

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

1:49 pm, Nov 13, 2009

Alameda County
Environmental Health



November 4, 2009

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

RE: Former Exxon RAS #70234/3450 35th Avenue, Oakland, California.

Dear Ms. Jakub:

Attached for your review and comment is a copy of the letter report entitled *Groundwater Monitoring Report, Third Quarter 2009*, dated November 4, 2009, for the above-referenced site. The report was prepared by Environmental Resolutions, Inc. (ERI) of Petaluma, California, and details groundwater monitoring and sampling activities for 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,

A handwritten signature in blue ink, appearing to read "JC Sedlachek".

Jennifer C. Sedlachek
Project Manager

Attachment: ERI's Groundwater Monitoring Report, Third Quarter 2009, dated November 4, 2009

cc: w/ attachment
Mr. Shay Wideman, Valero Companies, Environmental Liability Management

w/o attachment
Ms. Paula Sime, Environmental Resolutions, Inc.



[Southern California](#)
[Northern California](#)
[Central California](#)
[Pacific Northwest](#)
[New England](#)
[Southwest](#)
[Montana](#)
[Texas](#)

November 4, 2009
ERI 247613.Q093

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

SUBJECT **Groundwater Monitoring Report, Third Quarter 2009**
Former Exxon Service Station 70234
3450 35th Avenue, Oakland, California

Alameda County RO#2515

INTRODUCTION

At the request of ExxonMobil Environmental Services Company, on behalf of ExxonMobil Oil Corporation (ExxonMobil), Environmental Resolutions, Inc. (ERI) performed third quarter 2009 groundwater monitoring and sampling activities at the subject site. Relevant plates, tables, and appendices are included at the end of this report. Currently, the site is vacant.

GROUNDWATER MONITORING AND SAMPLING SUMMARY

Gauging and sampling date:	08/31/09
Wells gauged and sampled:	MW4 through MW9
Presence of NAPL:	Not observed
Concurrently Sampled:	Sampled concurrently during second and fourth quarters only.
Data Provided by:	
Laboratory:	Calscience Environmental Laboratories, Inc. Garden Grove, California
Analyses performed:	EPA 8015B EPA 8260B TPHg BTEX, MTBE, ETBE, TAME, TBA, EDB, 1,2-DCA, DIPE
Waste disposal:	61 gallons of purge and decon water delivered to Instrat, Inc., of Rio Vista, California, on 09/02/09

CONCLUSIONS

Groundwater monitoring and sampling data are consistent with previous data collected from the site. The monitoring and sampling frequency at the adjacent ConocoPhillips site (3420 35th Avenue) has been reduced to semi-annual, occurring during second and fourth quarters. ERI will conduct concurrent sampling with the ConocoPhillips site during these quarters. Quarterly monitoring and sampling will

Environmental Resolutions, Inc.

601 North McDowell Boulevard, Petaluma, CA 94954 | Tel: 707.766.2000 | Fax: 707.789.0414 | A/C10-611383

continue at the subject site through fourth quarter 2009, at which time ERI will evaluate site data and consider reducing the frequency to semi-annual. Groundwater flow is variable across the site.

DOCUMENT DISTRIBUTION

ERI recommends forwarding copies of this report to:

Ms. Barbara Jakub, P.G.
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Mr. Shay Wideman
The Valero Companies
Environmental Liability Management
P.O. Box 696000
San Antonio, Texas 78269

LIMITATIONS

For any documents cited that were not generated by ERI, the data taken from those documents is used "as is" and is assumed to be accurate. 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 was prepared in accordance with generally accepted standards of environmental, geological, and engineering practices 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 call Ms. Paula Sime, ERI's project manager for this site, at (707) 766-2000 with any questions regarding this report.

Sincerely,
Environmental Resolutions, Inc.

SCANNED
Jennifer Lacy
IMAGE
Senior Staff Scientist

SCANNED
Heidi L Dieffenbach-Carle
P.G. 6793
IMAGE



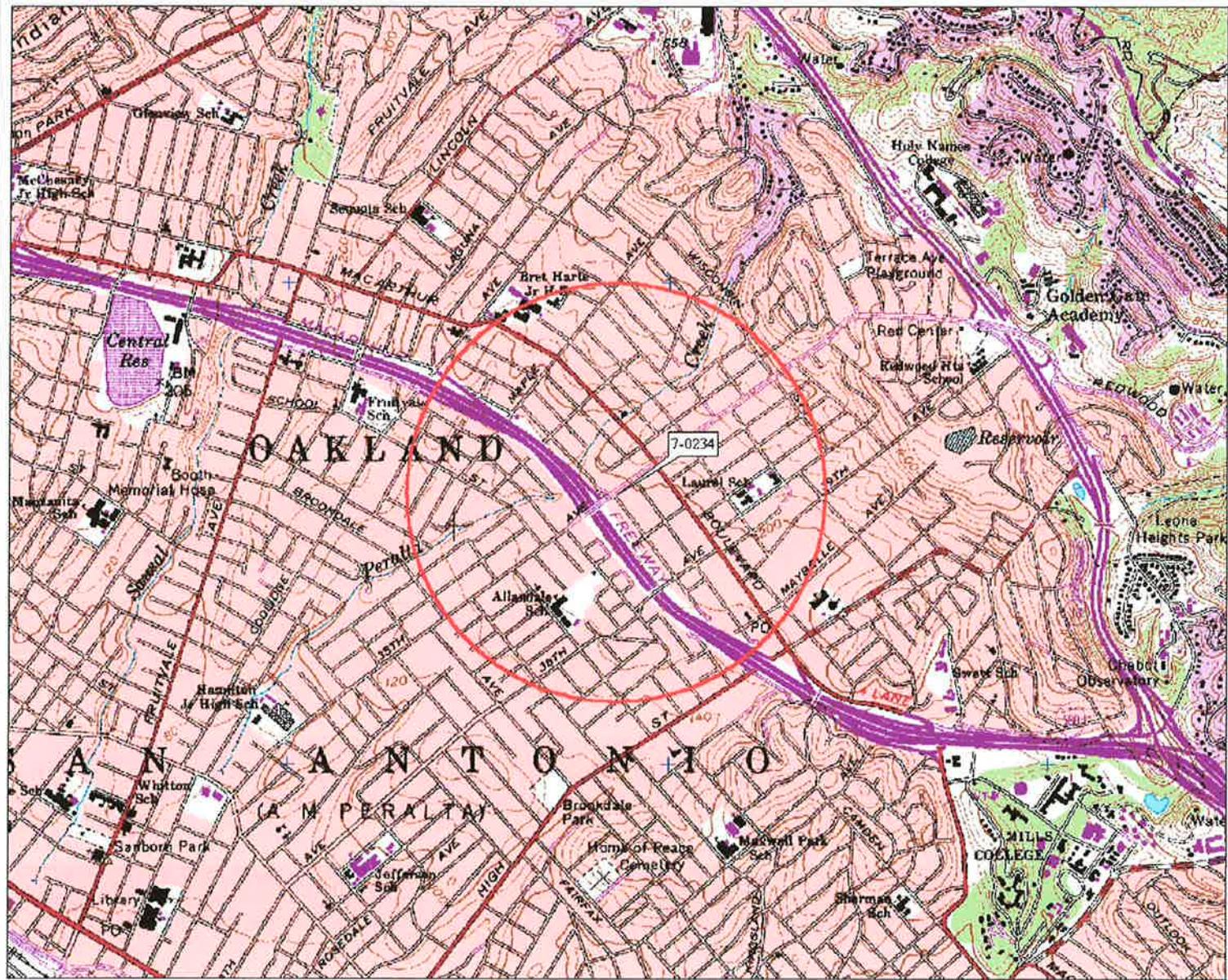
Enclosures:

