 99105, Oakland, California

RESULTS AND CONCLUSIONS

Newly-installed wells MW6 through MW8 were sampled during fourth quarter 2014. The remaining site wells are sampled on a semi-annual basis during the first and third quarter. Maximum dissolved-phase petroleum hydrocarbon concentrations at the site are present in well MW5, located downgradient of the former dispenser islands. Concentrations in the site wells show overall stable or decreasing trends.

Concentrations at the site are adequately delineated:

- Toward the north by former well MW1.
- Toward the northwest by well MW2.
- Toward the west by borings B6 through B8 and AB11.

RECOMMENDATIONS

Cardno ERI recommends continued groundwater monitoring and sampling and collecting and field screening soil vapor samples in first quarter 2015. Recommendations regarding future soil vapor sampling will be based on the results of the field screening.

LIMITATIONS

For documents cited that were not generated by Cardno ERI, the data taken from those documents is used "as is" and is assumed to be accurate. Cardno ERI does not guarantee the accuracy of this data and makes no warranties for the referenced work performed nor the inferences or conclusions stated in these documents.

This document and the work performed have been undertaken in good faith, with due diligence and with the expertise, experience, capability, and specialized knowledge necessary to perform the work in a good and workmanlike manner and within all accepted standards pertaining to providers of environmental services in California at the time of investigation. No soil engineering or geotechnical references are implied or should be inferred. The evaluation of the geologic conditions at the site for this investigation is made from a limited number of data points. Subsurface conditions may vary away from these data points.

Please contact Mr. Greg Gurss, Cardno ERI's project manager for this site, at greg.gurss@cardno.com or at (916) 692-3130 with any questions regarding this report.

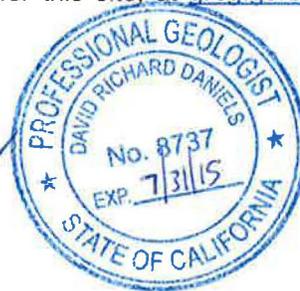
Sincerely,

SCANNED
 IMAGE
 Christine M. Capwell

Christine M. Capwell
 Senior Technical Editor
 for Cardno ERI
 707 766 2000
 Email: christine.capwell@cardno.com

SCANNED
 IMAGE
 David R. Daniels

David R. Daniels
 P.G. 8737
 for Cardno ERI
 707 766 2000
 Email: david.daniels@cardno.com



December 18, 2014
Cardno ERI 2783C.Q144 Former Mobil Service Station 99105, Oakland, California

Enclosures:

Acronym List

Plate 1	Site Vicinity Map
Plate 2	Select Analytical Results
Plate 3	Groundwater Elevation Map
Table 1A	Cumulative Groundwater Monitoring and Sampling Data
Table 1B	Additional Cumulative Groundwater Monitoring and Sampling Data
Table 2	Well Construction Details
Appendix A	Groundwater Sampling Protocol
Appendix B	Field Data Sheets
Appendix C	Laboratory Analytical Report
Appendix D	Waste Disposal Documentation

cc: Ms. Karel Detterman, Alameda County Health Care Services Agency, 1131 Harbor Bay Parkway, 2nd Floor, Alameda, California, 94502

Mr. Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa, Suite 3341, Oakland, California, 94612

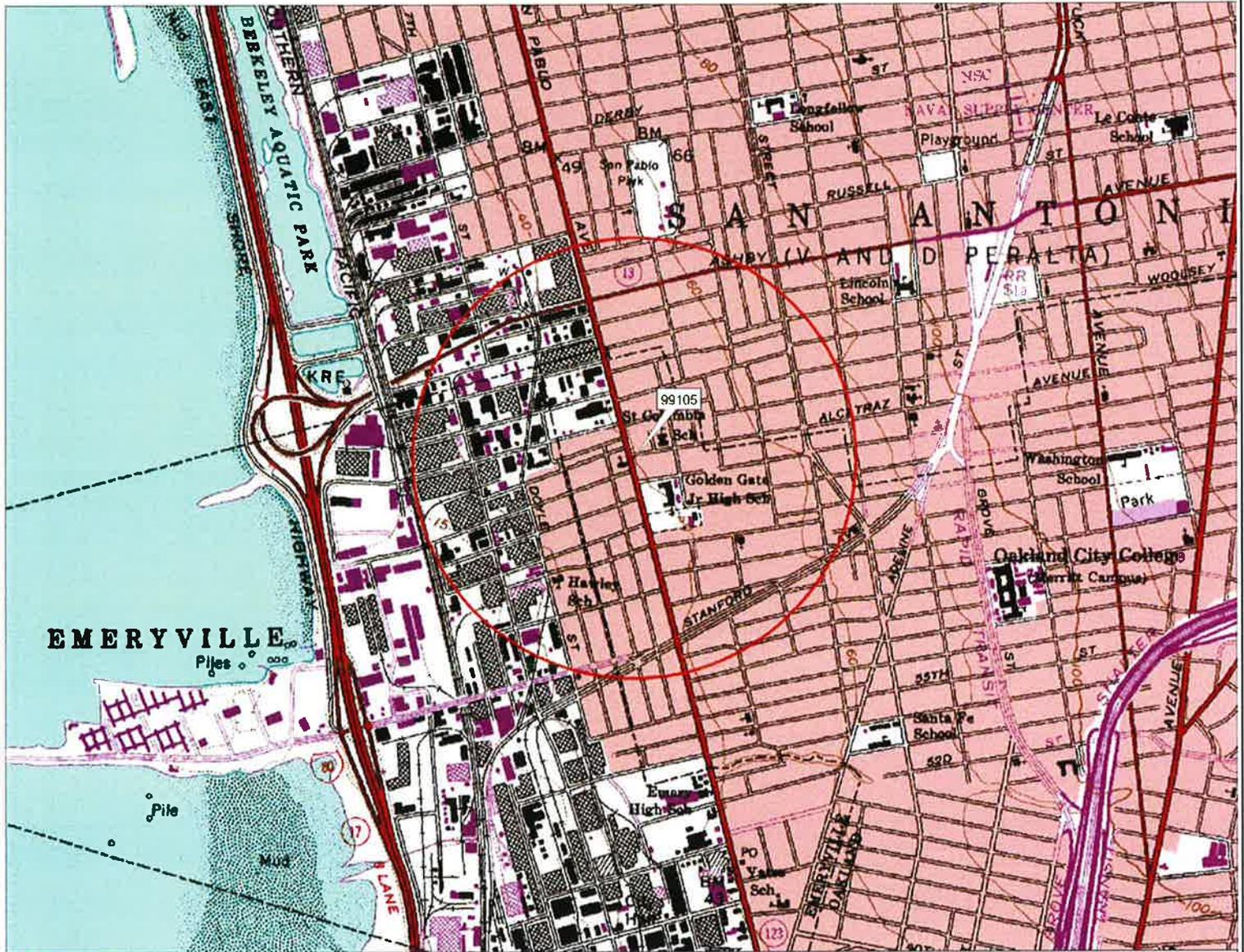
Messrs. On Dan and Nathan Lam, 200 El Dorado Terrace, San Francisco, California, 94112

December 18, 2014

Cardno ERI 2783C.Q144 Former Mobil Service Station 99105, Oakland, California

ACRONYM LIST

µg/L	Micrograms per liter	NEPA	National Environmental Policy Act
µs	Microsiemens	NGVD	National Geodetic Vertical Datum
1,2-DCA	1,2-dichloroethane	NPDES	National Pollutant Discharge Elimination System
acfm	Actual cubic feet per minute	O&M	Operations and Maintenance
AS	Air sparge	ORP	Oxidation-reduction potential
bgs	Below ground surface	OSHA	Occupational Safety and Health Administration
BTEX	Benzene, toluene, ethylbenzene, and total xylenes	OVA	Organic vapor analyzer
CEQA	California Environmental Quality Act	P&ID	Process & Instrumentation Diagram
cfm	Cubic feet per minute	PAH	Polycyclic aromatic hydrocarbon
COC	Chain of Custody	PCB	Polychlorinated biphenyl
CPT	Cone Penetration (Penetrometer) Test	PCE	Tetrachloroethene or perchloroethylene
DIPE	Di-isopropyl ether	PID	Photo-ionization detector
DO	Dissolved oxygen	PLC	Programmable logic control
DOT	Department of Transportation	POTW	Publicly owned treatment works
DPE	Dual-phase extraction	ppmv	Parts per million by volume
DTW	Depth to water	PQL	Practical quantitation limit
EDB	1,2-dibromoethane	psi	Pounds per square inch
EPA	Environmental Protection Agency	PVC	Polyvinyl chloride
ESL	Environmental screening level	QA/QC	Quality assurance/quality control
ETBE	Ethyl tertiary butyl ether	RBSL	Risk-based screening levels
FID	Flame-ionization detector	RCRA	Resource Conservation and Recovery Act
fpm	Feet per minute	RL	Reporting limit
GAC	Granular activated carbon	scfm	Standard cubic feet per minute
gpd	Gallons per day	SSTL	Site-specific target level
gpm	Gallons per minute	STLC	Soluble threshold limit concentration
GWPTS	Groundwater pump and treat system	SVE	Soil vapor extraction
HVOC	Halogenated volatile organic compound	SVOC	Semivolatile organic compound
J	Estimated value between MDL and PQL (RL)	TAME	Tertiary amyl methyl ether
LEL	Lower explosive limit	TBA	Tertiary butyl alcohol
LPC	Liquid-phase carbon	TCE	Trichloroethene
LRP	Liquid-ring pump	TOC	Top of well casing elevation; datum is msl
LUFT	Leaking underground fuel tank	TOG	Total oil and grease
LUST	Leaking underground storage tank	TPHd	Total petroleum hydrocarbons as diesel
MCL	Maximum contaminant level	TPHg	Total petroleum hydrocarbons as gasoline
MDL	Method detection limit	TPHmo	Total petroleum hydrocarbons as motor oil
mg/kg	Milligrams per kilogram	TPHs	Total petroleum hydrocarbons as stoddard solvent
mg/L	Milligrams per liter	TRPH	Total recoverable petroleum hydrocarbons
mg/m ³	Milligrams per cubic meter	UCL	Upper confidence level
MPE	Multi-phase extraction	USCS	Unified Soil Classification System
MRL	Method reporting limit	USGS	United States Geologic Survey
msl	Mean sea level	UST	Underground storage tank
MTBE	Methyl tertiary butyl ether	VCP	Voluntary Cleanup Program
MTCA	Model Toxics Control Act	VOC	Volatile organic compound
NAI	Natural attenuation indicators	VPC	Vapor-phase carbon
NAPL	Non-aqueous phase liquid		



