ExxonMobil Environmental Services Company

4096 Piedmont Avenue #194 Oakland, California 94611 510 547 8196 Telephone 510 547 8706 Facsimile

RECEIVED

11:46 am, Sep 22, 2011 Alameda County Environmental Health





September 16, 2011

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 #79374/990 San Pablo Avenue, Albany, California.

Dear Ms. Jakub:

Attached for your review and comment is a copy of the letter report entitled *Groundwater Monitoring Report, Third Quarter* 2011, dated September 16, 2011, for the above-referenced site. The report was prepared by Cardno ERI of Petaluma, California, and details activities pertaining to 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 Report, Third Quarter 2011, dated September 16, 2011

cc:

w/ attachment

Ms. Muriel T. Blank, Trustee, The Blank Family Trusts Reverend Deborah Blank, Trustee, The Blank Family Trusts

Ms. Marcia Blank Kelly, The Blank Family Trusts

w/o attachment

Ms. Paula Sime, Cardno ERI



Shaping the Future

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September 16, 2011 Cardno ERI 273513.Q113

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

SUBJECT

Groundwater Monitoring Report, Third Quarter 2011

Former Exxon Service Station 79374 990 San Pablo Avenue, Albany, California

Alameda County RO#2974

INTRODUCTION

At the request of ExxonMobil Environmental Services (EMES), on behalf of Exxon Mobil Corporation, Cardno ERI performed third quarter 2011 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 occupied by a retail outlet for Benjamin Moore paints and painting products and associated paved asphalt driveway and parking area.

GROUNDWATER MONITORING AND SAMPLING SUMMARY

Gauging and sampling date:

07/18/11

Wells gauged and sampled:

MW1 through MW6

Presence of NAPL:

Not observed

Laboratory:

Calscience Environmental Laboratories, Inc.

Garden Grove, California

Analyses performed:

EPA Method 8015B

TPHd, TPHg, TPHmo

EPA Method 8260B

BTEX, MTBE, ETBE, TAME, TBA, DIPE, EDB,

1,2-DCA

Waste disposal:

51 gallons purge and decon water delivered to InStrat, Inc., of Rio Vista, California, on 07/19/11

September 16, 2011 Cardno ERI 273513.Q113 Former Exxon Service Station 79374, Albany, California

CONCLUSIONS

Concentrations of TPHd and BTEX constituents were reported in wells MW3 through MW6. Concentrations of TPHg were reported in wells MW1 through MW6. Concentrations of TPHmo, MTBE, TBA, ETBE, DIPE, TAME, EDB, and 1,2-DCA were not reported in samples collected from wells MW1 through MW6.

The groundwater flow direction during the third quarter was radial outward from well MW5.

RECOMMENDATIONS

Cardno ERI recommends semi-annual monitoring and sampling of wells MW1 through MW6 during the second and fourth quarters. Cardno ERI has monitored and sampled wells MW1 through MW6 on a quarterly basis for one year.

Cardno ERI recommends implementing the work proposed in the Work Plan for Air Sparge and Soil Vapor Extraction Well Installation and Feasibility Testing, dated July 5, 2011.

LIMITATIONS

For any 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 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 contact Ms. Paula Sime, Cardno ERI's project manager for this site, at paula.sime@cardno.com or (707) 766-2000 with any questions regarding this report.

Sincerely,

Jennifer L. Lacy Senior Staff Scientist for Cardno ERI 707 766 2000

Email: jennifer.lacy@cardno.com

David R. Daniels P.G. 8737 for Cardno ERI 707 766 2000

Email: david.daniels@cardno.com

September 16, 2011 Cardno ERI 273513.Q113 Former Exxon Service Station 79374, Albany, 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 Notes

Appendix C Laboratory Analytical Report and Chain-of-Custody Record

Appendix D Waste Disposal Documentation

cc: Ms. Barbara Jakub, Alameda County Health Care Services Agency, Environmental Health Services, 1131 Harbor Bay Parkway, Suite 250, Alameda, California 94502-6577

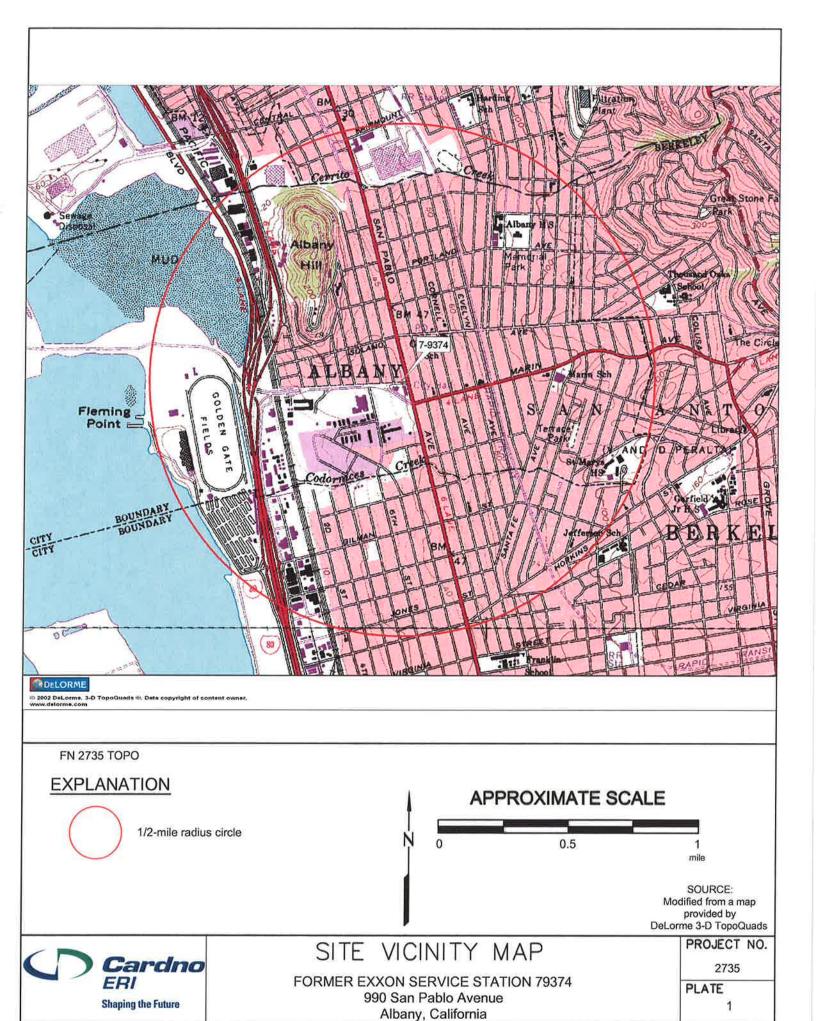
Ms. Muriel T. Blank, Trustee, The Blank Family Trusts, 1164 Solano Avenue, #406, Albany, California 94706