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	Laboratory Analytical Report and Chain-of-Custody Record
Appendix C	Waste Disposal Documentation
Appendix D	Field Data Sheets

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
acf m	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	Tetrachloroethylene 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
HVOCS	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	Trichloroethylene
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		



2-D TopoQuads Copyright © 1997 DeLorme Yarmouth, ME 04096 Source Data: USGS

550 ft Scale: 1 : 10,200 Detail: 1:3,0 Datum: WGS84

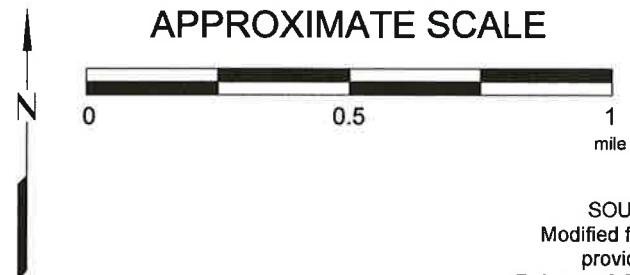
2476TOPO

EXPLANATION



1/2-mile radius circle

APPROXIMATE SCALE



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



SITE VICINITY MAP

FORMER EXXON SERVICE STATION 70234
3450 35th Avenue
Oakland, California

PROJECT NO.

2476

PLATE

1

Analyte Concentrations in ug/L
Sampled August 31, 2009

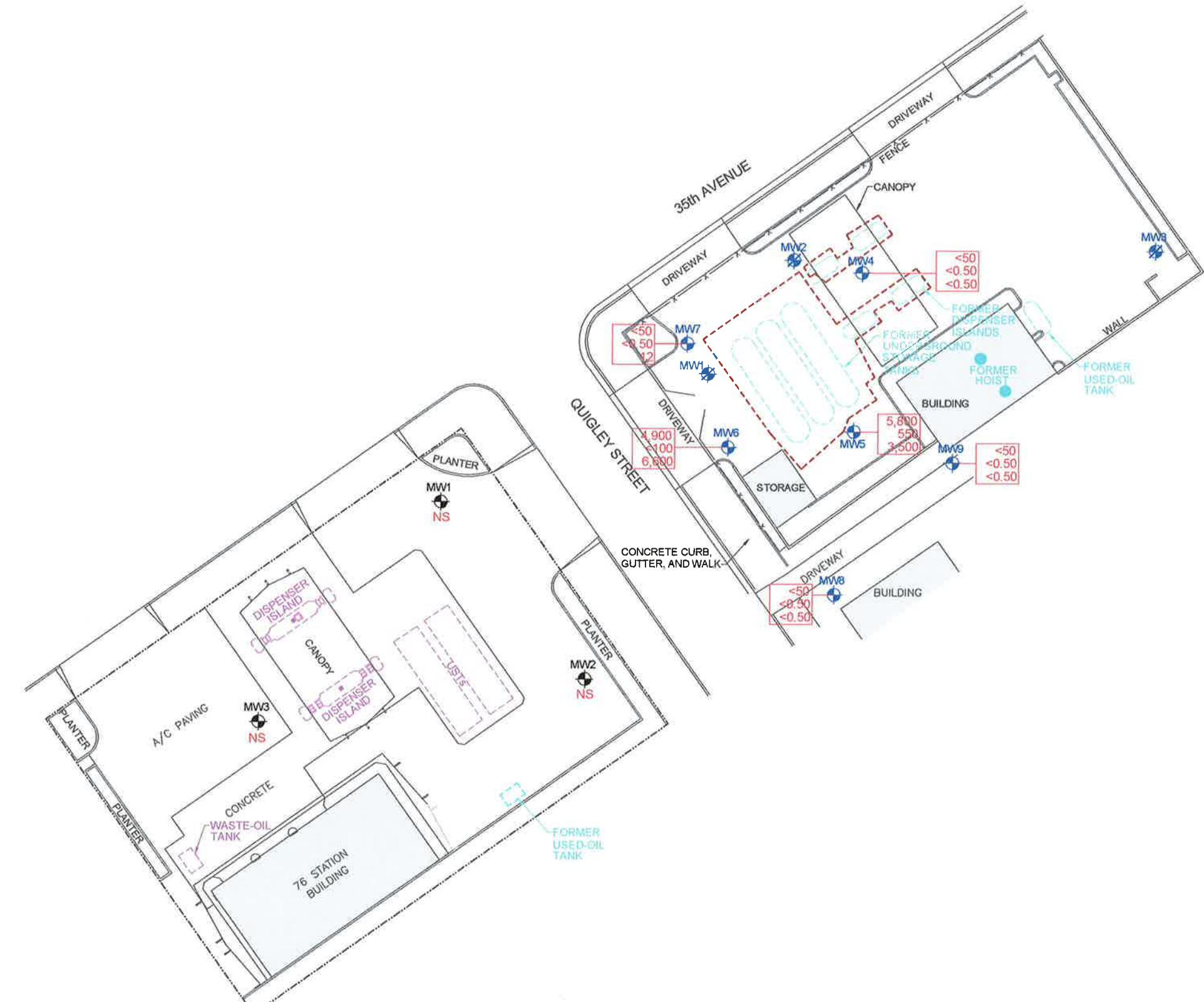
Total Petroleum Hydrocarbons
as gasoline

Benzene

Methyl Tertiary Butyl Ether

< Less Than the Stated Laboratory
Reporting Limit

ug/L Micrograms per Liter



APPROXIMATE SCALE



FN 2476 09 3QTR QM

SOURCE: Modified
from maps provided by
MORROW SURVERING
AND TRC



SELECT ANALYTICAL RESULTS

August 31, 2009

FORMER
EXXON SERVICE STATION 70234
3450 35th Avenue
Oakland, California

EXPLANATION

MW9
Groundwater Monitoring Well

MW1
Destroyed Groundwater Monitoring Well

MW3
Groundwater Monitoring Well By Others

[Red dashed box]
Excavated Area

PROJECT NO.
2476

PLATE
2



APPROXIMATE SCALE



FN 2476 09 3QTR QM



GROUNDWATER ELEVATION MAP

August 31, 2009

FORMER
EXXON SERVICE STATION 70234
3450 35th Avenue
Oakland, California

EXPLANATION

- MW9 Groundwater Monitoring Well
161.96 Groundwater elevation in feet; datum is mean sea level
MW1 Destroyed Groundwater Monitoring Well

MW3

Groundwater Monitoring Well By Others



Excavated Area

162.00 ---- Line of Equal Groundwater Elevation;
datum is mean sea level

NM Not Measured

Note:

Elevation data is not included in groundwater contouring. Concurrent datum is not surveyed to mean sea level (MSL).