DELORME

© 2002 DeLorme, 3-D TopoQuads. Data copyright of content owner. www.delorme.com

FN 2783TOPO

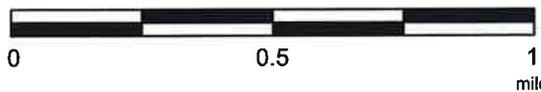
EXPLANATION



1/2-mile radius circle



APPROXIMATE SCALE



SOURCE:
Modified from a map
provided by
DeLorme 3-D TopoQuads



SITE VICINITY MAP
FORMER MOBIL SERVICE STATION 99105
6301 San Pablo Avenue
Oakland, California

PROJECT NO.

2783

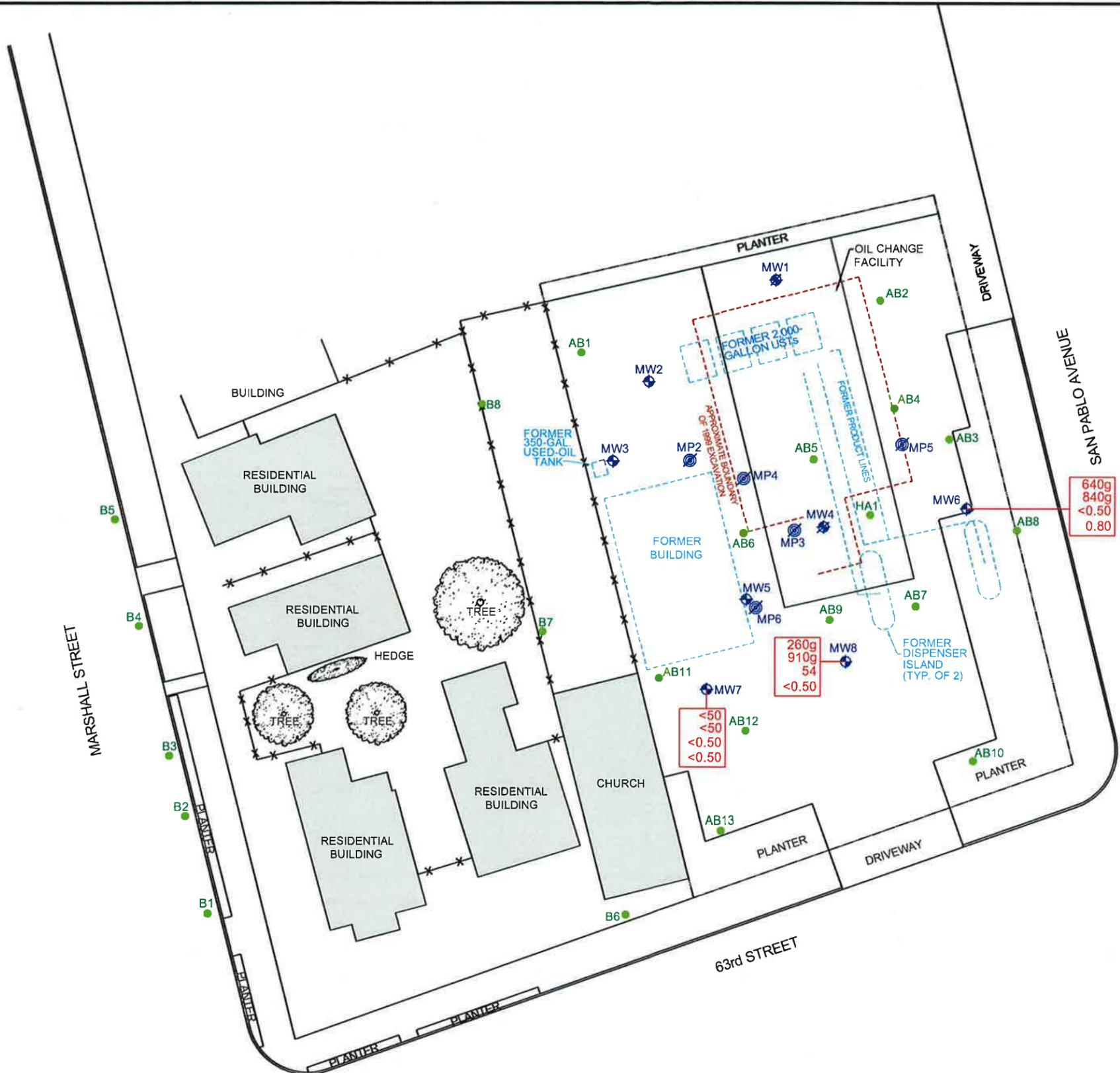
PLATE

1

Analyte Concentrations in ug/L
 Sampled November 6, 2014

- Total Petroleum Hydrocarbons as diesel
- Total Petroleum Hydrocarbons as gasoline
- Benzene
- Methyl Tertiary Butyl Ether

- < Less than the Stated Laboratory Reporting Limit
- ug/L Micrograms per Liter
- g Chromatographic pattern does not match that of the specified standard.

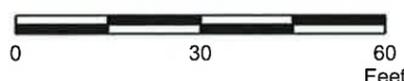


640g
 840g
 <0.50
 0.80

260g
 910g
 54
 <0.50

<50
 <50
 <0.50
 <0.50

APPROXIMATE SCALE



FN 2783 14 4QTR QM

SELECT ANALYTICAL RESULTS November 6, 2014

FORMER MOBIL SERVICE STATION 99105
 6301 San Pablo Avenue
 Oakland, California

EXPLANATION

- MW8 Groundwater Monitoring Well
- MW4 Destroyed Groundwater Monitoring Well
- MP6 Destroyed Observation Well
- AB13 Soil Boring

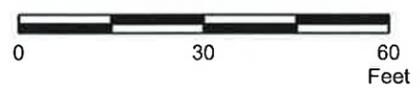


PROJECT NO.
 2783

PLATE
 2



APPROXIMATE SCALE



FN 2783 14 4QTR QM



GROUNDWATER ELEVATION MAP
November 6, 2014
FORMER MOBIL SERVICE STATION 99105
6301 San Pablo Avenue
Oakland, California

EXPLANATION

- MW8 Groundwater Monitoring Well
- 30.34 Groundwater elevation in feet; datum is mean sea level
- MP6 Destroyed Observation Well
- MW4 Destroyed Groundwater Monitoring Well
- AB13 Soil Boring
- 31.0 - - - - Line of Equal Groundwater Elevation; datum is mean sea level

PROJECT NO.
2783
PLATE
3

TABLE 1A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Mobil Service Station 99105
6301 San Pablo Avenue
Oakland, California
(Page 1 of 6)