Reverend Deborah Blank, Trustee, The Blank Family Trust, 1563 Solano Avenue, #344, Berkeley, California 94707

Ms. Marcia Blank, Trustee, The Blank Family Trust, 641 SW Morningside Road, Topeka, Kansas 66606

ACRONYM LIST

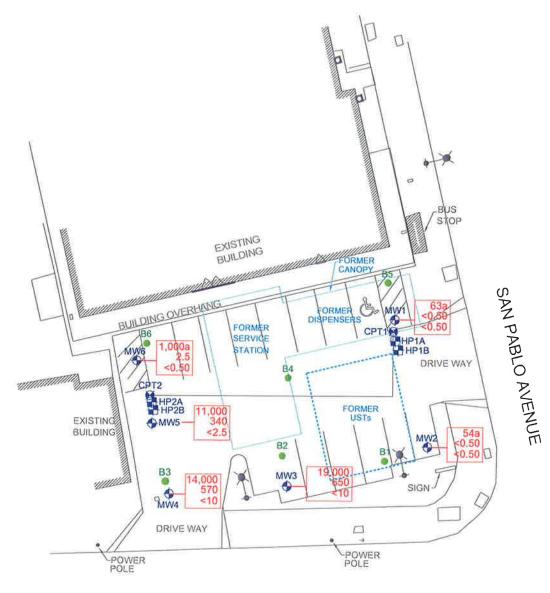
µg/L µs 1,2-DCA acfm AS bgs BTEX CEQA cfm COC CPT DIPE DO DOT DPE DTW EDB EPA ESL ETBE FID fpm GAC gpm GWPTS HVOC	Micrograms per liter Microsiemens 1,2-dichloroethane Actual cubic feet per minute Air sparge Below ground surface Benzene, toluene, ethylbenzene, and total xylenes California Environmental Quality Act Cubic feet per minute Chain of Custody Cone Penetration (Penetrometer) Test Di-isopropyl ether Dissolved oxygen Department of Transportation Dual-phase extraction Depth to water 1,2-dibromoethane Environmental Protection Agency Environmental screening level Ethyl tertiary butyl ether Flame-ionization detector Feet per minute Granular activated carbon Gallons per day Gallons per minute Groundwater pump and treat system Halogenated volatile organic compound Estimated value between MDI and POI (RI)	NEPA NGVD NPDES O&M ORP OSHA OVA P&ID PAH PCB PIC POTW PPMV PQL psi PVC QA/QC RBSL RCRA RL SCfm SSTLC SVE SVOC TAME	National Environmental Policy Act National Geodetic Vertical Datum National Pollutant Discharge Elimination System Operations and Maintenance Oxidation-reduction potential Occupational Safety and Health Administration Organic vapor analyzer Process & Instrumentation Diagram Polycyclic aromatic hydrocarbon Polychlorinated biphenyl Tetrachloroethene or perchloroethylene Photo-ionization detector Programmable logic control Publicly owned treatment works Parts per million by volume Practical quantitation limit Pounds per square inch Polyvinyl chloride Quality assurance/quality control Risk-based screening levels Resource Conservation and Recovery Act Reporting limit Standard cubic feet per minute Site-specific target level Soluble threshold limit concentration Soil vapor extraction Semivolatile organic compound Tertiary and methyl ether
			, ,
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 LUFT	Liquid-ring pump Leaking underground fuel tank	TOC TOG	Top of well casing elevation; datum is msl 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 mg/m³	Milligrams per liter Milligrams per cubic meter	TRPH UCL	Total recoverable petroleum hydrocarbons 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 NAPL	Natural attenuation indicators	VPC	Vapor-phase carbon
NACL	Non-aqueous phase liquid		



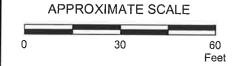
Benzene

Methyl Tertiary Butyl Ether

- Less Than the Stated Laboratory
 Reporting Limit
- ug/L Micrograms per Liter
- Sample chromatographic pattern does not match that of the specified standard.



BUCHANAN STREET

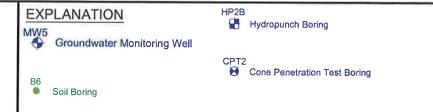


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SELECT ANALYTICAL RESULTS July 18, 2011

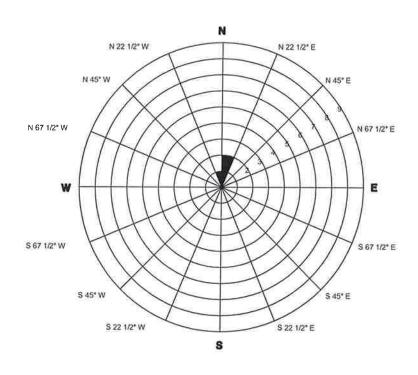
FORMER EXXON SERVICE STATION 79374 990 San Pablo Avenue Albany, California



PROJECT NO. 2735

PLATE 2

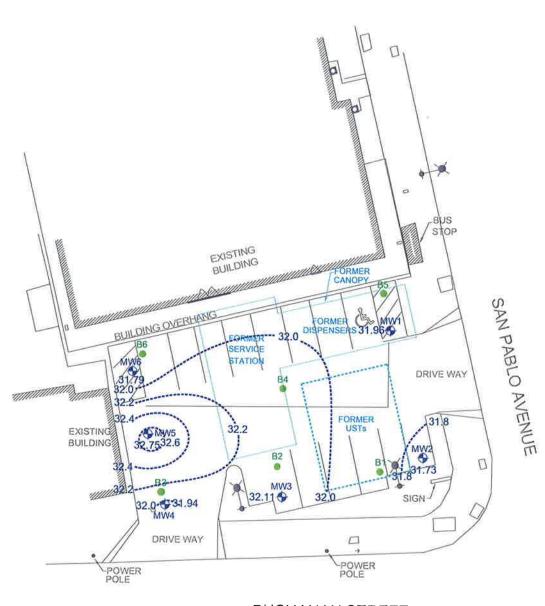
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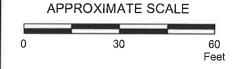
Rose diagram developed by evaluating the groundwater gradient direction from the quarterly monitoring data. Each circle on the rose diagram represents the number of monitoring events that the gradient plotted in that 22 1/2 degree sector.