PROJECT NO.	2476
PLATE	3

TABLE 1A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA

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

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHg (µg/L)	MTBE (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Total Pb (µg/L)	Organic Pb (mg/L)
MW1	07/15/92	---		Well installed.									
MW1	07/17/92	192.00	33.02	158.98	No	67	--	6.6	6.9	2.0	4.5	17	--
MW1	10/22/92	192.00	34.07	157.93	No	<50	--	2.9	<0.5	<0.5	<0.5	16	--
MW1	02/04/93	192.00	29.43	162.57	No	<50	--	0.8	<0.5	<0.5	<0.5	4	--
MW1	05/03/93	192.00	29.72	162.28	No	71	--	2.8	7.2	2.2	22	40	--
MW1	07/30/93	192.00	32.95	159.05	No	<50	--	<0.5	<0.5	<0.5	<0.5	5	--
MW1	10/19/93	192.00	34.34	157.66	No	<50	--	<0.5	<0.5	<0.5	<0.5	12	--
MW1	02/23/94	192.00	31.72	160.28	No	<50	--	<0.5	<0.5	<0.5	<0.5	4	--
MW1	06/06/94	192.00	31.77	160.23	No	<50	--	<0.5	<0.5	<0.5	<0.5	<3	--
MW1	08/18/94	192.00	33.76	158.24	No	<50	--	<0.5	<0.5	<0.5	<0.5	130	--
MW1	11/15/94	192.00	34.08	157.92	No	<50	--	<0.5	<0.5	<0.5	<0.5	<3.0	<100
MW1	02/06/95	192.00	28.50	163.50	No	<50	--	<0.5	<0.5	<0.5	<0.5	--	--
MW1	05/10/95	192.00	29.30	162.70	No	<50	--	<0.5	<0.5	<0.5	<0.5	--	--
MW1	09/20/99	192.00	33.30	158.70	No	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<75	<50
MW1	Well destroyed in June 2000.												
MW2	07/15/92	---		Well installed.									
MW2	07/17/92	194.85	34.65	160.20	No	<50	--	<0.5	<0.5	<0.5	<0.5	<3	--
MW2	10/22/92	194.85	35.64	159.21	No	<50	--	<0.5	<0.5	<0.5	<0.5	-	--
MW2	02/04/93	194.85	31.13	163.72	No	<50	--	<0.5	<0.5	<0.5	<0.5	<3	--
MW2	05/03/93	194.85	31.08	163.77	No	<50	--	<0.5	<0.5	<0.5	<0.5	3	--
MW2	07/30/93	194.85	34.34	160.51	No	<50	--	<0.5	<0.5	<0.5	<0.5	14	--
MW2	10/19/93	194.85	36.00	158.85	No	<50	--	<0.5	<0.5	<0.5	<0.5	<3	--
MW2	02/23/94	194.85	33.92	160.93	No	<50	--	<0.5	<0.5	<0.5	<0.5	<3	--
MW2	06/06/94	194.85	33.50	161.35	No	<50	--	<0.5	<0.5	<0.5	<0.5	<3	--
MW2	08/18/94	194.85	35.38	159.47	No	<50	--	<0.5	<0.5	<0.5	<0.5	<3.0	--
MW2	11/15/94	194.85	35.93	158.92	No	<50	--	<0.5	<0.5	<0.5	<0.5	<3.0	<100
MW2	02/06/95	194.85	30.38	164.47	No	<50	--	<0.5	<0.5	<0.5	<0.5	--	--
MW2	05/10/95	194.85	30.77	164.08	No	<50	--	<0.5	<0.5	<0.5	<0.5	--	--
MW2	09/20/99	194.85	35.15	159.70	No	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<75	<0.5
MW2	Well destroyed in June 2000.												
MW3	07/15/92	—		Well installed.									
MW3	07/17/92	196.90	37.24	159.66	No	<50	--	<0.5	<0.5	<0.5	<0.5	50	--
MW3	10/22/92	196.90	35.95	160.95	No	<50	--	<0.5	<0.5	<0.5	<0.5	9	--
MW3	02/04/93	196.90	29.85	167.05	No	<50	--	<0.5	<0.5	<0.5	<0.5	<3	--
MW3	05/03/93	196.90	29.87	167.03	No	<50	--	<0.5	<0.5	<0.5	<0.5	3	--
MW3	07/30/93	196.90	33.85	163.05	No	<50	--	<0.5	<0.5	<0.5	<0.5	22	--

TABLE 1A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA

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

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHg (µg/L)	MTBE (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Total Pb (µg/L)	Organic Pb (mg/L)	
MW3	10/19/93	196.90	35.89	161.01	No	<50	---	<0.5	<0.5	<0.5	<0.5	12	---	
MW3	02/23/94	196.90	32.88	164.02	No	<50	---	<0.5	<0.5	<0.5	<0.5	25	---	
MW3	06/06/94	196.90	32.40	164.50	No	<50	---	<0.5	<0.5	<0.5	<0.5	<3	---	
MW3	08/18/94	196.90	35.07	161.83	No	<50	---	<0.5	<0.5	<0.5	<0.5	<3.0	---	
MW3	11/15/94	196.90	35.97	160.93	No	<50	---	<0.5	<0.5	<0.5	<0.5	<3.0	<100	
MW3	02/06/95	196.90	28.39	168.51	No	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	
MW3	05/10/95	196.90	28.90	168.00	No	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	
MW3	09/20/99	196.90	34.68	162.22	No	75.0	1.87	<0.5	11.5	1.8	18.0	<75	<0.5	
MW3	Well destroyed in June 2000.													
MW4	03/02/09	---	Well installed.											
MW4	03/30/09	197.62	30.94	166.68	No	<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	No	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---	
MW4	08/31/09	197.62	35.43	162.19	No	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---	
MW5	03/06/09	---	Well installed.											
MW5	03/30/09	196.35	30.05	166.30	No	4,200	1,900	540	140	<12	310	---	---	
MW5	04/02/09	196.35	Well surveyed.											
MW5	05/28/09	196.35	31.45	164.90	No	5,300	3,600	890	150	<25	140	---	---	
MW5	08/31/09	196.35	34.70	161.65	No	5,800	3,500	550	<100	<100	<100	---	---	
MW6	03/09/09	---	Well installed.											
MW6	03/30/09	192.41	26.94	165.47	No	2,800	4,800	0.91	<0.50	<0.50	<0.50	---	---	
MW6	04/02/09	192.41	Well surveyed.											
MW6	05/28/09	192.41	28.04	164.37	No	2,800	6,000	<100	<100	<100	<100	---	---	
MW6	08/31/09	192.41	30.57	161.84	No	4,900	6,600	<100	<100	<100	<100	---	---	
MW7	03/09/09	---	Well installed.											
MW7	03/30/09	194.34	29.15	165.19	No	55	66	<0.50	<0.50	<0.50	<0.50	---	---	
MW7	04/02/09	194.34	Well surveyed.											
MW7	05/28/09	194.34	30.16	164.18	No	50	67	<1.0	<1.0	<1.0	<1.0	---	---	
MW7	08/31/09	194.34	33.31	161.03	No	<50	12	<0.50	0.60	<0.50	<0.50	---	---	
MW8	03/04/09	---	Well installed.											
MW8	03/30/09	192.96	27.35	165.61	No	<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	No	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---	
MW8	08/31/09	192.96	31.93	161.03	No	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---	

TABLE 1A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 70234
 3450 35th Avenue
 Oakland, California