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE		B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
								8020/8021 (µg/L)	8240/8260 (µg/L)				
Environmental Screening Levels, Groundwater is Current or Potential Drinking Water Source (December 2013)													
Table F-1a		---	---	---	---	100	100	5	5	1	40	30	20
MW1	03/14/96	32.79	4.50	28.29	No	450	610	---	---	0.75	0.54	1.5	59
MW1	05/21/96	32.79	5.64	27.15	No	ND	ND	---	---	ND	ND	ND	ND
MW1	08/13/96	32.79	9.76	23.03	No	ND	ND	---	---	ND	ND	ND	ND
MW1	11/08/96	32.79	10.24	22.55	No	ND	ND	ND	---	ND	0.92	ND	2.1
MW1	01/31/97	32.79	3.83	28.96	No	ND	ND	2.6	ND	ND	0.85	ND	ND
MW1	04/22/97	32.79	9.14	23.65	No	ND	ND	ND	---	ND	ND	ND	ND
MW1	07/29/97	a 32.79	10.18	22.61	No	60e	ND	36	---	0.84	0.95	ND	1.6
MW1	10/09/97	a 32.79	10.46	22.33	No	56e	ND	ND	---	ND	ND	ND	ND
MW1	01/23/98	a 32.79	3.95	28.84	No	33	ND	ND	---	ND	ND	ND	ND
MW1	04/22/98	32.79	5.33	27.46	No	ND	ND	ND	---	ND	ND	ND	ND
MW1	07/21/98	32.79	9.17	23.62	No	---	ND	ND	---	ND	ND	ND	ND
MW1	10/20/98	32.79	10.41	22.38	No	---	ND	ND	---	ND	ND	ND	ND
MW1	01/27/99	32.79	5.51	27.28	No	---	ND	ND	---	ND	ND	ND	ND
MW1	Apr-99	Destroyed during construction activities.											
MW2	03/14/96	32.80	4.51	28.29	No	250	560	---	---	2.0	0.96	4.3	11
MW2	05/21/96	32.80	5.65	27.15	No	560	730	---	---	5.1	1.4	6.7	5.9
MW2	08/13/96	32.80	10.14	22.66	No	380b	490	---	---	25	3.5	7.2	13
MW2	11/08/96	32.80	10.70	22.10	No	160d	520	6.1	---	80	2.7	14	66
MW2	01/31/97	32.80	3.84	28.96	No	130b	74	ND	---	ND	ND	ND	ND
MW2	04/22/97	32.80	9.61	23.19	No	430	260	ND	---	2.7	ND	2.5	ND
MW2	07/29/97	a 32.80	10.53	22.27	No	150d	320	ND	---	28	1.2	10	ND
MW2	10/09/97	a 32.80	10.87	21.93	No	160b	460	2.6	---	43	2.8	2.0	2.6
MW2	01/23/98	a 32.80	3.75	29.05	No	54	ND	ND	---	ND	ND	ND	ND
MW2	04/22/98	32.80	5.36	27.44	No	540	180	ND	---	1.2	0.3	0.4	ND
MW2	07/21/98	32.80	9.55	23.25	No	---	80	ND	---	8.9	2.1	0.6	2.5
MW2	10/20/98	32.80	10.75	22.05	No	---	50	ND	---	0.8	0.7	ND	0.8
MW2	01/27/99	32.80	5.53	27.27	No	---	ND	ND	---	0.6	ND	ND	ND
MW2	07/27/99	32.80	6.20	26.60	No	---	ND	ND	---	ND	0.6	ND	ND
MW2	12/08/99	32.80	9.98	22.82	No	---	ND	ND	---	1.2	0.43	ND	ND
MW2	10/25/00	39.34	11.30	28.04	No	---	<20	<0.30	---	2.0	0.59	0.46	1.3
MW2	01/15/01	39.34	9.41	29.93	No	---	<20	<0.30	---	<0.20	0.46	<0.20	<0.60
MW2	04/10/01	39.34	6.16	33.18	No	---	23	<1.0	---	0.28	<0.20	<0.20	<0.60
MW2	07/24/01	39.34	10.70	28.64	No	---	<50	<0.30	---	<0.20	0.93	<0.20	0.82
MW2	11/27/01	39.34	10.15	29.19	No	---	<50	<0.30	---	1.2	0.22	<0.20	<0.60
MW2	01/18/02	41.99	5.46	36.53	No	---	<50.0	1.40	---	<0.50	<0.50	<0.50	<0.50
MW2	04/10/02	41.99	6.48	35.51	No	---	<50.0	1.80	---	<0.50	<0.50	<0.50	<0.50
MW2	07/12/02	41.99	10.45	31.54	No	---	<50.0	<0.50	---	<0.50	<0.50	<0.50	<0.50
MW2	10/14/02	41.99	11.46	30.53	No	---	<50.0	<0.5	---	<0.5	4.1	0.6	4.0
MW2	01/20/03	41.99	5.39	36.60	No	---	<50.0	0.6	---	<0.50	<0.50	<0.50	<0.50

TABLE 1A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Mobil Service Station 99105
6301 San Pablo Avenue
Oakland, California
(Page 2 of 6)

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8020/8021 (µg/L)	MTBE 8240/8260 (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
Environmental Screening Levels, Groundwater is Current or Potential Drinking Water Source (December 2013)													
Table F-1a		---	---	---	---	100	100	5	5	1	40	30	20
MW2	04/28/03	41.99	5.87	36.12	No	---	<50.0	<0.50	---	<0.50	<0.50	<0.50	<0.50
MW2	07/15/03	41.99	10.31	31.68	No	---	<50	<0.5	---	<0.5	<0.5	<0.5	<0.5
MW2	10/08/03	41.99	11.20	30.79	No	---	<50	<0.5	---	<0.5	<0.5	<0.5	<0.5
MW2	01/15/04	41.99	5.36	36.63	No	---	63.3	1.0	---	0.70	<0.5	<0.5	<0.5
MW2	Well not sampled from 2004 to 2010.												
MW2	09/17/10	41.99	10.72	31.27	No	<50	<50	---	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	12/15/10	42.24	Well resurveyed.										
MW2	09/14/11	42.24	10.02	32.22	No	110g	<50	---	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	01/18/12	42.24	11.24	31.00	No	---	<50	---	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	01/27/12	42.24	9.65	32.59	No	<50	---	---	---	---	---	---	---
MW2	07/09/12	42.24	10.07	32.17	No	<50	<50	---	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	01/25/13	42.24	5.62	36.62	No	<50	<50	---	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	08/23/13	42.24	10.76	31.48	No	<50	<50	---	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	01/10/14	42.24	11.42	30.82	No	<50	<50	---	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	07/14/14	42.24	10.52	31.72	No	<49	<50	---	<0.50	<0.50	<0.50	<0.50	0.52
MW2	08/18/14	42.24	11.06	31.18	No	---	---	---	---	---	---	---	---
MW2	11/06/14	42.24	---	---	---	---	---	---	---	---	---	---	---
MW3	03/14/96	32.80	9.55	23.25	No	1,200	4,200	---	---	220	30	140	520
MW3	05/21/96	32.80	10.16	22.64	No	2,800	8,500	---	---	710	110	440	1,700
MW3	08/13/96	32.80	11.18	21.62	No	2,300c	5,000	---	---	430	ND	200	360
MW3	11/08/96	32.80	11.51	21.29	No	2,900b	8,400	73	ND	890	82	790	1,700
MW3	01/31/97	32.80	7.90	24.90	No	7,500b	16,000	ND	---	660	85	960	1,800
MW3	04/22/97	32.80	10.64	22.16	No	2,700	8,000	200	ND	340	33	400	490
MW3	07/29/97	a 32.80	11.36	21.44	No	2,300b	9,800	ND	---	330	ND	530	530
MW3	10/09/97	a 32.80	11.52	21.28	No	2,600b	7,300	270	ND	300	ND	430	460
MW3	01/23/98	a 32.80	7.50	25.30	No	2,300	6,100	ND	---	190	23	330	320
MW3	04/22/98	32.80	6.81	25.99	No	2,600	4,900	ND	ND	140	12	250	230
MW3	07/21/98	32.80	10.65	22.15	No	---	7,400	74	ND	250	16	400	370
MW3	10/20/98	32.80	11.57	21.23	No	---	6,700	ND	ND	200	18	350	350
MW3	01/27/99	32.80	9.11	23.69	No	---	3,100	13	---	74	4	94	39
MW3	07/27/99	32.80	7.27	25.53	No	---	8,900	ND	---	170	21	360	440
MW3	12/08/99	32.80	10.63	22.17	No	---	4,800	ND	---	94	13	170	210
MW3	10/25/00	39.27	12.08	27.19	No	---	3,800	<50	<5	63	2.9	100	65
MW3	01/15/01	39.27	10.29	28.98	No	---	4,300	<5.0	---	76	9.5	47	76
MW3	04/10/01	39.27	10.11	29.16	No	---	2,700	<20	---	55	4.4	100	37
MW3	07/24/01	39.27	11.57	27.70	No	---	3,100	<1.0	---	110	6.9	110	81
MW3	11/27/01	39.27	10.93	28.34	No	---	2,400	<0.30	---	47	8.9	25	35
MW3	01/18/02	41.71	9.47	32.24	No	---	1,130	13.6	---	15.3	2.30	42.0	24.6
MW3	04/10/02	41.71	10.14	31.57	No	---	916	11.2	---	35.1	3.00	22.5	13.8

TABLE 1A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Mobil Service Station 99105
6301 San Pablo Avenue
Oakland, California
(Page 3 of 6)

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8020/8021 (µg/L)	MTBE 8240/8260 (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
Environmental Screening Levels, Groundwater is Current or Potential Drinking Water Source (December 2013)													
Table F-1a		---	---	---	---	100	100	5	5	1	40	30	20
MW3	07/12/02	41.71	11.34	30.37	No	---	2,330	15.4	---	60.5	2.90	39.8	50.9
MW3	10/14/02	41.71	12.10	29.61	No	---	2,550	<0.5	---	36.9	3.8	20.3	48.0
MW3	01/20/03	41.71	9.20	32.51	No	---	1,750	10.7	---	20.4	304.0	60.7	22.0
MW3	04/28/03	41.71	9.37	32.34	No	---	2,730	11.2	---	10.0	2.7	42.7	20.1
MW3	07/15/03	41.71	11.15	30.56	No	---	1,790	5.6	---	68.8	3.6	39.0	44.7
MW3	10/08/03	41.71	11.89	29.82	No	---	1,320	7.1	---	35.1	4.0	23.6	31.8
MW3	01/15/04	41.71	9.16	32.55	No	---	791	3.4	---	24.4	1.3	40.1	14.7
MW3	Well not sampled from 2004 to 2010.												
MW3	09/17/10	41.71	11.46	30.25	No	99	2,500	---	<0.50	2.6	0.31f	1.8	1.8
MW3	12/15/10	42.18	Well resurveyed.										
MW3	09/14/11	42.18	11.37	30.81	No	270g	1,200	---	<0.50	18	0.95	1.7	1.3
MW3	01/18/12	42.18	12.11	30.07	No	---	910g	---	<0.50	0.89	<0.50	<0.50	0.88
MW3	01/27/12	42.18	10.18	32.00	No	1,000g	---	---	---	---	---	---	---
MW3	07/09/12	42.18	11.15	31.03	No	420g	350g	---	<0.50	7.9	<0.50	<0.50	<0.50
MW3	01/25/13	42.18	9.41	32.77	No	120g	390g	---	<0.50	2.8	<0.50	<0.50	<0.50
MW3	08/23/13	42.18	11.67	30.51	No	310g	640	---	<0.50	1.1	<0.50	<0.50	<0.50
MW3	01/10/14	42.18	12.13	30.05	No	160g	720g	---	<0.50	<0.50	<0.50	<0.50	<0.50
MW3	07/14/14	42.18	11.55	30.63	No	320g	1,100g	---	<0.50	1.8	<0.50	<0.50	0.53
MW3	08/18/14	42.18	11.83	30.35	No	---	---	---	---	---	---	---	---
MW3	11/06/14	42.18	---	---	---	---	---	---	---	---	---	---	---
MW4	03/14/96	31.50	4.92	26.58	No	3,500	12,000	---	---	2,200	140	880	2,000
MW4	05/21/96	31.50	8.60	22.90	No	4,200	11,000	---	---	1,700	ND	930	470
MW4	08/13/96	31.50	10.02	21.50	0.02	---	---	---	---	---	---	---	---
MW4	11/08/96	31.50	10.28	21.33	0.15	---	---	---	---	---	---	---	---
MW4	01/31/97	31.50	7.88	23.62	No	8,200b	23,000	ND	---	980	68	1,100	1,400
MW4	04/22/97	31.50	7.40	24.10	No	4,500	8,800	ND	---	950	ND	610	130
MW4	07/29/97	31.50	9.85	21.74	0.12	---	---	---	---	---	---	---	---
MW4	10/09/97	31.50	10.35	21.38	0.30	---	---	---	---	---	---	---	---
MW4	01/23/98	31.50	4.68	27.51	0.92	---	---	---	---	---	---	---	---
MW4	04/22/98	31.50	6.39	25.22	0.14	---	---	---	---	---	---	---	---
MW4	07/21/98	31.50	7.10	24.55	0.20	---	---	---	---	---	---	---	---
MW4	10/20/98	31.50	9.03	22.60	0.17	---	---	---	---	---	---	---	---
MW4	01/27/99	31.50	5.37	26.18	0.07	---	---	---	---	---	---	---	---
MW4	Apr-99	Destroyed during construction activities.											
MW5	10/25/00	39.18	10.92	28.26	No	---	2,500	<20	---	79	3.8	66	<20
MW5	01/15/01	39.18	8.32	30.86	No	---	3,900	<5.0	---	120	7.9	280	52
MW5	04/10/01	39.18	7.21	31.97	No	---	8,000	<50	<5	280	4.4	410	100
MW5	07/24/01	39.18	9.54	29.64	No	---	7,000	<1.0	---	360	7.4	380	67