3 Data Point Shown Shown for 07/18/11

GROUNDWATER FLOW DIRECTION ROSE DIAGRAM



BUCHANAN STREET



FN 2735 11 3QTR QM



GROUNDWATER ELEVATION MAP July 18, 2011

FORMER EXXON SERVICE STATION 79374 990 San Pablo Avenue Albany, California

EXF	'LAN	IΑI	ION

MW6
Groundwater Monitoring Well

31.79 Groundwater elevation in feet; datum is mean sea level

B6

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

PROJECT NO. 2735

PLATE

3

TABLE 1A CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA Former Exxon Service Station 79374 990 San Pablo Avenue

Albany, California

Well ID	Sampling		TOC Elev		GW Elev.	NAPL	O&G	TPHmo	TPHd	TPHg	MTBE	В	Т		
	Date	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/L)	(µg/L)	(μg/L)	(μg/L)	(µg/L)	(µg/L)	ι (μg/L)	Ε (μg/L)	X (µg/L)
Monitorina V	Veil Samples													11-3-1	(P9/L)
	ven Samples														
MW1	11/04/10		Well ins	talled.											
MW1	12/01/10		41.45	Wellsu	rveved.										
MW1	12/16/10	-	41.45	9.18	32.27	No	_	<250	71a	5.4					
MW1	01/31/11		41.45	8.78	32.67	No		<250	/ ia <50	54	<0.50	1.4	0.65	0.58	1.6
MW1	04/07/11		41.45	8.45	33.00	No		<250 <250		<50	<0.50	<0.50	<0.50	<0.50	< 0.50
MW1	07/18/11		41.45	9.49	31.96	No		<250	65a <50	160a	<0.50	2.9	0.92	<0.50	1.7
MAZO	44/04/40							7200	\30	63a	<0.50	<0.50	<0.50	<0.50	<0.50
VIW2	11/04/10		Well inst												
MW2	12/01/10		41.25	Well su	rveyed.										
VIW2	12/16/10		41.25	8.11	33.14	No		<250	110a	<50	<0.50	<0.50	<0.F0		
MW2	01/31/11		41.25	9.29	31.96	No		<250	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	04/07/11		41.25	8.21	33.04	No	_	<250	<50	<50	0.51		<0.50	<0.50	<0.50
MW2	07/18/11		41.25	9.52	31.73	No	===	<250	<50	54a	<0.51 <0.50	<0.50 <0.50	<0.50	<0.50	<0.50
/IW3	11/08/10		Well inst	المعالمة						-10	40.50	~0.50	<0.50	<0.50	<0.50
/IW3	12/01/10														
vIW3	12/16/10		40.42	Well su	•										
VIVV3	01/31/11		40.42	8.18	32.24	No		<250	2,900a	19,000	<12	350	130	940	290
VIVV3	04/07/11		40.42	7.64	32.78	No		390	2,800a	17,000a	<12	540	140	700	270
MW3			40.42	5.88	34.54	No		<250	2,700a	14,000	<10	600	150	780	230
ALAAO	07/18/11		40.42	8.31	32.11	No		<250	1,700a	19,000	<10	650	140	660	230 220
/IW4	11/05/10		Well insta	alled.											220
∕IW4	12/01/10		39.30	Well sur	rveved										
/IW4	12/16/10		39.30	6.10	33.20	No		-050		_					
/IW4	01/31/11		39.30	6.84	32.46	No		<250	2,000a	9,900	<5.0	440	40	170	380
/IW4	04/07/11		39.30	5.29	34.01	No		260	3,900a	13,000	<10	500	59	320	740
/W4	07/18/11		39.30	7.36	31.94	No	_	<250	1,900a	9,600	<10	530	59	250	340
			00.00	7.50	31.54	NO		<250	2,800a	14,000	<10	570	66	320	510
/IW5	11/11/10	-	Well insta	alled.											
/W5	12/01/10		40.38	Well sur	veyed.										
/IW5	12/16/10		40.38	7.69	32.69	No		<250	1,100a	6 200	40 F	450			
/IV /5	01/31/11		40.38	8.00	32.38	No		270	•	6,200	<2.5	150	96	270	980
/IW5	04/07/11		40.38	6.73	33.65	No		<250	4,600a	15,000	<10	520	310	1,100	2,500
IW5	07/18/11		40.38	7.63	32.75	No		<250 <250	610a 2,000 a	2,500	<2.5	61	32	180	390
								7250	∠,uuua	11,000	<2.5	340	160	990	1,800
/W6	11/03/10	-	Well insta	alled.											
fW6	12/01/10		41.06	Well sur	veyed.										

TABLE 1A CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA Former Exxon Service Station 79374 990 San Pablo Avenue Albany, California

Well ID	Sampling Date	Depth (feet)	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	Ο&G (μg/L)	TPHmo (µg/L)	TPHd (µg/L)	TPHg (μg/L)	MTBE (μg/L)	B (µg/L)	Τ (μg/L)	E (µg/L)	Χ (μg/L)
MW6	12/16/10		41.06	8.55	32.51	No		<250	110a	1,700	<0.50	2.8			
MW6	01/31/11		41.06	8.52	32.54	No		<250	800a	2,000a	<1.0	6.0	1.2	61	46
VIW6	04/07/11		41.06	7.78	33.28	No		<250	660a	2,000	<0.50	10	<1.0	30	24
MW6	07/18/11	•	41.06	9.27	31.79	No		<250	350a	1,000a	< 0.50	2.5	1.0 <0.50	20 3.8	19 3.5
Grab Ground	lwater Samples														
3-1W	01/06/08						26r,s	<5,000	99,000o,n,r	76,000m,p,r	<50	<50	93	3,100	9,600
3-2W	01/06/08							310s	23,000o,r,s	77,000 l,r,s	<50	1,500	300	2,000	6,800
3-3W	01/06/08							<250s	2,000o,s	6,200 I,s	<10	170	32	740	250
3-4W	01/06/08		_					<250s	3,100o,s	7,700 l,s	<10	360	<10	240	20
3-5W	01/06/08							<250s	120o,s	120q,s	<0.5	<0.5	<0.5	<0.5	<0.5
1-6W	01/06/08							<250s	830o,s	1,700 l,s	<2.5	5.2	<2.5	100	8.6
R-W	01/06/08							<250	960	730m,p	<0.5	<0.5	<0.5	6.9	14
V-27.5-HP1A	10/28/10	27.5						260	330a	63a	<0.50	<0.50	<0.50	<0.50	<0.50
/-36-HP1A	10/28/10	36						<250	220a	<50	<0.50	<0.50	<0.50	<0.50	
V-46.5-HP1A	10/28/10	46.5		-			`	<420	<83	<50	<0.50	<0.50	<0.50	<0.50	<0.50 <0.50
V-59-HP1B	10/27/10	59						<250	130	<50	<0.50	<0.50	<0.50	<0.50	<0.50
V-27.5-HP2A		27.5						<250	100a	340	<0.50	1.7	2.1	20	46
V-52-HP2A	10/29/10	52						<250	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
V-60.5-HP2B	10/27/10	60.5			_			<250	62	<50	<0.50	<0.50	<0.50	<0.50	<0.50