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHg (µg/L)	MTBE (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Total Pb (µg/L)	Organic Pb (mg/L)
MW9	03/05/09	---	Well installed.									---	---
MW9	03/30/09	195.16	28.31	166.85	No	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW9	04/02/09	195.16	Well surveyed.									---	---
MW9	05/28/09	195.16	29.69	165.47	No	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW9	08/31/09	195.16	33.20	161.96	No	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---

TABLE 1A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 70234
 3450 35th Avenue
 Oakland, California

Notes:	Data prior to 1999 provided by EA Environmental Science and Engineering in previously submitted reports.
TOC Elev.	= Top of well casing elevation; datum is mean sea level.
DTW	= Depth to water.
GW Elev.	= Groundwater elevation; datum is mean sea level.
NAPL	= Non-aqueous phase liquid.
TPHg	= Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015.
MTBE	= Methyl tertiary butyl ether analyzed using EPA Method 8260.
BTEX	= Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8020.
Total Pb	= Total lead analyzed using EPA Method 6010.
Organic Pb	= Organic lead analyzed using CA DHS LUFT method.
EDB	= 1,2-dibromoethane analyzed using EPA Method 8260B.
1,2-DCA	= 1,2-dichloroethane analyzed using EPA Method 8260B.
TAME	= Tertiary amyl methyl ether analyzed using EPA Method 8260B.
TBA	= Tertiary butyl alcohol analyzed using EPA Method 8260B.
ETBE	= Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
DIPE	= Di-isopropyl ether analyzed using EPA Method 8260B.
µg/L	= Micrograms per liter.
mg/L	= Milligrams per liter.
<	= Less than the stated laboratory reporting limit.
---	= Not sampled/Not analyzed/Not measured/Not applicable.

TABLE 1B
ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA

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

Well ID	Sampling Date	EDB ($\mu\text{g/L}$)	1,2-DCA ($\mu\text{g/L}$)	TAME ($\mu\text{g/L}$)	TBA ($\mu\text{g/L}$)	ETBE ($\mu\text{g/L}$)	DIPE ($\mu\text{g/L}$)
MW1	07/17/92 - 09/20/99						
MW1	Well destroyed in June 2000.						
MW2	07/17/92 - 09/20/99						
MW2	Well destroyed in June 2000.						
MW3	07/17/92 - 09/20/99						
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
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
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
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
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
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

TABLE 1B
ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA

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

Notes:	Data prior to 1999 provided by EA Environmental Science and Engineering in previously submitted reports.
TOC Elev.	= Top of well casing elevation; datum is mean sea level.
DTW	= Depth to water.
GW Elev.	= Groundwater elevation; datum is mean sea level.
NAPL	= Non-aqueous phase liquid.
TPHg	= Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015.
MTBE	= Methyl tertiary butyl ether analyzed using EPA Method 8260.
BTEX	= Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8020.
Total Pb	= Total lead analyzed using EPA Method 6010.
Organic Pb	= Organic lead analyzed using CA DHS LUFT method.
EDB	= 1,2-dibromoethane analyzed using EPA Method 8260B.
1,2-DCA	= 1,2-dichloroethane analyzed using EPA Method 8260B.
TAME	= Tertiary amyl methyl ether analyzed using EPA Method 8260B.
TBA	= Tertiary butyl alcohol analyzed using EPA Method 8260B.
ETBE	= Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
DIPE	= Di-isopropyl ether analyzed using EPA Method 8260B.
µg/L	= Micrograms per liter.
mg/L	= Milligrams per liter.
<	= Less than the stated laboratory reporting limit.
---	= Not sampled/Not analyzed/Not measured/Not applicable.

TABLE 2
WELL CONSTRUCTION DETAILS
Former Exxon Service Station 70234
3450 35th Avenue
Oakland, California

Well ID	Well Installation Date	Well Destruction Date	TOC Elevation (feet)	Borehole Diameter (inches)	Total Depth of Boring (feet bgs)	Well Depth (feet bgs)	Casing Diameter (inches)	Well Casing Material	Screened Interval (feet bgs)	Slot Size (inches)	Filter Pack Interval (feet bgs)	Filter Pack Material
MW1	07/15/92	Jun-00	192.00	11	45	45	4	Schedule 40 PVC	25-45	0.010	23-45	2/12 Lonestar Sand
MW2	07/15/92	Jun-00	194.85	11	45	45	4	Schedule 40 PVC	25-45	0.010	23-45	2/12 Lonestar Sand
MW3	07/15/92	Jun-00	196.90	11	45	45	4	Schedule 40 PVC	25-45	0.010	23-45	2/12 Lonestar Sand
MW4	03/02/09	---	197.62	8	45	45	2	PVC	35-45	0.2	33-45	#3 Sand
MW5	03/06/09	---	196.35	8	40	40	2	PVC	30-40	0.2	28-40	#3 Sand
MW6	03/09/09	---	192.41	8	40	39	2	PVC	29-39	0.2	27-39	#3 Sand
MW7	03/09/09	---	194.34	8	40	40	2	PVC	30-40	0.2	28-40	#3 Sand
MW8	03/04/09	---	192.96	8	40	40	2	PVC	30-40	0.2	28-40	#3 Sand
MW9	03/05/09	---	195.16	8	40	40	2	PVC	30-40	0.2	28-40	#3 Sand

Notes:

TOC = Top of well casing elevation; datum is mean sea level.

PVC = Polyvinyl chloride.

feet bgs = feet below ground surface.

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 an 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:

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

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.

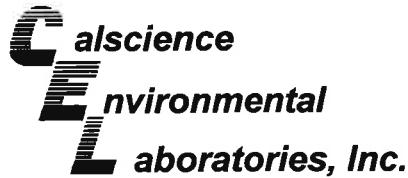
After purging, each well is allowed to recharge to at least 80% of the initial water level. Water samples from wells that do not recover at least 80% (due to slow recharging of the well) between purging and sampling are considered to be "grab samples." Water samples are collected with a new, disposable 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.

APPENDIX B

**LABORATORY ANALYTICAL REPORT
AND CHAIN-OF-CUSTODY RECORD**



September 16, 2009

Paula Sime
 Environmental Resolutions, Inc.
 601 North McDowell Blvd.
 Petaluma, CA 94954-2312

RECEIVED
 SEP 17 2009

BY: -----

Subject: Calscience Work Order No.: 09-09-0131
Client Reference: ExxonMobil 70234

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 9/2/2009 and analyzed in accordance with the attached chain-of-custody.

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

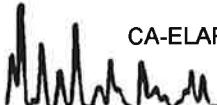
Note that the Chain-of-Custody Record and Sample Receipt Form are integral parts of this report.