TABLE 1A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Mobil Service Station 99105
6301 San Pablo Avenue
Oakland, California
(Page 4 of 6)

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8020/8021 (µg/L)	MTBE 8240/8260 (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
Environmental Screening Levels, Groundwater is Current or Potential Drinking Water Source (December 2013)													
Table F-1a		---	---	---	---	100	100	5	5	1	40	30	20
MW5	11/27/01	39.18	8.84	30.34	No	---	5,000	8.9	<2	64	11	340	52
MW5	01/18/02	41.59	6.52	35.07	No	---	6,330	21.8	---	99.1	2.30	103	19.6
MW5	04/10/02	41.59	7.20	34.39	No	---	2,140	<2.50	---	275	8.00	183	24.5
MW5	07/12/02	41.59	8.83	32.76	No	---	3,940	20	<0.50	350	<0.50	268	14
MW5	10/14/02	41.59	10.74	30.85	No	---	4,040	<2.5	---	98.5	9.0	169	29.0
MW5	01/20/03	41.59	6.45	35.14	No	---	7,660	59	<0.50	421	10.0	743	96.0
MW5	04/28/03	41.59	6.68	34.91	No	---	7,510	47	<0.50	403	5.5	524	50.5
MW5	07/15/03	41.59	8.68	32.91	No	---	6,080	52.9	<2.5	406	19.8	412	34.7
MW5	10/08/03	41.59	10.56	31.03	No	---	2,460	54.3	<0.5	160	12.8	173	31.7
MW5	01/15/04	41.59	6.56	35.03	No	---	4,630	37.4	<0.5	181	6.0	312	38.5
MW5	Well not sampled from 2004 to 2010.												
MW5	09/17/10	41.59	9.99	31.60	No	5,700	6,600	---	<5.0	19	<5.0	16	1.4f
MW5	12/15/10	41.86	Well resurveyed.										
MW5	09/14/11	41.86	7.33	34.53	No	1,600g	7,200	---	<2.0	23	<2.0	8.6	<2.0
MW5	01/18/12	41.86	9.46	32.40	No	---	3,600g	---	<1.0	14	<1.0	7.6	<1.0
MW5	01/27/12	41.86	8.81	33.05	No	3,100g	---	---	---	---	---	---	---
MW5	07/09/12	41.86	8.91	32.95	Sheen	29,000g	9,300g	---	<2.5	21	<2.5	6.9	<2.5
MW5	01/25/13	41.86	6.01	35.85	Sheen	22,000g	4,900g	---	<2.0	46	<2.0	4.5	<2.0
MW5	08/23/13	41.86	9.12	32.74	No	34,000g	17,000	---	<2.0	17	<2.0	6.3	<2.0
MW5	01/10/14	41.86	10.30	31.56	No	36,000g	62,000	---	<2.0	4.7	<2.0	3.5	<2.0
MW5	07/14/14	41.86	8.70	33.16	No	88,000g	90,000g	---	<5.0	100	<5.0	12	<5.0
MW5	08/18/14	41.86	9.40	32.46	No	---	---	---	---	---	---	---	---
MW5	08/22/14	41.86	9.60	32.26	No	5,800g	5,100	---	<5.0	520	<5.0	320	81
MW5	11/06/14	41.86	---	---	---	---	---	---	---	---	---	---	---
MW6	08/18/14	42.00	Well surveyed.										
MW6	08/18/14	42.00	13.12	28.88	No	350g	410g	---	0.60	<0.50	<0.50	<0.50	<0.50
MW6	08/22/14	42.00	11.20	30.80	No	1,000g	1,500g	---	<0.50	<0.50	<0.50	<0.50	<0.50
MW6	11/06/14	42.00	10.77	31.23	No	640g	840g	---	0.80	<0.50	<0.50	<0.50	<0.50
MW7	08/18/14	41.34	Well surveyed.										
MW7	08/18/14	41.34	13.81	27.53	No	<51	<50	---	<0.50	<0.50	<0.50	<0.50	<0.50
MW7	08/22/14	41.34	Dry			---	---	---	---	---	---	---	---
MW7	11/06/14	41.34	11.73	29.61	No	<50	<50	---	<0.50	<0.50	<0.50	<0.50	<0.50
MW8	08/18/14	41.30	Well surveyed.										
MW8	08/18/14	41.30	12.18	29.12	No	440g	1,600	---	<0.50	39	<0.50	19	44
MW8	08/22/14	41.30	13.10	28.20	No	350g	950g	---	<0.50	5.7	<0.50	4.2	6.4
MW8	11/06/14	41.30	10.96	30.34	No	260g	910g	---	<0.50	54	<0.50	25	11

TABLE 1A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Mobil Service Station 99105
6301 San Pablo Avenue
Oakland, California
(Page 5 of 6)

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8020/8021 (µg/L)	MTBE 8240/8260 (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
Environmental Screening Levels, Groundwater is Current or Potential Drinking Water Source (December 2013)													
Table F-1a		---	---	---	---	100	100	5	5	1	40	30	20
Grab Groundwater Samples													
<i>Former Gasoline Tank Cavity</i>													
TW1	01/04/96	---	6.00	---	No	700	ND	---	---	ND	ND	ND	ND
<i>Used-Oil Tank Cavity</i>													
WW1	01/04/96	---	3.00	---	No	---	ND	---	---	ND	ND	ND	ND
AB1	03/05/98	---	4.5	---	No	---	1,600	ND	---	31	5.3	79	130
AB2	03/05/98	---	8.0	---	No	---	ND	ND	---	ND	2.9	0.9	5.7
AB3	03/05/98	---	5.5	---	No	---	6,800	230	---	680	100	1,500	2,300
AB4	03/05/98	---	4.0	---	No	---	8,500	ND	---	240	ND	260	720
AB6	03/05/98	---	4.5	---	No	---	12,000	ND	---	350	ND	310	100
AB9	03/05/98	---	6.0	---	No	---	1,000	ND	---	57	12	44	93
AB10	03/05/98	---	2.0	---	No	---	200	ND	---	3.0	1.2	3.2	2.8
AB11	03/05/98	---	8.5	---	No	---	ND	ND	---	ND	ND	ND	ND
AB12	03/05/98	---	6.0	---	No	---	8,800	37	---	660	50	630	940
AB13	03/05/98	---	8.0	---	No	---	210	ND	---	11	0.8	10	15
HA1	01/25/00	---	---	---	---	---	<500	<5.0	---	<0.3	<0.3	<0.3	<0.6
B1	11/18/10	---	Dry	---	---	---	---	---	---	---	---	---	---
B2	11/19/10	---	Dry	---	---	---	---	---	---	---	---	---	---
B3	11/19/10	---	8.45	---	---	<50	<50	---	<0.50	<0.50	<0.50	0.053f	0.21f
B4	11/19/10	---	Dry	---	---	---	---	---	---	---	---	---	---
B5	11/18/10	---	8.95	---	---	<50	<50	---	<0.50	<0.50	<0.50	0.047f	0.21f
W-15-B6	06/19/12	---	15	---	---	<50	<50	---	<0.50	<0.50	<0.50	<0.50	<0.50
W-15-B7	06/19/12	---	15	---	---	<50	<50	---	<0.50	<0.50	<0.50	<0.50	<0.50
W-9.5-B8	06/19/12	---	9.5	---	---	230g	<50	---	<0.50	<0.50	<0.50	<0.50	<0.50

TABLE 1A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA

Former Mobil Service Station 99105

6301 San Pablo Avenue

Oakland, California

(Page 6 of 6)

Notes:	Adapted from	ETIC's <i>Report of Groundwater Monitoring, Third Quarter 2010</i> .
TOC Elev.	=	Top of casing elevation.
DTW	=	Depth to water.
GW Elev.	=	Groundwater elevation.
NAPL	=	Non-aqueous phase liquid.
TPHd	=	Total petroleum hydrocarbons as diesel analyzed using EPA Method 8015B.
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015B.
MTBE 8020/8021	=	Methyl tertiary butyl ether analyzed using EPA Method 8020 or 8021B.
MTBE 8240/8260	=	Methyl tertiary butyl ether analyzed using EPA Method 8260B or 8240.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8260B.
DIPE	=	Di-isopropyl ether analyzed using EPA Method 8260B.
ETBE	=	Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
TAME	=	Tertiary amyl methyl ether analyzed using EPA Method 8260B.
TBA	=	Tertiary butyl alcohol analyzed using EPA Method 8260B.
1,2-DCA	=	1,2-dichloroethane analyzed using EPA Method 8260B.
EDB	=	1,2-dibromoethane analyzed using EPA Method 8260B.
Ethanol	=	Ethanol analyzed using EPA Method 8260B.
ND	=	Not detected at or above the laboratory reporting limit.
µg/L	=	Micrograms per liter.
<	=	Less than the stated laboratory reporting limit.
---	=	Not analyzed/Not applicable.
a	=	Well sampled using no-purge method.
b	=	Diesel and unidentified hydrocarbons <C15.
c	=	Diesel and unidentified hydrocarbons <C15>C25.
d	=	Diesel and unidentified hydrocarbons >C20.
e	=	Unidentified hydrocarbons >C18.
f	=	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit.
g	=	Chromatographic pattern does not match that of the specified standard.