TABLE 1A CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA Former Exxon Service Station 79374 990 San Pablo Avenue Albany, California

N1 .		. asary, canonia
Notes:		
TOC	=	Top of well casing elevation; datum is mean sea level.
DTW	=	Depth to water.
GW Elev.	=	Groundwater elevation; datum is mean sea level. If liquid-phase hydrocarbons present, elevation adjusted using TOC - [DTW - (PT x 0.76)].
NAPL	=	Non-aqueous phase liquid.
O&G	=	Oil and grease with silica gel clean-up analyzed using Standard Method 5520B/F.
TPHmo	=	Total petroleum hydrocarbons as motor oil analyzed using EPA Method 8015 (modified).
TPHd	=	Total petroleum hydrocarbons as diesel analyzed using EPA Method 8015 (modified).
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015 (modified).
MTBE	=	Methyl tertiary butyl ether analyzed using EPA Method 8260B.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8260B.
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.
Add'l VOCs	=	Additional volatile organic carbons analyzed using EPA Method 8260B.
Add'l SVOCs	=	Additional semi-volatile organic carbons analyzed using EPA Method 8270C.
µg/L	=	Micrograms per liter.
ND	=	Not detected at or above laboratory reporting limits.
(1000)	=	Not measured/Not sampled/Not analyzed.
<	=	Less than the stated laboratory reporting limit.
а	=	Sample chromatographic pattern does not match that of the specified standard.
b	=	n-butylbenzene.
C	=	sec-butylbenzene.
d	=	Isopropylbenzene.
e	=	n-propylbenzene.
f	=	1,2,4-trimethylbenzene.
9	=	1,3,5-trimethylbenzene.
h	=	Naphthalene.
i	=	1-butanone.
j I	=	1,2-dibromo-3-chloropropane.
k	=	2-methylnapthalene.
1	=	Unmodified or weakly modified gasoline is significant.
m	=	Heavier gasoline range compounds are significant.
n	=	Diesel range compounds are significant; no recognizable pattern.
0	=	Gasoline range compounds are significant.

TABLE 1A CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA Former Exxon Service Station 79374 990 San Pablo Avenue Albany, California

Notes (Cont.):		
р	=	No recognizable pattern.
q	= 0	Strongly aged gasoline or diesel compounds are significant.
r	=	Lighter than water immiscible sheen/product is present.
s	=	Liquid sample that contains greater than approximately 1 volume % sediment.

TABLE 1B ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA Former Exxon Service Station 79374 990 San Pablo Avenue Albany, California

						Albany, Ca	amornia			
Well ID	Sampling Date	Depth (feet)	EDB (µg/L)	1,2-DCA (μg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (μg/L)	Add'l VOCs (µg/L)	Add'l SVOCs (µg/L)
Monitorin	g Well Samples									
MW1	12/16/10		<0.50	<0.50	<0.50	<5.0	<0.50	<0.50		
MW1	01/31/11		<0.50	<0.50	< 0.50	<5.0	<0.50	<0.50		
MW1	04/07/11		<0.50	<0.50	<0.50	10	<0.50	<0.50	-	
MW1	07/18/11		<0.50	<0.50	<0.50	<5.0	<0.50	<0.50		
MW2	12/16/10		<0.50	<0.50	<0.50	<5.0	<0.50	<0.50		
MW2	01/31/11		<0.50	<0.50	< 0.50	<5.0	<0.50	<0.50		
MW2	04/07/11		<0.50	<0.50	<0.50	<5.0	<0.50	<0.50		
MW2	07/18/11		<0.50	<0.50	<0.50	< 5.0	<0.50 <0.50	< 0.50		
MW3	12/16/10		<12	<12	<12	<120	<12			
MW3	01/31/11		<12	<12	<12	<120	<12	<12 <12	_	
MW3	04/07/11		<10	<10	<10	<100	<10	<12		-
MW3	07/18/11		<10	<10	<10	<100	<10	<10 <10		
MW4	12/16/10		<5.0	<5.0	<5.0	<50	<5.0			
MW4	01/31/11		<10	<10	<10	<100	<5.0 <10	<5.0		
MW4	04/07/11		<10	<10	<10	<100	<10	<10		
MW4	07/18/11		<10	<10	<10	<100	<10	<10 <10		
MW5	12/16/10		<2.5	<2.5	<2.5	<25				
MW5	01/31/11		<10	<10	<2.5 <10		<2.5	<2.5	-	
MW5	04/07/11	_	<2.5	<2.5		<100	<10	<10		_
MW5	07/18/11		<2.5	<2.5 <2.5	<2.5 <2.5	<25 <25	<2.5 <2.5	<2.5		
MW6	12/16/10							<2.5		
MW6	01/31/11		<0.50	<0.50	<0.50	<5.0	<0.50	<0.50		
VIVV6	04/07/11		<1.0	<1.0	<1.0	<10	<1.0	<1.0		
MW6	07/18/11		<0.50	<0.50	<0.50	<5.0	<0.50	<0.50		
MAAO	07/16/11		<0.50	<0.50	<0.50	<5.0	<0.50	<0.50		
Grab Grou	ndwater Samples	S								
B-1W	01/06/08		<50	<50	<50	<200	<50	<50	210b, 68c, 370d, 1,100e, 3,800f, 1,300g, 1,500h	4,000h, 3,900k
B-2W	01/06/08	-	<50	<50	<50	<200	<50	<50	110b, 140e, 440f, 2,400g, 730h, 610i, 32j	
3-3W	01/06/08		<10	<10	<10	<40	<10	<10	25b, 11c, 74d, 190e, 290f, 49g, 55i	
3-4W	01/06/08	-	<10	<10	<10	<40	<10	<10	46b, 19c, 48d, 160e, 16f, 100h	
3-5W	01/06/08		ND	<0.5	<0.5	<2.0	<0.5	<0.5		-
				3.0	-10	0	-0.0	~0.0	2.6b, 0.83e, 4.8f, 1.2g, 6.5h	12001