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

Sincerely,

Cecile L deGuia

Calscience Environmental
 Laboratories, Inc.
 Cecile deGuia
 Project Manager



CA-ELAP ID: 1230 • NELAP ID: 03220CA • CSDLAC ID: 10109 • SCAQMD ID: 93LA0830
 7440 Lincoln Way, Garden Grove, CA 92841-1427 • TEL:(714) 895-5494 • FAX: (714) 894-7501



Analytical Report



Environmental Resolutions, Inc.
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Date Received: 09/02/09
Work Order No: 09-09-0131
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: ExxonMobil 70234

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW4	09-09-0131-2-D	08/31/09 11:53	Aqueous	GC 57	09/03/09	09/03/09 16:30	090903B01

Parameter	Result	RL	DF	Qual	Units
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TPH as Gasoline ND 50 1 ug/L

Surrogates: REC (%) Control Limits Qual

1,4-Bromofluorobenzene 103 38-134

MW5	09-09-0131-3-E	08/31/09 12:09	Aqueous	GC 57	09/08/09	09/09/09 00:30	090908B01
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Parameter	Result	RL	DF	Qual	Units
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TPH as Gasoline 5800 250 5 ug/L

Surrogates: REC (%) Control Limits Qual

1,4-Bromofluorobenzene 105 38-134

MW6	09-09-0131-4-D	08/31/09 12:35	Aqueous	GC 57	09/03/09	09/04/09 09:54	090903B01
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Parameter	Result	RL	DF	Qual	Units
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TPH as Gasoline 4900 250 5 ug/L

Surrogates: REC (%) Control Limits Qual

1,4-Bromofluorobenzene 133 38-134

MW7	09-09-0131-5-E	08/31/09 12:00	Aqueous	GC 57	09/08/09	09/09/09 01:34	090908B01
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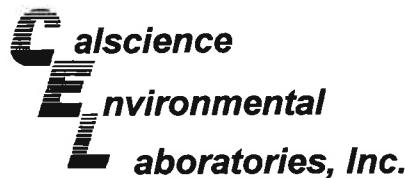
Parameter	Result	RL	DF	Qual	Units
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TPH as Gasoline ND 50 1 ug/L

Surrogates: REC (%) Control Limits Qual

1,4-Bromofluorobenzene 103 38-134

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



Analytical Report



Environmental Resolutions, Inc.
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Date Received: 09/02/09
Work Order No: 09-09-0131
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: ExxonMobil 70234

Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW8	09-09-0131-6-E	08/31/09 12:23	Aqueous	GC 57	09/08/09	09/09/09 02:07	090908B01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	104	38-134			

MW9	09-09-0131-7-E	08/31/09 12:12	Aqueous	GC 57	09/08/09	09/09/09 07:28	090908B02
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	106	38-134			

Method Blank	099-12-436-3,740	N/A	Aqueous	GC 57	09/03/09	09/03/09 14:53	090903B01
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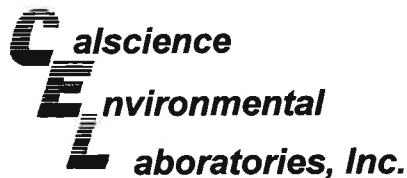
Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	97	38-134			

Method Blank	099-12-436-3,761	N/A	Aqueous	GC 57	09/08/09	09/08/09 12:09	090908B01
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	89	38-134			

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





Analytical Report



Environmental Resolutions, Inc.
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Date Received: 09/02/09
Work Order No: 09-09-0131
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: ExxonMobil 70234

Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-436-3,764	N/A	Aqueous	GC 57	09/08/09	09/09/09 04:15	090908B02

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1		ug/L
<u>Surrogates:</u>					
1,4-Bromofluorobenzene	81	38-134			

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





Analytical Report



Environmental Resolutions, Inc.
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Date Received: 09/02/09
Work Order No: 09-09-0131
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 70234

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW4	09-09-0131-2-A	08/31/09 11:53	Aqueous	GC/MS Z	09/02/09	09/03/09 04:16	090902L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		1,2-Dibromoethane	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1		1,2-Dichloroethane	ND	0.50	1	
Tert-Butyl Alcohol (TBA)	ND	5.0	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	92	80-128			1,4-Bromofluorobenzene	93	68-120		
Dibromofluoromethane	97	80-127			Toluene-d8	98	80-120		

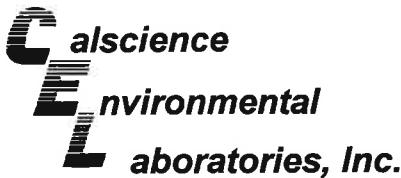
MW5	09-09-0131-3-A	08/31/09 12:09	Aqueous	GC/MS Z	09/02/09	09/03/09 04:43	090902L02
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	550	100	200		Diisopropyl Ether (DIPE)	ND	100	200	
Toluene	ND	100	200		Ethyl-t-Butyl Ether (ETBE)	ND	100	200	
Ethylbenzene	ND	100	200		Tert-Amyl-Methyl Ether (TAME)	ND	100	200	
Xylenes (total)	ND	100	200		1,2-Dibromoethane	ND	100	200	
Methyl-t-Butyl Ether (MTBE)	3500	100	200		1,2-Dichloroethane	ND	100	200	
Tert-Butyl Alcohol (TBA)	ND	1000	200						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	88	80-128			1,4-Bromofluorobenzene	91	68-120		
Dibromofluoromethane	98	80-127			Toluene-d8	97	80-120		

MW6	09-09-0131-4-A	08/31/09 12:35	Aqueous	GC/MS Z	09/02/09	09/03/09 05:11	090902L02
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	100	200		Diisopropyl Ether (DIPE)	ND	100	200	
Toluene	ND	100	200		Ethyl-t-Butyl Ether (ETBE)	ND	100	200	
Ethylbenzene	ND	100	200		Tert-Amyl-Methyl Ether (TAME)	ND	100	200	
Xylenes (total)	ND	100	200		1,2-Dibromoethane	ND	100	200	
Methyl-t-Butyl Ether (MTBE)	6600	100	200		1,2-Dichloroethane	ND	100	200	
Tert-Butyl Alcohol (TBA)	1100	1000	200						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	91	80-128			1,4-Bromofluorobenzene	90	68-120		
Dibromofluoromethane	101	80-127			Toluene-d8	98	80-120		

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



Analytical Report



Environmental Resolutions, Inc.
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Date Received: 09/02/09
Work Order No: 09-09-0131
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 70234

Page 2 of 3

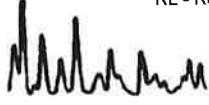
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW7	09-09-0131-5-B	08/31/09 12:00	Aqueous	GC/MS Z	09/04/09	09/04/09 19:27	090904L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	0.60	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		1,2-Dibromoethane	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	12	0.50	1		1,2-Dichloroethane	ND	0.50	1	
Tert-Butyl Alcohol (TBA)	ND	5.0	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	93	80-128			1,4-Bromofluorobenzene	91	68-120		
Dibromofluoromethane	95	80-127			Toluene-d8	99	80-120		
MW8	09-09-0131-6-A	08/31/09 12:23	Aqueous	GC/MS Z	09/02/09	09/03/09 06:06	090902L02		

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		1,2-Dibromoethane	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1		1,2-Dichloroethane	ND	0.50	1	
Tert-Butyl Alcohol (TBA)	ND	5.0	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	91	80-128			1,4-Bromofluorobenzene	89	68-120		
Dibromofluoromethane	96	80-127			Toluene-d8	97	80-120		
MW9	09-09-0131-7-A	08/31/09 12:12	Aqueous	GC/MS Z	09/02/09	09/03/09 06:33	090902L02		

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		1,2-Dibromoethane	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1		1,2-Dichloroethane	ND	0.50	1	
Tert-Butyl Alcohol (TBA)	ND	5.0	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	95	80-128			1,4-Bromofluorobenzene	90	68-120		
Dibromofluoromethane	97	80-127			Toluene-d8	97	80-120		

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





Analytical Report



Environmental Resolutions, Inc.
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Date Received: 09/02/09
Work Order No: 09-09-0131
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 70234

Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-884-223	N/A	Aqueous	GC/MS Z	09/02/09	09/02/09 23:40	090902L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		1,2-Dibromoethane	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1		1,2-Dichloroethane	ND	0.50	1	
Tert-Butyl Alcohol (TBA)	ND	5.0	1						
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
1,2-Dichloroethane-d4	94	80-128			1,4-Bromofluorobenzene	91	68-120		
Dibromofluoromethane	93	80-127			Toluene-d8	99	80-120		

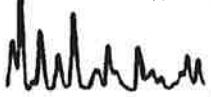
Method Blank	099-12-884-229	N/A	Aqueous	GC/MS Z	09/04/09	09/04/09 11:59	090904L01
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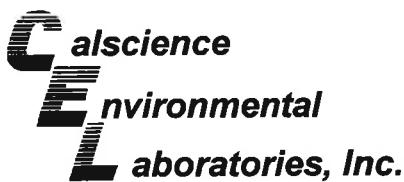
Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		1,2-Dibromoethane	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1		1,2-Dichloroethane	ND	0.50	1	
Tert-Butyl Alcohol (TBA)	ND	5.0	1						
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
1,2-Dichloroethane-d4	91	80-128			1,4-Bromofluorobenzene	89	68-120		
Dibromofluoromethane	95	80-127			Toluene-d8	95	80-120		

RL - Reporting Limit

DF - Dilution Factor

Qual - Qualifiers





Quality Control - Spike/Spike Duplicate



Environmental Resolutions, Inc.
601 North McDowell Blvd.
Petaluma, CA 94954-2312

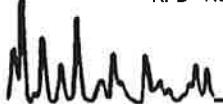
Date Received: 09/02/09
Work Order No: 09-09-0131
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project ExxonMobil 70234

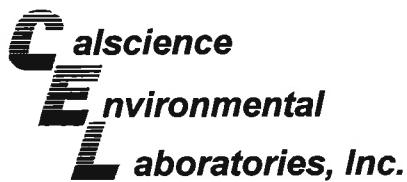
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW4	Aqueous	GC 57	09/03/09	09/03/09	090903S01

<u>Parameter</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
TPH as Gasoline	109	108	68-122	1	0-18	

RPD - Relative Percent Difference , CL - Control Limit



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Quality Control - Spike/Spike Duplicate



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Petaluma, CA 94954-2312

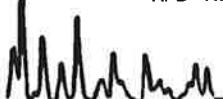
Date Received: 09/02/09
Work Order No: 09-09-0131
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project ExxonMobil 70234

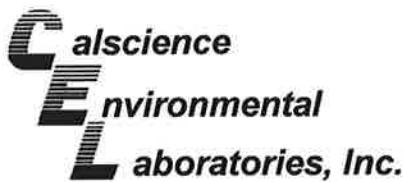
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-09-0320-2	Aqueous	GC 57	09/08/09	09/08/09	090908S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	108	104	68-122	4	0-18	

RPD - Relative Percent Difference , CL - Control Limit



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Quality Control - Spike/Spike Duplicate



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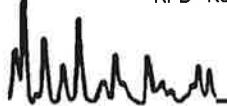
Date Received: 09/02/09
Work Order No: 09-09-0131
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project ExxonMobil 70234

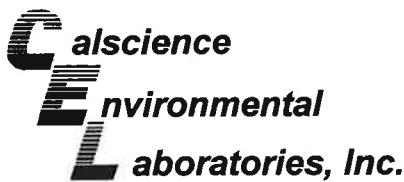
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-09-0320-5	Aqueous	GC 57	09/08/09	09/09/09	090908S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	97	96	68-122	1	0-18	

RPD - Relative Percent Difference , CL - Control Limit



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Quality Control - Spike/Spike Duplicate



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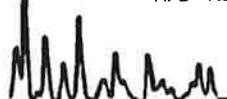
Date Received: 09/02/09
Work Order No: 09-09-0131
Preparation: EPA 5030B
Method: EPA 8260B

Project ExxonMobil 70234

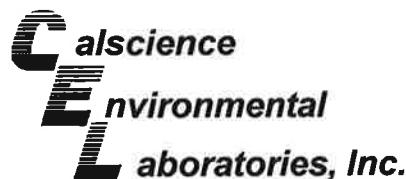
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-08-2407-1	Aqueous	GC/MS Z	09/02/09	09/03/09	090902S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	104	107	76-124	2	0-20	
Toluene	103	104	80-120	0	0-20	
Ethylbenzene	107	109	78-126	2	0-20	
Methyl-t-Butyl Ether (MTBE)	95	96	67-121	1	0-49	
Tert-Butyl Alcohol (TBA)	109	117	36-162	8	0-30	
Diisopropyl Ether (DIPE)	105	105	60-138	1	0-45	
Ethyl-t-Butyl Ether (ETBE)	93	92	69-123	2	0-30	
Tert-Amyl-Methyl Ether (TAME)	88	90	65-120	2	0-20	
Ethanol	110	90	30-180	20	0-72	
1,1-Dichloroethene	95	95	73-127	0	0-20	
1,2-Dibromoethane	116	121	80-120	5	0-20	3
1,2-Dichlorobenzene	105	109	80-120	4	0-20	
Carbon Tetrachloride	99	98	74-134	1	0-20	
Chlorobenzene	106	108	80-120	2	0-20	
Trichloroethene	103	104	77-120	1	0-20	
Vinyl Chloride	107	103	72-126	4	0-20	

RPD - Relative Percent Difference , CL - Control Limit



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Quality Control - Spike/Spike Duplicate



Environmental Resolutions, Inc.
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Petaluma, CA 94954-2312

Date Received: 09/02/09
Work Order No: 09-09-0131
Preparation: EPA 5030B
Method: EPA 8260B

Project ExxonMobil 70234

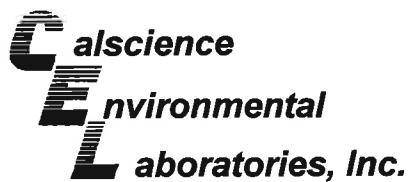
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-09-0226-5	Aqueous	GC/MS Z	09/04/09	09/04/09	090904S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	105	108	76-124	2	0-20	
Toluene	105	106	80-120	1	0-20	
Ethylbenzene	107	108	78-126	1	0-20	
Methyl-t-Butyl Ether (MTBE)	81	88	67-121	9	0-49	
Tert-Butyl Alcohol (TBA)	109	109	36-162	0	0-30	
Diisopropyl Ether (DIPE)	94	98	60-138	4	0-45	
Ethyl-t-Butyl Ether (ETBE)	81	84	69-123	4	0-30	
Tert-Amyl-Methyl Ether (TAME)	80	88	65-120	9	0-20	
Ethanol	128	110	30-180	15	0-72	
1,1-Dichloroethene	96	97	73-127	1	0-20	
1,2-Dibromoethane	103	109	80-120	6	0-20	
1,2-Dichlorobenzene	106	104	80-120	1	0-20	
Carbon Tetrachloride	99	98	74-134	1	0-20	
Chlorobenzene	106	106	80-120	0	0-20	
Trichloroethene	103	106	77-120	3	0-20	
Vinyl Chloride	100	99	72-126	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit



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Quality Control - LCS/LCS Duplicate



Environmental Resolutions, Inc.
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Petaluma, CA 94954-2312

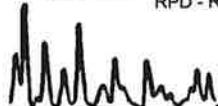
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Work Order No: 09-09-0131
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: ExxonMobil 70234