TABLE 1B
ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Mobil Service Station 99105
6301 San Pablo Avenue
Oakland, California
(Page 1 of 3)

Well ID	Sampling Date	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Ethanol (µg/L)
Environmental Screening Levels, Groundwater is Current or Potential Drinking Water Source (December 2013)								
Table F-1a		---	---	---	12	0.50	0.05	---
MW1	03/14/96 - 01/27/99	Not analyzed for these analytes						
MW1	Apr-99	Destroyed during construction activities.						
MW2	03/14/96 - 01/15/04	Not analyzed for these analytes						
MW2	09/17/10	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---
MW2	09/14/11	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<50
MW2	01/18/12	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<50
MW2	01/27/12	---	---	---	---	---	---	---
MW2	07/09/12	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW2	01/25/13	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW2	08/23/13	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW2	01/10/14	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW2	07/14/14	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW2	08/18/14	---	---	---	---	---	---	---
MW2	08/22/14	---	---	---	---	---	---	---
MW2	11/06/14	---	---	---	---	---	---	---
MW3	03/14/96 - 01/15/04	Not analyzed for these analytes						
MW3	09/17/10	0.17f	<0.50	<0.50	9.8f	1.9	<0.50	---
MW3	09/14/11	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<50
MW3	01/18/12	<0.50	<0.50	<0.50	23	<0.50	<0.50	<50
MW3	01/27/12	---	---	---	---	---	---	---
MW3	07/09/12	<0.50	<0.50	<0.50	9.1	1.1	<0.50	---
MW3	01/25/13	<0.50	<0.50	<0.50	9.6	1.1	<0.50	---
MW3	08/23/13	<0.50	<0.50	<0.50	7.2	0.90	<0.50	---
MW3	01/10/14	<0.50	<0.50	<0.50	12	1.1	<0.50	---
MW3	07/14/14	<0.50	<0.50	<0.50	11	1.1	<0.50	---
MW3	08/18/14	---	---	---	---	---	---	---
MW3	08/22/14	---	---	---	---	---	---	---
MW3	11/06/14	---	---	---	---	---	---	---
MW4	03/14/96 - 01/27/99	Not analyzed for these analytes						
MW4	Apr-99	Destroyed during construction activities.						
MW5	10/25/00 - 01/15/04	Not analyzed for these analytes						
MW5	09/17/10	<5.0	<5.0	<5.0	<100	<5.0	<5.0	---
MW5	09/14/11	<2.0	<2.0	<2.0	25	<2.0	<2.0	<200
MW5	01/18/12	<1.0	<1.0	<1.0	37	<1.0	<1.0	<100
MW5	01/27/12	---	---	---	---	---	---	---
MW5	07/09/12	<2.5	<2.5	<2.5	36	<2.5	<2.5	---
MW5	01/25/13	<2.0	<2.0	<2.0	45	<2.0	<2.0	---

TABLE 1B
ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Mobil Service Station 99105
6301 San Pablo Avenue
Oakland, California
(Page 2 of 3)

Well ID	Sampling Date	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Ethanol (µg/L)
Environmental Screening Levels, Groundwater is Current or Potential Drinking Water Source (December 2013)								
Table F-1a		---	---	---	12	0.50	0.05	---
MW5	08/23/13	<2.0	<2.0	<2.0	42	<2.0	<2.0	---
MW5	01/10/14	<2.0	<2.0	<2.0	36	<2.0	<2.0	---
MW5	07/14/14	<5.0	<5.0	<5.0	<50	<5.0	<5.0	---
MW5	08/18/14	---	---	---	---	---	---	---
MW5	08/22/14	<5.0	<5.0	<5.0	<50	<5.0	<5.0	---
MW5	11/06/14	---	---	---	---	---	---	---
MW6	08/18/14	<0.50	<0.50	<0.50	14	1.1	<0.50	---
MW6	08/22/14	<0.50	<0.50	<0.50	12	<0.50	<0.50	---
MW6	11/06/14	<0.50	<0.50	<0.50	14	1.3	<0.50	---
MW7	08/18/14	<0.50	<0.50	<0.50	21	3.1	<0.50	---
MW7	08/22/14	Dry	---	---	---	---	---	---
MW7	11/06/14	<0.50	<0.50	<0.50	15	3.9	<0.50	---
MW8	08/18/14	<0.50	<0.50	<0.50	20	0.78	<0.50	---
MW8	08/22/14	<0.50	<0.50	<0.50	31	<0.50	<0.50	---
MW8	11/06/14	<0.50	<0.50	<0.50	34	2.8	<0.50	---
Grab Groundwater Samples								
Not analyzed for these analytes prior to 2010.								
B1	11/18/10	---	---	---	---	---	---	---
B3	11/19/10	---	---	---	---	8.7	---	---
B4	11/19/10	---	---	---	---	---	---	---
B5	11/18/10	---	---	---	---	0.099f	---	---
W-15-B6	06/19/12	<0.50	<0.50	<0.50	<5.0	---	---	---
W-15-B7	06/19/12	<0.50	<0.50	<0.50	<5.0	---	---	---
W-9.5-B8	06/19/12	<0.50	<0.50	<0.50	<5.0	---	---	---

TABLE 1B
ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Mobil Service Station 99105
6301 San Pablo Avenue
Oakland, California
(Page 3 of 3)

Notes:	Adapted from ETIC's <i>Report of Groundwater Monitoring, Third Quarter 2010</i> .
TOC Elev.	= Top of casing elevation.
DTW	= Depth to water.
GW Elev.	= Groundwater elevation.
NAPL	= Non-aqueous phase liquid.
TPHd	= Total petroleum hydrocarbons as diesel analyzed using EPA Method 8015B.
TPHg	= Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015B.
MTBE 8020/8021	= Methyl tertiary butyl ether analyzed using EPA Method 8020 or 8021B.
MTBE 8240/8260	= Methyl tertiary butyl ether analyzed using EPA Method 8260B or 8240.
BTEX	= Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8260B.
DIPE	= Di-isopropyl ether analyzed using EPA Method 8260B.
ETBE	= Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
TAME	= Tertiary amyl methyl ether analyzed using EPA Method 8260B.
TBA	= Tertiary butyl alcohol analyzed using EPA Method 8260B.
1,2-DCA	= 1,2-dichloroethane analyzed using EPA Method 8260B.
EDB	= 1,2-dibromoethane analyzed using EPA Method 8260B.
Ethanol	= Ethanol analyzed using EPA Method 8260B.
ND	= Not detected at or above the laboratory reporting limit.
µg/L	= Micrograms per liter.
<	= Less than the stated laboratory reporting limit.
---	= Not analyzed/Not applicable.
a	= Well sampled using no-purge method.
b	= Diesel and unidentified hydrocarbons <C15.
c	= Diesel and unidentified hydrocarbons <C15>C25.
d	= Diesel and unidentified hydrocarbons >C20.
e	= Unidentified hydrocarbons >C18.
f	= Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit.
g	= Chromatographic pattern does not match that of the specified standard.

TABLE 2
WELL CONSTRUCTION DETAILS
Former Mobil Service Station 99105
6301 San Pablo Avenue
Oakland, California
(Page 1 of 1)