TABLE 1B ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA Former Exxon Service Station 79374 990 San Pablo Avenue

Albany, California

Well ID	Sampling Date	Depth (feet)	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Add'l VOCs (μg/L)	Add'l SVOCs (μg/L)
B-6W	01/06/08		<2.5	<2.5	<2.5	<10	<2.5	<2.5	14b, 5.6c, 17d, 60e, 32f, 5.8g, 38h, 10i	(F3-)
DR-W	01/06/08		<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	6.9b, 2.4c, 2.5d, 11e, 17f, 5.5g, 7.0h	-
W-27.5-HP1	10/28/10	27.5	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50		
W-36-HP1A	10/28/10	36	< 0.50	< 0.50	< 0.50	<5.0	<0.50	<0.50		
W-46.5-HP1	10/28/10	46.5	< 0.50	<0.50	<0.50	<5.0	<0.50	<0.50		
W-59-HP1B	10/27/10	59	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	***:	
W-27.5-HP2	10/29/10	27.5	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50		
W-52-HP2A	10/29/10	52	< 0.50	<0.50	<0.50	<5.0	<0.50	<0.50	57% 	
W-60.5-HP2	10/27/10	60.5	<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 79374 990 San Pablo Avenue Albany, California

		Albany, California
Notes:		
TOC	=	Top of well casing elevation; datum is mean sea level.
DTW	=	Depth to water.
GW Elev.	=	Groundwater elevation; datum is mean sea level. If liquid-phase hydrocarbons present, elevation adjusted using TOC - [DTW - (PT x 0.76)].
NAPL	=	Non-aqueous phase liquid.
O&G	=	Oil and grease with silica gel clean-up analyzed using Standard Method 5520B/F.
TPHmo	=	Total petroleum hydrocarbons as motor oil analyzed using EPA Method 8015 (modified).
TPHd	=	Total petroleum hydrocarbons as diesel analyzed using EPA Method 8015 (modified).
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015 (modified).
MTBE	=	Methyl tertiary butyl ether analyzed using EPA Method 8260B.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8260B.
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.
Add'I VOCs	=	Additional volatile organic carbons analyzed using EPA Method 8260B.
Add'l SVOCs	=	Additional semi-volatile organic carbons analyzed using EPA Method 8270C.
µg/L	=	Micrograms per liter.
ND	=	Not detected at or above laboratory reporting limits.
(144)	=	Not measured/Not sampled/Not analyzed.
<	=	Less than the stated laboratory reporting limit.
а	=	Sample chromatographic pattern does not match that of the specified standard.
b	=	n-butylbenzene.
С	=	sec-butylbenzene.
d	=	Isopropylbenzene.
е	=	n-propylbenzene.
f	=	1,2,4-trimethylbenzene.
g	=	1,3,5-trimethylbenzene.
h	=	Naphthalene.
i	=	1-butanone.
j	=	1,2-dibromo-3-chloropropane.
k	=	2-methylnapthalene.
I	=	Unmodified or weakly modified gasoline is significant.
m	=	Heavier gasoline range compounds are significant.
n	=	Diesel range compounds are significant; no recognizable pattern.
0	=	Gasoline range compounds are significant.

TABLE 1B ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA Former Exxon Service Station 79374 990 San Pablo Avenue Albany, California

Notes (Cont.):		
p	=	No recognizable pattern.
q	=	Strongly aged gasoline or diesel compounds are significant.
r	=	Lighter than water immiscible sheen/product is present.
s	=	Liquid sample that contains greater than approximately 1 volume % sediment.

TABLE 2

WELL CONSTRUCTION DETAILS Former Exxon Service Station 79374 990 San Pablo Avenue Albany, California

Well ID	Well Installation 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	11/04/10	41.45	8	17	17	2	Schedule 40 PVC	12-17	0.020	10-17	#3 Sand
MW2	11/04/10	41.25	8	17	17	4	Schedule 40 PVC	12-17	0.020	10-17	#3 Sand
MW3	11/08/10	40.42	8	17	17	4	Schedule 40 PVC	11-16	0.020	9-16	#3 Sand
MW4	11/05/10	39.30	8	17	13	2	Schedule 40 PVC	8-13	0.020	6-13	#3 Sand
MW5	11/05/10	40.38	8	17	14	2	Schedule 40 PVC	9-14	0.020	7-14	#3 Sand
MW6	11/03/10	41.06	10	20	20	2	Schedule 40 PVC	15-20	0.020	13-20	#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 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 NOTES

DAILY FIELD REPORT

PROJECT: 79374	JOB#+ACTIVITY: 2735
SUBJECT:	DATE:7-18-11
EQUIPMENT USED:	SHEET: OF
NAME: Jake Provise	PROJECT MNGR:
Ousite 845	Snuly
Safety Meeting	
Open Wells - DTW Wells	
DTW WENS	
Purged & Sampled MW1,2,5	3,4,5,6
Decon 20 gal Purge 31 gal	Total Stgal
Offsite 1245	
U175178 1295	
* Did Not follow sompline	order due to
* Did Not follow sampling accessability & recharge rate	es
•	

REV SOUND

10/18/2010 2:21:35

.\AutoCAD-PET\ERI-BINDER.CHART.LOGOS\Fieldro.dws.