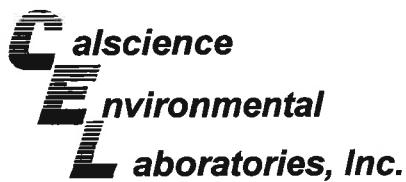
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-436-3,740	Aqueous	GC 57	09/03/09	09/03/09	090903B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	102	106	78-120	4	0-10	

RPD - Relative Percent Difference , CL - Control Limit



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Quality Control - LCS/LCS Duplicate



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Petaluma, CA 94954-2312

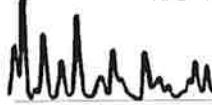
Date Received: N/A
Work Order No: 09-09-0131
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: ExxonMobil 70234

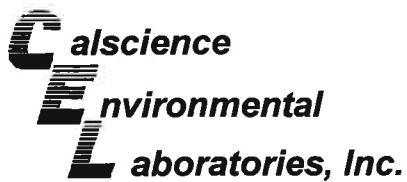
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-436-3,761	Aqueous	GC 57	09/08/09	09/08/09	090908B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	107	102	78-120	5	0-10	

RPD - Relative Percent Difference , CL - Control Limit



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Quality Control - LCS/LCS Duplicate



Environmental Resolutions, Inc.
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Petaluma, CA 94954-2312

Date Received: N/A
Work Order No: 09-09-0131
Preparation: EPA 5030B
Method: EPA 8015B (M)

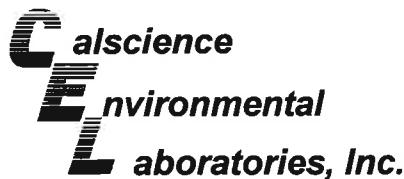
Project: ExxonMobil 70234

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-436-3,764	Aqueous	GC 57	09/08/09	09/09/09	090908B02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	101	102	78-120	1	0-10	

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Environmental Resolutions, Inc.
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Date Received: N/A
Work Order No: 09-09-0131
Preparation: EPA 5030B
Method: EPA 8260B

Project: ExxonMobil 70234

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number	
Parameter	Aqueous	GC/MS Z	09/02/09	09/02/09	090902L02	
Benzene	107	104	80-120	73-127	3	0-20
Toluene	105	103	80-120	73-127	2	0-20
Ethylbenzene	107	104	80-120	73-127	3	0-20
Methyl-t-Butyl Ether (MTBE)	92	93	69-123	60-132	1	0-20
Tert-Butyl Alcohol (TBA)	99	105	63-123	53-133	6	0-20
Diisopropyl Ether (DIPE)	102	103	59-137	46-150	2	0-37
Ethyl-t-Butyl Ether (ETBE)	91	91	69-123	60-132	0	0-20
Tert-Amyl-Methyl Ether (TAME)	88	89	70-120	62-128	1	0-20
Ethanol	110	67	28-160	6-182	48	0-57
1,1-Dichloroethene	97	96	78-126	70-134	1	0-28
1,2-Dibromoethane	109	107	79-121	72-128	2	0-20
1,2-Dichlorobenzene	106	104	80-120	73-127	1	0-20
Carbon Tetrachloride	98	99	74-134	64-144	1	0-20
Chlorobenzene	106	102	80-120	73-127	4	0-20
Trichloroethene	122	127	79-127	71-135	4	0-20
Vinyl Chloride	108	111	72-132	62-142	3	0-20

Total number of LCS compounds : 16

Total number of ME compounds : 0

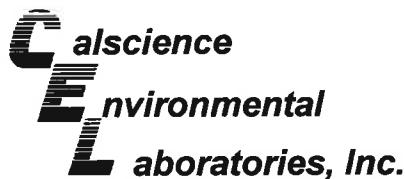
Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit



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Quality Control - LCS/LCS Duplicate



Environmental Resolutions, Inc.
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Date Received: N/A
Work Order No: 09-09-0131
Preparation: EPA 5030B
Method: EPA 8260B

Project: ExxonMobil 70234

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number		
099-12-884-229	Aqueous	GC/MS Z	09/04/09	09/04/09	090904L01		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	104	106	80-120	73-127	2	0-20	
Toluene	103	105	80-120	73-127	2	0-20	
Ethylbenzene	109	108	80-120	73-127	2	0-20	
Methyl-t-Butyl Ether (MTBE)	80	80	69-123	60-132	0	0-20	
Tert-Butyl Alcohol (TBA)	107	106	63-123	53-133	1	0-20	
Diisopropyl Ether (DIPE)	91	93	59-137	46-150	3	0-37	
Ethyl-t-Butyl Ether (ETBE)	78	79	69-123	60-132	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	79	82	70-120	62-128	3	0-20	
Ethanol	116	91	28-160	6-182	24	0-57	
1,1-Dichloroethene	96	96	78-126	70-134	0	0-28	
1,2-Dibromoethane	105	106	79-121	72-128	1	0-20	
1,2-Dichlorobenzene	103	106	80-120	73-127	3	0-20	
Carbon Tetrachloride	99	99	74-134	64-144	0	0-20	
Chlorobenzene	107	107	80-120	73-127	0	0-20	
Trichloroethene	106	109	79-127	71-135	3	0-20	
Vinyl Chloride	108	107	72-132	62-142	0	0-20	

Total number of LCS compounds : 16

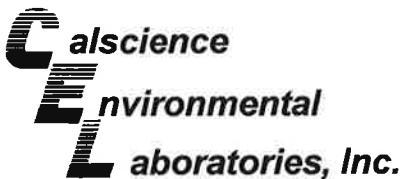
Total number of ME compounds : 0

Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit





Glossary of Terms and Qualifiers



Work Order Number: 09-09-0131

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



CHAIN OF CUSTODY RECORD

0131

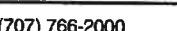
Page 1 of 1



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

ExxonMobil

Shipping Method:

Consultant Name: Environmental Resolutions, Inc.
Address: 601 North McDowell Boulevard
City/State/Zip: Petaluma, California 94954
Project Manager: Paula Sime
Telephone Number: (707) 766-2000
ERI Job Number: 247613X
Sampler Name: (Print) ISAG (w/24M)
Sampler Signature: 
d Deliver Commercial Express Other:

ExxonMobil Engineer Jennifer C. Sedlachek
Telephone Number (510) 547-8196
Account #: _____
PO #: 4510813934
Facility ID # 70234
Global ID# T06019757161
Site Address 3450 35th Avenue
City, State Zip Oakland, California

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: ELT

DATE: 9/2/09

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

Temperature 2.6 °C - 0.2 °C (CF) = 2.4 °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 Metals Only PCBs Only

Initial: WB

CUSTODY SEALS INTACT:

<input type="checkbox"/> Cooler	<input type="checkbox"/> _____	<input type="checkbox"/> No (Not Intact)	<input checked="" type="checkbox"/> Not Present	<input type="checkbox"/> N/A	Initial: <u>WB</u>
<input type="checkbox"/> Sample	<input type="checkbox"/> _____	<input type="checkbox"/> No (Not Intact)	<input checked="" type="checkbox"/> Not Present		Initial: <u>RN</u>

SAMPLE CONDITION:

Yes No N/A

- Chain-Of-Custody (COC) document(s) received with samples.....
- COC document(s) received complete.....
- Collection date/time, matrix, and/or # of containers logged in based on sample labels.
- COC not relinquished. No date relinquished. No time relinquished.
- Sampler's name indicated on COC.....
- Sample container label(s) consistent with COC.....
- Sample container(s) intact and good condition.....
- Correct containers and volume for analyses requested.....
- Analyses received within holding time.....
- Proper preservation noted on COC or sample container.....
 - Unpreserved vials received for Volatiles analysis
- Volatile analysis container(s) free of headspace.....
- Tedlar bag(s) free of condensation.....