Well ID	Well Installation Date	Well Destruction Date	TOC Elevation (feet)	Well Casing Material	Total Depth (feet)	Well Depth (feet)	Borehole Diameter (inches)	Casing Diameter (inches)	Screened Interval (feet)	Slot Size (inches)	Filter Pack Interval (feet)	Filter Pack Material
MW1	03/01/96	Apr-99	32.79	PVC	21.5	21.5	10	4	5-20	0.010	4.5-21.5	#12 Sand
MW2	03/01/96	---	42.24	PVC	21.5	21.5	10	4	5-20	0.010	4.5-21.5	#12 Sand
MW3	03/01/96	---	42.18	PVC	21.5	21.5	10	4	5-20	0.010	4.5-21.5	#12 Sand
MW4	03/01/96	Apr-99	31.50	PVC	26.5	25	10	4	5-25	0.010	4.5-21.5	#12 Sand
MW5	09/06/00	---	41.86	PVC	21.5	21.5	10	4	5-20	0.010	4-21.5	#2/12 Sand
MW6	08/11/14	---	42.00	PVC	18	15	12	4	5-15	0.020	4-15	#2/12 Sand
MW7	08/11/14	---	41.34	PVC	16	15	10	2	5-15	0.020	4-15	#2/12 Sand
MW8	08/15/14	---	41.30	PVC	16	15	12	4	5-15	0.020	4-15	#2/12 Sand
VW1	11/01/10	---	---	Stainless Steel	6	6	4	0.25	5.25-5.75	0.0057	5-6	#2/12 Sand
VW2	11/02/10	---	---	Stainless Steel	6	6	4	0.25	5.25-5.75	0.0057	5-6	#2/12 Sand
VW3	11/01/10	---	---	Stainless Steel	6	6	4	0.25	5.25-5.75	0.0057	5-6	#2/12 Sand
VW4	11/02/10	---	---	Stainless Steel	6	6	4	0.25	5.25-5.75	0.0057	5-6	#2/12 Sand
VW5	11/02/10	---	---	Stainless Steel	6	6	4	0.25	5.25-5.75	0.0057	5-6	#2/12 Sand
MP1	11/16/98	1998	---	PVC	23	23	1.5	1	4-23	0.020	2.5-23	#3 Sand
MP2	11/16/98	1998	---	PVC	20	20	1.5	1	5-20	0.020	4-20	#3 Sand
MP3	11/16/98	1998	---	PVC	18	18	1.5	1	3-18	0.020	2-18	#3 Sand
MP4	11/16/98	1998	---	PVC	18	18	1.5	1	3-18	0.020	2-18	#3 Sand
MP5	11/16/98	1998	---	PVC	18	18	1.5	1	3-18	0.020	2-18	#3 Sand
MP6	11/16/98	1998	---	PVC	17.5	17.5	1.5	1	3.5-17.5	0.020	2.5-17.5	#3 Sand
SVS1	06/18/12	---	38.78	PVC/Stainless Steel	5.5	5	3.25	0.25	4.75-5	0.010	4.5-5	#3 Sand
SVS2	06/18/12	---	41.05	PVC/Stainless Steel	5.5	5	3.25	0.25	4.75-5	0.010	4.5-5	#3 Sand
SVS3	06/18/12	---	42.64	PVC/Stainless Steel	5.5	5	3.25	0.25	4.75-5	0.010	4.5-5	#3 Sand

Notes:
TOC = Top of casing.
PVC = Polyvinyl chloride.
--- = Not applicable/Not available.

APPENDIX A
GROUNDWATER SAMPLING PROTOCOL

GROUNDWATER SAMPLING PROTOCOL

The static water level and separate-phase product level, if present, in each well that contained water and/or separate-phase product are measured with a ORS Interface Probe, which is accurate to the nearest 0.01 foot. To calculate groundwater elevations and evaluate groundwater gradient, depth to water (DTW) levels are subtracted from top of casing elevations.

Groundwater samples collected for subjective evaluation are collected by gently lowering approximately half the length of a clean Teflon® or polypropylene bailer past the air-water interface (if possible) and collecting a sample from near the surface of the water in the well. The samples are checked for measurable free-phase hydrocarbons or sheen. If appropriate, free-phase hydrocarbons are removed from the well.

Before water samples are collected from the groundwater monitoring wells, the wells are purged until a minimum of three well casing volumes is purged and stabilization of the temperature, pH, and conductivity is obtained. Water samples from the wells that do not obtain stability of the temperature, pH, and conductivity are considered to be "grab samples." The quantity of water purged from each well is calculated as follows:

1 well casing volume = $\pi r^2 h(7.48)$ where:

r	=	radius of the well casing in feet
h	=	column of water in the well in feet (depth to bottom - depth to water)
7.48	=	conversion constant from cubic feet to gallons
π	=	ratio of the circumference of a circle to its diameter

Gallons of water purged/gallons in 1 well casing volume = well casing volumes removed.

The wells are purged using a submersible pump. Prior to use at the site and between wells the pump is cleaned.

Five gallons of water are placed in three 15-gallon tubs. Liquinox detergent is added to the first tub of water. The pump and tubing are submerged in the first tub and the water is pumped through the pump. The process is repeated in the second and third tub.

After purging, each well is allowed to recharge to at least 80% of the initial water level. Water samples from wells that do not recover at least 80% (due to slow recharging of the well) between purging and sampling are considered to be "grab samples." Water samples are collected with a new, disposable Teflon® or polypropylene bailer. The groundwater is carefully poured into selected sample containers (40-milliliter [ml] glass vials, 1,000-ml glass amber bottles, etc.), which are filled so as to produce a positive meniscus.

Depending on the required analysis, each sample container is preserved with hydrochloric acid, nitric acid, etc., or it is preservative free. The type of preservative used for each sample is specified on the Chain-of-Custody record.

Each vial and glass amber bottle is sealed with a cap containing a Teflon® septum, and subsequently examined for air bubbles to avoid headspace, which would allow volatilization to occur. The samples are promptly transported in iced storage in a thermally-insulated ice chest, accompanied by a Chain-of-Custody record, to a California state-certified laboratory.

Water generated during purging and cleaning is contained and transported off site for treatment and disposal.

APPENDIX B
FIELD DATA SHEETS



Daily Field Report

Project ID #: 99105 ERI Job # 2783
Subject: Monitoring + Sampling Date: 11-6-14
Equipment Used: Sub pump, DTW Tape Sheet: 1 of 1
Name(s): Darin Einhell
Time Arrived On Site: Time Departed Site: Total Travel:

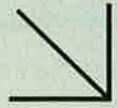
On site	6:45
H+S Meeting	6:45 - 7:00
opened wells	7:00 - 7:05
Deconed Equipment	7:05 - 7:25
DTW on wells	7:25 - 7:45
Purged wells MW7, MW6, MW8	7:47 - 8:12
Sampled wells MW7, MW6, MW8, QCB3	8:50 - 9:40
Well Development MW8	9:50 - 10:20
Purged well MW8	9:57 - 10:23
off site	11:00

Decon Water: 20 gal.
Purge Water: 20 gal.
Total Water: 40 gal.

Dropped off samples at Cal science before returning to the office.

Only 1 amber from MW8 due to slow recharge.

APPENDIX C
LABORATORY ANALYTICAL REPORT



WORK ORDER NUMBER: 14-11-0590

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Cardno ERI

Client Project Name: ExxonMobil 99105/022783C

Attention: Greg Gurss
601 North McDowell Blvd.
Petaluma, CA 94954-2312

RECEIVED
NOV 20 2014

Cecile de Guia

BY:

Approved for release on 11/20/2014 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

Client Project Name: ExxonMobil 99105/022783C
Work Order Number: 14-11-0590

1	Work Order Narrative.	3
2	Sample Summary.	4
3	Client Sample Data.	5
	3.1 EPA 8015B (M) TPH Diesel (Aqueous).	5
	3.2 EPA 8015B (M) TPH Gasoline (Aqueous).	6
	3.3 EPA 8260B Volatile Organics (Aqueous).	7
4	Quality Control Sample Data.	11
	4.1 MS/MSD.	11
	4.2 LCS/LCSD.	14
5	Glossary of Terms and Qualifiers.	18
6	Chain-of-Custody/Sample Receipt Form.	19

Work Order: 14-11-0590

Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 11/07/14. They were assigned to Work Order 14-11-0590.

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.

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.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: http://www.calscience.com/PDF/New_York.pdf

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.

Subcontractor Information:

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

Sample Summary

Client: Cardno ERI	Work Order:	14-11-0590
601 North McDowell Blvd.	Project Name:	ExxonMobil 99105/022783C
Petaluma, CA 94954-2312	PO Number:	022783C
	Date/Time Received:	11/07/14 10:00
	Number of Containers:	26

Attn: Greg Gurs

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
W-14-MW6	14-11-0590-1	11/06/14 09:15	8	Aqueous
W-14-MW7	14-11-0590-2	11/06/14 08:50	8	Aqueous
W-14-MW8	14-11-0590-3	11/06/14 09:25	8	Aqueous
QCBB	14-11-0590-4	11/06/14 09:40	2	Aqueous

Analytical Report

Cardno ERI
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Date Received: 11/07/14
Work Order: 14-11-0590
Preparation: EPA 3510C
Method: EPA 8015B (M)
Units: ug/L

Project: ExxonMobil 99105/022783C

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-14-MW6	14-11-0590-1-H	11/06/14 09:15	Aqueous	GC 47	11/10/14	11/10/14 19:42	141110B05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>	<u>DF</u>		<u>Qualifiers</u>
TPH as Diesel		640		50	1.00		SG,HD
<u>Surrogate</u>		<u>Rec. (%)</u>		<u>Control Limits</u>		<u>Qualifiers</u>	
n-Octacosane		113		68-140			
W-14-MW7	14-11-0590-2-H	11/06/14 08:50	Aqueous	GC 47	11/10/14	11/10/14 20:00	141110B05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>	<u>DF</u>		<u>Qualifiers</u>
TPH as Diesel		ND		50	1.00		SG
<u>Surrogate</u>		<u>Rec. (%)</u>		<u>Control Limits</u>		<u>Qualifiers</u>	
n-Octacosane		102		68-140			
W-14-MW8	14-11-0590-3-G	11/06/14 09:25	Aqueous	GC 47	11/10/14	11/10/14 20:17	141110B05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>	<u>DF</u>		<u>Qualifiers</u>
TPH as Diesel		260		50	1.00		SG,HD
<u>Surrogate</u>		<u>Rec. (%)</u>		<u>Control Limits</u>		<u>Qualifiers</u>	
n-Octacosane		96		68-140			
Method Blank	099-15-304-860	N/A	Aqueous	GC 47	11/10/14	11/10/14 17:27	141110B05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>	<u>DF</u>		<u>Qualifiers</u>
TPH as Diesel		ND		50	1.00		
<u>Surrogate</u>		<u>Rec. (%)</u>		<u>Control Limits</u>		<u>Qualifiers</u>	
n-Octacosane		104		68-140			

Return to Contents

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

Analytical Report

Cardno ERI
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Date Received: 11/07/14
Work Order: 14-11-0590
Preparation: EPA 5030C
Method: EPA 8015B (M)
Units: ug/L