94954

Depth to W	ater Data	QRT	3rd	YEAR	2011	
ERI#	2735					
Site #	79374	Address:	990 San Pab	lo Ave, Albany,	, CA	
PM:	Paula Sime	2				
Date:	7/18/11					
Tech:	JP			Recharge	formula:	47.5
DTW Time					Calc 80% in	feet▶
Start:				Step 2▶	Calc PostDT	W (ft)▶
Finish:				Take ratio	of result fro	m Sten 2 a
	THE STREET STREET	Autoption from the Committee	Contract of the Contract of Contract Contract	LOWER STREET,	or roome no	ocop z c
WELL TO	TD	ProDTW	CASED		446.5	Rechrg
The state of the s	TD 16.61	PreDTW	CASE D	CASE V	PostDTW	Rechrg 80%
W1	16.61	9.49	2	CASE V 1.16	PostDTW 9.71	Rechrg 80% 96.91
W1 W2	16.61 16.89	9.49 9.52	2	CASE V	PostDTW	Rechrg 80% 96.91
W1 \W2 \W3	16.61	9.49	2	CASE V 1.16	PostDTW 9.71	Rechrg 80% 96.91 80.60
W1 W2 W3 W4	16.61 16.89	9.49 9.52	2	CASE V 1.16 4.81	PostDTW 9.71 10.95	Rechrg 80% 96.91 80.60
WELL ID W1 W2 W3 W4 W5	16.61 16.89 15.20	9.49 9.52 8.31	2 4 4	CASE V 1.16 4.81 4.49	PostDTW 9.71 10.95 10.49	Rechrg 80% 96.91 80.60 68.36

GROUNDW		. 01111			-
ERI#	2735		QRT	3rd	2011
Client:			DATE:	7/18/11	
Site ID:	79:	374	ТЕСН	JP	
ADDRESS:			PM:	Paula Sime	
990 San Pablo Av	e, Albany, C	A	Total Purg	je Volume	
		PRO	G		
WELL#	TIME	VO	L TEMP	COND	pН
BB					
COMMENTS:					
		PRO	3		
WELL#	TIME	VOI	TEMP	COND	pН
MW1	9:23	2	°C	uS	T
	9:25	2	21.90	284.00	6.86
	9:27	4	21.40	271.00	6.92
		6			5.52
TOTAL PURGE	4				
COMMENTS:					
		PRG			
WELL#	TIME	VOL		COND	pН
W3	9:39	5	°C	uS	pm
	9:43	5	21.70	147.00	7.02
		10	21.70	177.00	7.02
		15			
		1.0			
					1107
OTAL PURGE	7	1			
OMMENTS:					
		1			
		PRG			
VELL#	TIME	VOL	ТЕМР	COND	pН
W2	10:02	5	°C	uS	þп
	10:06	5	21.10	157.70	7.01
		10	21.10	107.70	1.01
		15			
		13			
OTAL PURGE	8				
OMMENTS:					
		DDG			
TETT #	THATE	PRG	THE STATE OF	00275	
ELL#	TIME	VOL	TEMP	COND	pН
***	10:20	1	°C	uS	
	10:21	1	22.30	162.80	7.02
	10:21	2	22.10	170.20	7.01

ERI#	2735		QRT	3rd	2011
Client:	Merced C	county	DATE:	7/18/11	
Site ID:	7937	4	TECH	JP	
ADDRESS:			PM:	Paula Sime	
990 San Pablo Av	e, Albany, CA		Total Purg		
	10:22	3	21.90	172.00	7.01
TOTAL PURGE					
COMMENTS:					
		PRG			
WELL #	TIME	VOL	TEMP	COND	pН
MW5	10:33	1	°C	uS	
	10:34	1 1	22.20	146.30	7.02
	10:34	2	22.00	140.80	7.02
	10:35	3	21.50	136.20	7.02
OTAL PURGE					
COMMENTS:					
		PRG			
VELL#	TIME	VOL	TEMP	COND	pН
/IW6	10:44	2	°C	uS	
	10:46	2	20.80	123.30	7.00
	10:48	4	20.20	124.40	6.99
	10:50	6	20.10	128.10	6.99
OTAL PURGE					
OMMENTS:					

WAT	ER S	SAME	PIINC	TIRE	FS	TATU	9								- 10 15
															Date: 7-18-U
				_									4	Alb	Date: 7-18-1(Inspected by: $\Box P$
ERI Jo	b Num	ber: 2	735	Station	No.:	9374	1	Site A	ddress	: 990	Sa	N Pab	- Ave	. Alh	and I
		/	/				7						0///	4/11/20	<u> </u>
	5 /	Jead /	1 3/	-08.0/	0 - 08	1000	and /	in all		Net	cate	/	/	/ ./	
Well I	Nell	Ster Rub	385K Nell	ockin ock	Well Con	dele cegi	NO Nate	Vell 3	05 /	rell Cover	ncelondit	Orund	intertiald	ondition Sie Apr	Readall
	N/R/OK	N/R/ok	N/R/ok	N/R/ok	N/R/ok	N/R/ok	Y/N	N/R/o	LINIR	ok N/R/	ak l	s/w/e	1 80 C		Comments / Well Covers
MW	LOK	all	OK	OK	ok	ok	Y	01	- 0	C NOTES	DK	s/w/e	g/v/o	N/R/ok	
		1	1			Ĭ	N	1	11	+	+	+	-	10r	
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								-	-	+					
N = Not r	epairable	in time	available	-see con	nments.		Y=1	/es	1		s = 8				
R = Repa	ired-see	commer	nts				N = 1					Soll. Water.			affitti on walls.
ok = No a	ction nec	eded.										Empty.			grants (or evidence of). en (not secured).
															on (not secureu).

APPENDIX C

LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY RECORD



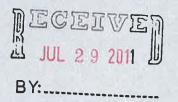
Environmental & Marine Chemistry Laboratories



CALSCIENCE

WORK ORDER NUMBER: 11-07-1241

The difference is service





AIR SOIL WATER MARINE CHEMISTRY

Analytical Report For

Client: Cardno ERI

Client Project Name: ExxonMobil 79374/022735C

Attention: Paula Sime

601 North McDowell Blvd. Petaluma, CA 94954-2312

Cecile & en Sain

Approved for release on 07/27/2011 by: Cecile deGuia Project Manager

nelad

ResultLink >

Email your PM >

Calscience Environmental Laboratories 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 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.