CONTAINER TYPE:

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve EnCores® TerraCores® _____

Water: VOA VOAh VOAna₂ 125AGB 125AGBh 125AGBp 1AGB 1AGBna₂ 1AGBs
 500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 500PB 500PBna
 250PB 250PBn 125PB 125PBznna 100PJ 100PJna₂ _____ _____

Air: Tedlar® Summa® _____ **Other:** _____ **Checked/Labeled by:** RN

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

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

APPENDIX C

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. <i>EM-70234</i>		Manifest Document No. <i>EM-70234</i>	2. Page 1 of 1
GENERATOR	3. Generator's Name and Mailing Address <i>Instrat. 1105 C Airport Rd. Rio Vista, CA.</i>		4. Generator's Phone () <i>(707) 374-3834</i>		5. Transporter 1 Company Name <i>ERI</i>
					6. US EPA ID Number <i></i>
					7. Transporter 2 Company Name <i></i>
					8. US EPA ID Number <i></i>
					9. Designated Facility Name and Site Address <i>Instrat. 1105 C Airport Rd. Rio Vista, CA.</i>
TRANSPORTER	11. WASTE DESCRIPTION <i>a. Non-Haz purge water</i>		12. Containers <i>1 poly. 61 GAL</i>		13. Total Quantity <i></i>
					14. Unit Wt./Vol. <i></i>
					b. <i></i>
					c. <i></i>
					d. <i></i>
FACILITY	G. Additional Descriptions for Materials Listed Above <i>Colors - Clear Odors - P Solids - P</i>		H. Handling Codes for Wastes Listed Above <i></i>		15. Special Handling Instructions and Additional Information <i></i>
					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.
					Date <i></i>
	Printed/Typed Name <i></i>		Signature <i></i>		Month Day Year <i></i>
					17. Transporter 1 Acknowledgement of Receipt of Materials <i>Shane McLean</i>
Printed/Typed Name <i></i>		Signature <i></i>		Month Day Year <i></i>	
				18. Transporter 2 Acknowledgement of Receipt of Materials <i></i>	
Printed/Typed Name <i></i>		Signature <i></i>		Month Day Year <i></i>	
19. Discrepancy Indication Space <i></i>					
20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. <i>Instrat.</i>					
Printed/Typed Name <i>Walt Belcher</i>		Signature <i></i>		Date <i>9 12 09</i>	

APPENDIX D

FIELD DATA SHEETS



DAILY FIELD REPORT

Environmental Resolutions, Inc.

PROJECT: 70234

JOB # + ACTIVITY: 2476 13.

SUBJECT: On

DATE: 8-31-07

EQUIPMENT USED:

SHEET: 1 OF 1

NAME: Jose S.

PROJECT MNGR: Paula

Onsite @ 1015 Safe by Cloudy

Non Active Station

Open Wells

OTW Wells

punched & Sampled
MW1, MW2, MW3.

Purge + 10
Decant + 15

TOTAL + 28 + 15mcs H2O

Offsite 1300

WATER SAMPLING SITE STATUS

Date: 8-21-09

Inspected by

ERI Job Number 2476 Station No. 70274 Site Address: 2450 35th Ave Oklahoma

N = Not repairable in time available-see comments.

R = Repaired-see comments

ok = No action needed.

Y = Yes.

N = No

s = Soil

W = Water

8 - Empty

a = Graffiti on walls

ν = Vacante (or evidence, e)

• Open (not assessed)

ERI Groundwater M+S

Depth To Water

Case Volume= $H(r^2 \times 0.163)$

H=Height of Water Column in Feet
r=Radius of well casing in inches

Common conversion factors:
 $2''=0.163$, $4''=0.652$, $6''=1.457$

Project Location Date Name
2476 70234 8-31-09 John S.

GROUNDWATER SAMPLING FIELD LOG

Client Name: Exxon Mobile
Location: 70234
Field Crew: 105e

ERI Job #: 2475

Field Cleaning Performed: _____

Analysis: _____

Date: 8.31-09 Page 1 of 1

Case Volume = (TD - DTW) x F where F =

0.163 for 2" inside-diameter well casing

0.652 for 4" inside-diameter well casing

1.457 for 6" inside-diameter well casing



VALUE, QUALITY, RESPONSE

Daily Field Report

Environmental Resolutions, Inc.

Project ID #: 70234

ERI Job # 0224762009

Subject: 1/4 LY GW SAMPLING

Date: 8/31/2009

Equipment Used: SOLINST/HYDAC/PUMPS/BATTS'S/SAMPLING EQUIPMENT/ETC.

Sheet: 1

Name(s): INGRAM, ISAAC

Time Arrived On Site: 11:00 AM

Time Departed Site: 1:00 PM

Total Travel 2

- 11:00 AM -ARRIVED ON SITE
-VACANT PROPERTY
-SET UP EXCLUSION ZONE AND CHOCKED THE WHEELS ON VEHICLE
11:00 AM -HELD H&S MEETING/REVIEWED HOSPITAL ROUTE
-REVIEWED APPLICABLE JSA'S
-PERFORMED SPSA FOR: BROKEN GLASS
-SET UP EXCLUSION ZONE AROUND WELLS TO BE OPENED
-STARTED PAPERWORK FOR SITE AND LABELS
-SET UP DECON/WORK AREA AND DECON'D EQUIPMENT
11:15 AM -STARTED PURGING/FINISHED AT 12:00 PM
12:00 PM -STARTED SAMPLING/FINISHED AT 1:00 PM
1:00 PM -ERI OFF SITE

*M/P/S 3 WELLS

*M/S 0 WELLS

*M/S LOW FLOW 0 WELLS

*MO 0 WELLS

*O/P 0 WELLS

*POTABLE 0 WELLS

*TOOK TWO AT 2:00 PM

TOTAL PURGED GALLONS: 18

*0 T/C SET UPS



DAILY FIELD REPORT

Environmental Resolutions, Inc.

PROJECT: 70234

JOB # + ACTIVITY: 247613X

SUBJECT: QM

DATE: 8/31/09

EQUIPMENT USED:

SHEET: 1 OF 1

NAME: J. INGRAM

PROJECT MNGR: PAUL

ONSITE 1100 TOSE ONSITE

FOG, COOL

SAPET

PUNCT + SAMPLE MW9, MW8, MW6

TOSE CONDUCTED LPC ~1230

TOTAL PUMP 18

TOTAL Decon 15

TOTAL H₂O 33

ON-SITE ISK
1800

Client Name: Exxon/Mobil
Location: Fort McMurray
Field Crew: 1. INGRAM

GROUNDWATER SAMPLING FIELD LOG

ERI Job #: 2446

Field Cleaning Performed: _____

Analysis: _____

Date: 8/31/09 Page 1 of 1

Case Volume = (TD - DTW) x F where F =

0.163 for 2" Inside-diameter well casing

0.652 for 4" inside-diameter well casing

1.457 for 6" inside-diameter well casing