Project: ExxonMobil 99105/022783C

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-14-MW6	14-11-0590-1-D	11/06/14 09:15	Aqueous	GC 1	11/08/14	11/09/14 00:52	141108L013
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
TPH as Gasoline		840	50		1.00		HD
<u>Surrogate</u>		<u>Rec. (%)</u>	<u>Control Limits</u>		<u>Qualifiers</u>		
1,4-Bromofluorobenzene		96	38-134				
W-14-MW7	14-11-0590-2-D	11/06/14 08:50	Aqueous	GC 1	11/08/14	11/09/14 01:28	141108L013
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
TPH as Gasoline		ND	50		1.00		
<u>Surrogate</u>		<u>Rec. (%)</u>	<u>Control Limits</u>		<u>Qualifiers</u>		
1,4-Bromofluorobenzene		90	38-134				
W-14-MW8	14-11-0590-3-D	11/06/14 09:25	Aqueous	GC 1	11/08/14	11/09/14 02:04	141108L013
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
TPH as Gasoline		910	50		1.00		HD
<u>Surrogate</u>		<u>Rec. (%)</u>	<u>Control Limits</u>		<u>Qualifiers</u>		
1,4-Bromofluorobenzene		119	38-134				
Method Blank	099-12-436-9655	N/A	Aqueous	GC 1	11/08/14	11/08/14 12:21	141108L013
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
TPH as Gasoline		ND	50		1.00		
<u>Surrogate</u>		<u>Rec. (%)</u>	<u>Control Limits</u>		<u>Qualifiers</u>		
1,4-Bromofluorobenzene		89	38-134				

Return to Contents

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

Analytical Report

Cardno ERI
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Date Received: 11/07/14
Work Order: 14-11-0590
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 99105/022783C

Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-14-MW6	14-11-0590-1-A	11/06/14 09:15	Aqueous	GC/MS T	11/11/14	11/12/14 01:05	141111L047

Parameter	Result	RL	DF	Qualifiers
Benzene	ND	0.50	1.00	
Toluene	ND	0.50	1.00	
Ethylbenzene	ND	0.50	1.00	
o-Xylene	ND	0.50	1.00	
p/m-Xylene	ND	0.50	1.00	
Xylenes (total)	ND	0.50	1.00	
Methyl-t-Butyl Ether (MTBE)	0.80	0.50	1.00	
Tert-Butyl Alcohol (TBA)	14	5.0	1.00	
Diisopropyl Ether (DIPE)	ND	0.50	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1.00	
1,2-Dibromoethane	ND	0.50	1.00	
1,2-Dichloroethane	1.3	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	106	68-120	
Dibromofluoromethane	105	80-127	
1,2-Dichloroethane-d4	92	80-128	
Toluene-d8	105	80-120	


 Return to Contents

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

Analytical Report

Cardno ERI
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Date Received: 11/07/14
Work Order: 14-11-0590
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 99105/022783C

Page 2 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-14-MW7	14-11-0590-2-A	11/06/14 08:50	Aqueous	GC:MS T	11/11/14	11/12/14 01:35	141111L047
<u>Parameter</u>		<u>Result</u>			<u>DF</u>		<u>Qualifiers</u>
Benzene		ND			0.50	1.00	
Toluene		ND			0.50	1.00	
Ethylbenzene		ND			0.50	1.00	
o-Xylene		ND			0.50	1.00	
p/m-Xylene		ND			0.50	1.00	
Xylenes (total)		ND			0.50	1.00	
Methyl-t-Butyl Ether (MTBE)		ND			0.50	1.00	
Tert-Butyl Alcohol (TBA)		15			5.0	1.00	
Diisopropyl Ether (DIPE)		ND			0.50	1.00	
Ethyl-t-Butyl Ether (ETBE)		ND			0.50	1.00	
Tert-Amyl-Methyl Ether (TAME)		ND			0.50	1.00	
1,2-Dibromoethane		ND			0.50	1.00	
1,2-Dichloroethane		3.9			0.50	1.00	
<u>Surrogate</u>		<u>Rec. (%)</u>			<u>Control Limits</u>		<u>Qualifiers</u>
1,4-Bromofluorobenzene		84			68-120		
Dibromofluoromethane		102			80-127		
1,2-Dichloroethane-d4		93			80-128		
Toluene-d8		96			80-120		


 Return to Contents

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

Analytical Report

Cardno ERI
 601 North McDowell Blvd.
 Petaluma, CA 94954-2312

Date Received: 11/07/14
 Work Order: 14-11-0590
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: ExxonMobil 99105/022783C

Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-14-MW8	14-11-0590-3-A	11/06/14 09:25	Aqueous	GC/MS T	11/11/14	11/12/14 02:04	141111L047

Parameter	Result	RL	DF	Qualifiers
Toluene	ND	0.50	1.00	
Ethylbenzene	25	0.50	1.00	
o-Xylene	ND	0.50	1.00	
p/m-Xylene	11	0.50	1.00	
Xylenes (total)	11	0.50	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1.00	
Tert-Butyl Alcohol (TBA)	34	5.0	1.00	
Diisopropyl Ether (DIPE)	ND	0.50	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1.00	
1,2-Dibromoethane	ND	0.50	1.00	
1,2-Dichloroethane	2.8	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	94	68-120	
Dibromofluoromethane	99	80-127	
1,2-Dichloroethane-d4	97	80-128	
Toluene-d8	106	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-14-MW8	14-11-0590-3-E	11/06/14 09:25	Aqueous	GC/MS T	11/13/14	11/13/14 15:53	141113L051

Parameter	Result	RL	DF	Qualifiers
Benzene	54	1.0	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	94	68-120	
Dibromofluoromethane	103	80-127	
1,2-Dichloroethane-d4	102	80-128	
Toluene-d8	107	80-120	

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

Analytical Report

Cardno ERI
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Date Received: 11/07/14
Work Order: 14-11-0590
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 99105/022783C

Page 4 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-884-1209	N/A	Aqueous	GC/MS T	11/11/14	11/11/14 16:04	141111L047

Parameter	Result	RL	DF	Qualifiers
Benzene	ND	0.50	1.00	
Toluene	ND	0.50	1.00	
Ethylbenzene	ND	0.50	1.00	
o-Xylene	ND	0.50	1.00	
p/m-Xylene	ND	0.50	1.00	
Xylenes (total)	ND	0.50	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1.00	
Tert-Butyl Alcohol (TBA)	ND	5.0	1.00	
Diisopropyl Ether (DIPE)	ND	0.50	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1.00	
1,2-Dibromoethane	ND	0.50	1.00	
1,2-Dichloroethane	ND	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	87	68-120	
Dibromofluoromethane	98	80-127	
1,2-Dichloroethane-d4	107	80-128	
Toluene-d8	90	80-120	

Method Blank	099-12-884-1210	N/A	Aqueous	GC/MS T	11/13/14	11/13/14 13:52	141113L051
--------------	-----------------	-----	---------	---------	----------	-------------------	------------

Parameter	Result	RL	DF	Qualifiers
Benzene	ND	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	81	68-120	
Dibromofluoromethane	106	80-127	
1,2-Dichloroethane-d4	109	80-128	
Toluene-d8	96	80-120	

Return to Contents ↑

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

Quality Control - Spike/Spike Duplicate

Cardno ERI
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Date Received: 11/07/14
Work Order: 14-11-0590
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project: ExxonMobil 99105/022783C

Page 1 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-11-0136-2	Sample	Aqueous	GC 1	11/08/14	11/08/14 12:57	141108S003
14-11-0136-2	Matrix Spike	Aqueous	GC 1	11/08/14	11/08/14 13:33	141108S003
14-11-0136-2	Matrix Spike Duplicate	Aqueous	GC 1	11/08/14	11/08/14 14:09	141108S003

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	7820	4000	11400	90	11780	99	68-122	3	0-18	



Calscience

Quality Control - Spike/Spike Duplicate

Cardno ERI
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Date Received: 11/07/14
Work Order: 14-11-0590
Preparation: EPA 5030C
Method: EPA 8260B

Project: ExxonMobil 99105/022783C

Page 2 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-11-0675-2	Sample	Aqueous	GC/MS T	11/11/14	11/11/14 16:46	141111S023
14-11-0675-2	Matrix Spike	Aqueous	GC/MS T	11/11/14	11/11/14 17:15	141111S023
14-11-0675-2	Matrix Spike Duplicate	Aqueous	GC/MS T	11/11/14	11/11/14 17:44	141111S023

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	10.00	11.22	112	11.20	112	75-125	0	0-20	
Toluene	ND	10.00	10.74	107	11.11	111	75-125	3	0-20	
Ethylbenzene	ND	10.00	11.76	118	11.95	119	75-125	2	0-20	
o-Xylene	ND	10.00	11.94	119	12.11	121	75-127	1	0-20	
p/m-Xylene	ND	20.00	24.22	121	24.35	122	75-125	1	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	10.00	11.07	111	10.30	103	71-131	7	0-20	
Tert-Butyl Alcohol (TBA)	ND	50.00	63.18	126	52.91	106	20-180	18	0-40	
Diisopropyl Ether (DIPE)	ND	10.00	11.45	115	11.49	115	64-136	0	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	10.00	11.35	114	11.08	111	73-133	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	10.00	11.41	114	10.79	108	75-125	6	0-20	
1,2-Dibromoethane	ND	10.00	11.66	117	11.72	117	75-126	0	0-20	
1,2-Dichloroethane	ND	10.00	10.96	110	10.28	103	75-127	6	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Cardno ERI
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Date Received: 11/07/14
Work Order: 14-11-0590
Preparation: EPA 5030C
Method: EPA 8260B

Project: ExxonMobil 99105/022783C

Page 3 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-11-0859-14	Sample	Aqueous	GC/MS T	11/13/14	11/13/14 14:25	141113S003
14-11-0859-14	Matrix Spike	Aqueous	GC/MS T	11/13/14	11/13/14 14:54	141113S003
14-11-0859-14	Matrix Spike Duplicate	Aqueous	GC/MS T	11/13/14	11/13/14 15:23	141113S003