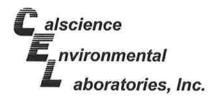
Environmental & Marine Chemistry Laboratories

Contents

Client Project Name: ExxonMobil 79374/022735C

Work Order Number: 11-07-1241

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Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received: Work Order No: Preparation: Method:

07/20/11 11-07-1241 **EPA 3510C** EPA 8015B (M)

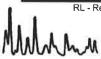
Project: ExxonMobil 79374/022735C

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	711110011 7007 4702							1 6	ige i oi z
Client Sample Numb	per		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-10-MW1			11-07-1241-2-H	07/18/11 11:05	Aqueous	GC 46	07/22/11	07/25/11 20:11	110722B08
Comment(s):	-The sample extract w	as subjected to	Silica Gel treatment	prior to analy	/sis.				
<u>Parameter</u>		Result	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>			
TPH as Motor Oil		ND	250	1	U	ug/L			
Surrogates:		REC (%)	Control Limits		Qual				
Decachlorobiphenyl		105	68-140						
W-11-MW2			11-07-1241-3-H	07/18/11 11:20	Aqueous	GC 46	07/22/11	07/25/11 20:26	110722B08
Comment(s):	-The sample extract wa	as subjected to	Silica Gel treatment	prior to analy	sis.				
<u>Parameter</u>		Result	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>			
TPH as Motor Oil		ND	250	1	U	ug/L			
Surrogates:		REC (%)	Control Limits		Qual				
Decachlorobiphenyl		132	68-140						
W-11-MW3			11-07-1241-4-H	07/18/11 11:35	Aqueous	GC 46	07/22/11	07/25/11 20:42	110722B08
Comment(s):	-The sample extract wa	as subjected to	Silica Gel treatment	prior to analys	sis.				
Parameter		Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>			
ΓPH as Motor Oil	1	ND	250	1	U	ug/L			
Surrogates:	<u> </u>	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	-	138	68-140						
W-8-MW4			11-07-1241-5-H	07/18/11 11:55	Aqueous	GC 46	07/22/11	07/25/11 20:57	110722B08
Comment(s):	-The sample extract wa	s subjected to	Silica Gel treatment p	orior to analys	sis.				
Parameter		Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>			
PH as Motor Oil	1	ND	250	1	U	ug/L			
Surrogates;	E	REC (%)	Control Limits		Qual				
ecachlorobiphenyl	1	104	68-140						

DF - Dilution Factor ,

Qual - Qualifiers





Cardno ERI

601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received:

Work Order No:

Preparation:

Method:

07/20/11

11-07-1241 **EPA 3510C**

EPA 8015B (M)

Project: EyyonMobil 70374/022735C

Page 2 of 2

Project: Exxo	nMobil 79374/022735C					,	Pa	age 2 of 2
Client Sample Numb	er	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-10-MW5		11-07-1241-6-H	07/18/11 12:05	Aqueous	GC 46	07/22/11	07/25/11 21:13	110722B08
Comment(s):	-The sample extract was subjec	ted to Silica Gel treatmen	t prior to analy	sis.				
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	DF	Qual	<u>Units</u>			
TPH as Motor Oil	ND	250	1	U	ug/L			
Surrogates:	<u>REC (%)</u>	Control Limits		Qual				
Decachlorobiphenyl	130	68-140						
W-13-MW6		11-07-1241-7-H	07/18/11 12:20	Aqueous	GC 46	07/22/11	07/25/11 21:28	110722B08
Comment(s):	-The sample extract was subject	ted to Silica Gel treatmen	t prior to analy:	sis.				
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>			
TPH as Motor Oil	ND	250	1	U	ug/L			
Surrogates:	<u>REC (%)</u>	Control Limits		<u>Qual</u>				
Decachlorobiphenyl	118	68-140						
Method Blank		099-12-234-889	N/A	Aqueous	GC 46	07/22/11	07/25/11 17:50	110722B08
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>			
TPH as Motor Oil	ND	250	1	U	ug/L			

Qual





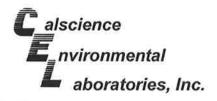
REC (%)

93

Control Limits

68-140

Surrogates: Decachlorobiphenyl



Cardno ERI

601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received:

Work Order No:

Preparation: Method:

11-07-1241

EPA 3510C EPA 8015B (M)

07/20/11

Project: ExxonMobil 79374/022735C

Page 1 of 2

Project. Exxo	niviodii 79374/(0227350						Pa	ige 1 of 2
Client Sample Numb	er		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-10-MW1			11-07-1241-2-H	07/18/11 11:05	Aqueous	GC 46	07/22/11	07/25/11 20:11	110722B07
Comment(s):	-The sample extrac	t was subjected	to Silica Gel treatment	prior to analy	sis.				
Parameter		Result	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>			
PH as Diesel		ND	50	1	U	ug/L			
Surrogates;		REC (%)	Control Limits		Qual				
Decachlorobiphenyl		105	68-140						
W-11-MW2			11-07-1241-3-H	07/18/11 11:20	Aqueous	GC 46	07/22/11	07/25/11 20:26	110722B07
Comment(s):	-The sample extract	-	to Silica Gel treatment	prior to analy					
Parameter Parameter		Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>			
PH as Diesel		ND	50	1	U	ug/L			
Surrogates:		REC (%)	Control Limits		Qual				
Decachlorobiphenyl		132	68-140						
W-11-MW3			11-07-1241-4-H	07/18/11 11:35	Aqueous	GC 46	07/22/11	07/25/11 20:42	110722B07
Comment(s):	of the unknown hydr	rocarbon(s) in th	rn for TPH does not m e sample was based ι to Silica Gel treatment	pon the spec	ified standard		specified st	andard, Qua	ntitation
<u>arameter</u>		Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>			
PH as Diesel		1700	50	1		ug/L			
urrogates:		REC (%)	Control Limits		Qual				
ecachlorobiphenyl		138	68-140						
W-8-MW4			11-07-1241-5-H	07/18/11 11:55	Aqueous	GC 46	07/22/11	07/25/11 20:57	110722B07
Comment(s):	of the unknown hydr	ocarbon(s) in th	n for TPH does not m e sample was based u o Silica Gel treatment	pon the speci	fied standard		specified sta	andard. Quar	ntitation

<u>DF</u>

RL - Reporting Limit ,

<u>Parameter</u>

Surrogates:

TPH as Diesel

Decachlorobiphenyl

DF - Dilution Factor

Result

REC (%)

2800

104

Qual - Qualifiers

Control Limits

68-140

<u>RĻ</u>

50



<u>Qual</u>

Qual

<u>Units</u>

ug/L





Cardno ERI

601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received:

Work Order No:

Preparation:

Method:

07/20/11

11-07-1241

EPA 3510C

EPA 8015B (M)

Project: ExxonMobil 79374/022735C

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-10-MW5	11-07-1241-6-H	07/18/11 12:05	Aqueous	GC 46	07/22/11	07/25/11 21:13	110722B07

Comment(s):

-The sample chromatographic pattern for TPH does not match the chromatographic pattern of the specified standard. Quantitation of the unknown hydrocarbon(s) in the sample was based upon the specified standard.