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	10.00	12.25	122	11.89	119	75-125	3	0-20	
Toluene	ND	10.00	12.27	123	11.92	119	75-125	3	0-20	
Ethylbenzene	ND	10.00	12.22	122	11.89	119	75-125	3	0-20	
o-Xylene	ND	10.00	12.17	122	11.87	119	75-127	2	0-20	
p/m-Xylene	ND	20.00	24.62	123	23.80	119	75-125	3	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	10.00	11.32	113	11.73	117	71-131	4	0-20	
Tert-Butyl Alcohol (TBA)	ND	50.00	64.29	129	61.34	123	20-180	5	0-40	
Diisopropyl Ether (DIPE)	ND	10.00	12.11	121	12.39	124	64-136	2	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	10.00	11.32	113	11.50	115	73-133	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	10.00	10.73	107	10.77	108	75-125	0	0-20	
1,2-Dibromoethane	ND	10.00	13.09	131	12.22	122	75-126	7	0-20	HX
1,2-Dichloroethane	ND	10.00	11.53	115	11.27	113	75-127	2	0-20	

Return to Contents ↑

RPD: Relative Percent Difference. CL: Control Limits



Quality Control - LCS/LCSD

Cardno ERI
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Date Received: 11/07/14
Work Order: 14-11-0590
Preparation: EPA 3510C
Method: EPA 8015B (M)

Project: ExxonMobil 99105/022783C

Page 1 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-304-860	LCS	Aqueous	GC 47	11/10/14	11/10/14 18:18	141110B05
099-15-304-860	LCSD	Aqueous	GC 47	11/10/14	11/10/14 18:36	141110B05

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	2000	2086	104	2016	101	75-117	3	0-13	

Return to Contents ↑

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

Cardno ERI
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Date Received: 11/07/14
Work Order: 14-11-0590
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project: ExxonMobil 99105/022783C

Page 2 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-436-9655	LCS	Aqueous	GC 1	11/08/14	11/08/14 11:10	141108L013
099-12-436-9655	LCSD	Aqueous	GC 1	11/08/14	11/08/14 11:46	141108L013

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	2000	2136	107	2148	107	78-120	1	0-10	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Cardno ERI
 601 North McDowell Blvd.
 Petaluma, CA 94954-2312

Date Received: 11/07/14
 Work Order: 14-11-0590
 Preparation: EPA 5030C
 Method: EPA 8260B

Project: ExxonMobil 99105/022783C

Page 3 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-884-1209	LCS	Aqueous	GC/MS T	11/11/14	11/11/14 14:56	141111L047
Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Benzene	10.00	10.79	108	80-120	73-127	
Toluene	10.00	10.41	104	80-120	73-127	
Ethylbenzene	10.00	10.96	110	80-120	73-127	
o-Xylene	10.00	11.20	112	80-120	73-127	
p/m-Xylene	20.00	22.03	110	80-120	73-127	
Methyl-t-Butyl Ether (MTBE)	10.00	10.61	106	75-123	67-131	
Tert-Butyl Alcohol (TBA)	50.00	52.30	105	80-120	73-127	
Diisopropyl Ether (DIPE)	10.00	11.01	110	73-121	65-129	
Ethyl-t-Butyl Ether (ETBE)	10.00	10.76	108	76-124	68-132	
Tert-Amyl-Methyl Ether (TAME)	10.00	11.29	113	80-120	73-127	
1,2-Dibromoethane	10.00	11.08	111	80-120	73-127	
1,2-Dichloroethane	10.00	10.41	104	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

Quality Control - LCS

Cardno ERI
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Date Received: 11/07/14
Work Order: 14-11-0590
Preparation: EPA 5030C
Method: EPA 8260B

Project: ExxonMobil 99105/022783C

Page 4 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
099-12-884-1210	LCS	Aqueous	GC/MS T	11/13/14	11/13/14 12:47	141113L051	
Parameter		Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Benzene		10.00	11.06	111	80-120	73-127	
Toluene		10.00	11.09	111	80-120	73-127	
Ethylbenzene		10.00	11.35	114	80-120	73-127	
o-Xylene		10.00	11.34	113	80-120	73-127	
p/m-Xylene		20.00	22.53	113	80-120	73-127	
Methyl-t-Butyl Ether (MTBE)		10.00	10.60	106	75-123	67-131	
Tert-Butyl Alcohol (TBA)		50.00	52.75	106	80-120	73-127	
Diisopropyl Ether (DIPE)		10.00	11.35	114	73-121	65-129	
Ethyl-t-Butyl Ether (ETBE)		10.00	10.67	107	76-124	68-132	
Tert-Amyl-Methyl Ether (TAME)		10.00	9.887	99	80-120	73-127	
1,2-Dibromoethane		10.00	11.57	116	80-120	73-127	
1,2-Dichloroethane		10.00	10.36	104	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

<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.
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.



< WebShip > > > > >

800-322-5555 www.gso.com

0590

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

Tracking #: 526084618

NPS

ORC

A

GARDEN GROVE

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

D92845A

COD:
\$0.00



30575707

Reference:
CARDNO ERI,PHILLIPS 66, ANDERSEN ENV

Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Print Date : 11/06/14 10:06 PM

Package 1 of 1

Send Label To Printer

Print All

Edit Shipment

Finish ...

LABEL INSTRUCTIONS:

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

STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.

STEP 2 - Fold this page in half.

STEP 3 - Securely attach this label to your package, do not cover the barcode.

STEP 4 - Request an on-call pickup for your package, if you do not have scheduled daily pickup service or Drop-off your package at the nearest GSO drop box. Locate nearest GSO dropbox locations using this link.

ADDITIONAL OPTIONS:

Send Label Via Email

Create Return Label

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all the service terms and conditions described in this section. Our liability for loss or damage to any package is limited to your actual damages or \$100 whichever is less, unless you pay for and declare a higher authorized value. If you declare a higher value and pay the additional charge, our liability will be the lesser of your declared value or the actual value of your loss or damage. In any event, we will not be liable for any damage, whether direct, incidental, special or consequential, in excess of the declared value of a shipment whether or not we had knowledge that such damage might be incurred including but not limited to loss of income or profit. We will not be liable for your acts or omissions, including but not limited to improper or insufficient packaging, securing, marking or addressing. Also, we will not be liable if you or the recipient violates any of the terms of our agreement. We will not be liable for loss, damage or delay caused by events we cannot control, including but not limited to acts of God, perils of the air, weather conditions, act of public enemies, war, strikes, or civil commotion. The highest declared value for our GSO Priority Letter or GSO Priority Package is \$500. For other shipments the highest declared value is \$10,000 unless your package contains items of "extraordinary value", in which case the highest declared value we allow is \$500. Items of "extraordinary value" include, but not limited to, artwork, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.

Return to Contents

Calscience

WORK ORDER #: 14-11-

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Cardno ERY

DATE: 11/07/14

TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Temperature 2.8 °C - 0.2°C (CF) = 2.6 °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.

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

Ambient Temperature: Air Filter

Checked by: 836

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Checked by: 836

Sample _____ No (Not Intact) Not Present Checked by: 739

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"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels. <input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
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 good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® TerraCores® _____

Aqueous: VOA VOAh VOAna₂ 125AGB 125AGBh 125AGBp 1AGB 1AGBna₂ 1AGBs

500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 1PBna 500PB

250PB 250PBn 125PB 125PBzanna 100PJ 100PJna₂ _____ _____ _____

Air: Tedlar® Canister **Other:** _____ **Trip Blank Lot#:** _____ **Labeled/Checked by:** 739

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** 802

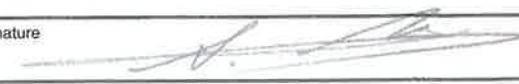
Preservative: h: HCL n: HNO₃ na₂: Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure zanna: ZnAc₂+NaOH f: Filtered **Scanned by:** 802

Return to Contents

APPENDIX D
WASTE DISPOSAL DOCUMENTATION

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.		Manifest Document No. 278320141104	2. Page 1 of
3. Generator's Name and Mailing Address EXXONMOBIL OIL CORP. 2555 W. 190TH ST. #1106 TORRANCE, CA 90504		ATTN: EMES ADMINISTRATOR 6301 San Pablo Ave., Oakland (EM 98105)			
4. Generator's Phone (310) 212-2938					
5. Transporter 1 Company Name CARDNO ERI		6. US EPA ID Number		A. State Transporter's ID 707-766-2000	
7. Transporter 2 Company Name		8. US EPA ID Number		B. Transporter 1 Phone	
9. Designated Facility Name and Site Address INSTRAT INC. 1105 C. AIRPORT ROAD RIO VISTA, CA 94571		10. US EPA ID Number		C. State Transporter's ID	
				D. Transporter 2 Phone	
				E. State Facility's ID	
				F. Facility's Phone 530-753-1829	
11. WASTE DESCRIPTION			12. Containers		13. Total Quantity
			No.	Type	14. Unit Wt./Vol.
a. NON-HAZARDOUS PURGE WATER			01	Trailer	40 GAL.
b.					
c.					
d.					
G. Additional Descriptions for Materials Listed Above			H. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information					
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.					
Printed/Typed Name On behalf of Exxon Mobil Azat R. Magdanov				Signature 	
				Date 11/04/14	
17. Transporter 1 Acknowledgement of Receipt of Materials					
Printed/Typed Name Azat R. Magdanov				Signature 	
				Date 12/17/14	
18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name				Signature	
				Date	
19. Discrepancy Indication Space					
20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.					
Printed/Typed Name MICHAEL WHITEHEAD				Signature 	
				Date 12/17/14	

NON-HAZARDOUS WASTE

GENERATOR

TRANSPORTER

FACILITY