-The sample extract was subjected to Silica Gel treatment prior to analysis.

Parameter TPH as Diesel

Result 2000

131

<u>RL</u> 50

<u>DF</u>

Qual

ug/L

Units

Surrogates:

REC (%)

Control Limits

68-140

Qual

Decachlorobiphenyl W-13-MW6

11-07-1241-7-H

07/18/11 12:20

Aqueous

GC 46 07/22/11

<u>Units</u>

ug/L

07/25/11 21:28

07/25/11

17:50

110722B07

Comment(s):

-The sample chromatographic pattern for TPH does not match the chromatographic pattern of the specified standard. Quantitation of the unknown hydrocarbon(s) in the sample was based upon the specified standard.

The sample extract was subjected to Silica Gel treatment prior to analysis.

<u>Parameter</u> TPH as Diesel Result 350

<u>RL</u> 50

68-140

REC (%) Surrogates:

Control Limits

Qual

Aqueous

Decachlorobiphenyl

Method Blank

118

N/A

GC 46

07/22/11

110722B07

Parameter TPH as Diesel

Result ND

<u>RL</u> 50

<u>DE</u>

Qual U

Units ug/L

Surrogates:

Decachlorobiphenyl

REC (%)

93

Control Limits

68-140

099-12-330-1.961

Qual

DF - Dilution Factor

Qual - Qualifiers



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FAX: (714) 894-7501





Cardno ERI

601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received:

Work Order No: Preparation:

Method:

07/20/11

11-07-1241 **EPA 5030C**

EPA 8015B (M)

Project: ExxonMobil 79374/022735C

Page 1 of 2

									0
Client Sample Numbe	er		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-10-MW1			11-07-1241-2-D	07/18/11 11:05	Aqueous	GC 29	07/22/11	07/22/11 14:23	110721B02
Comment(s):	-The sample chroma	atographic patter ocarbon(s) in the	n for TPH does not me sample was based o	natch the chro	matographic ified standar	pattern of the	specified s	tandard. Qua	intitation
<u>Parameter</u>		Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>			
TPH as Gasoline		63	50	1		ug/L			
Surrogates:		REC (%)	Control Limits		Qual				
1,4-Bromofluorobenze	ene	83	38-134						

W-11-MW2	11-07-1241-3-D	07/18/11 11:20	Aqueous	GC 29	07/22/11	07/22/11 14:58	110721B02
Comment(s):	-The sample chromatographic pattern for TPH does not m of the unknown hydrocarbon(s) in the sample was based u				e specified st	andard. Qua	ntitation

<u>Parameter</u> TPH as Gasoline

Result 54

82

<u>RL</u> 50 <u>DF</u>

Qual

ug/L

<u>Units</u>

Surrogates:

REC (%)

Qual

1,4-Bromofluorobenzene

Control Limits

38-134

W-11-MW3 07/22/11 GC 29 07/22/11 110721B02 11-07-1241-4-D 07/18/11 11:35 Aqueous 15:33

<u>Parameter</u> TPH as Gasoline Result 19000

RL500 <u>DF</u> 10

Qual

Units ug/L

Surrogates:

REC (%)

07/18/11 11:55

1,4-Bromofluorobenzene

93

Control Limits

11-07-1241-5-D

<u>Qual</u>

W-8-MW4

1,4-Bromofluorobenzene

38-134

07/22/11 07/22/11 110721B02 16:11

Parameter TPH as Gasoline

Result 14000

<u>RL</u> 250

38-134

<u>DF</u>

Qual

Aqueous

<u>Units</u> ug/L

GC 29

Surrogates:

REC (%)

105

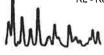
Control Limits

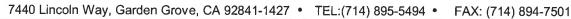
Qual

RL - Reporting Limit ,

DF - Dilution Factor

Qual - Qualifiers







Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received: Work Order No: Preparation:

Method:

07/20/11 11-07-1241 **EPA 5030C** EPA 8015B (M)

Project: ExxonMobil 79374/	0227000							age 2 of 2
Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch II
W-10-MW5		11-07-1241-6-E	07/18/11 12:05	Aqueous	GC 29	07/25/11	07/25/11 13:59	110725B01
<u>Parameter</u>	Result	<u>RL</u>	DF	Qual	<u>Units</u>			
TPH as Gasoline	11000	500	10		ug/L			
Surrogates:	REC (%)	Control Limits		<u>Qual</u>				
1,4-Bromofluorobenzene	104	38-134						
W-13-MW6		11-07-1241-7-D	07/18/11 12:20	Aqueous	GC 29	07/22/11	07/22/11 17:21	110721B02
Comment(s): -The sample chrom	natographic patte	rn for TPH does not ma	atch the chro	matographic	pattern of the	specified st	andard, Qua	ntitation
Parameter	Result	ie sampie was based u <u>RL</u>	DF	ned standart Qual	a. <u>U</u> nits			
TPH as Gasoline	1000	50	1		ug/L			
Surrogates:	REC (%)	Control Limits		Qual				
,4-Bromofluorobenzene	96	38-134						
Method Blank		099-12-436-6,428	N/A	Aqueous	GC 29	07/21/11	07/22/11 06:15	110721B02
Parameter	Result	RL	DF	Qual	Units			
PH as Gasoline	ND	50	1	U	ug/L			
Surrogates:	REC (%)	Control Limits		Qual				
,4-Bromofluorobenzene	73	38-134						
Method Blank		099-12-436-6,432	N/A	Aqueous	GC 29	07/25/11	07/25/11 12:50	110725B01

RL - Reporting Limit

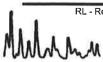
DF - Dilution Factor

REC (%)

Qual - Qualifiers

Control Limits

38-134



TPH as Gasoline

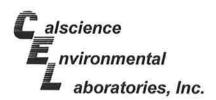
1,4-Bromofluorobenzene

Surrogates:



Qual

ug/L



Cardno ERI

601 North McDowell Blvd.

Petaluma, CA 94954-2312

Analytical Report

Units:

Date Received:

07/20/11 Work Order No: 11-07-1241 Preparation: **EPA 5030C** Method: **EPA 8260B**

ug/L

REC (%) Control

100

96

<u>Limits</u>

80-127

80-120

Qual

Project: ExxonMobil 79374/022735C

Page 1 of 3

Client Sample Number				ab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/ Analy		QC Batch ID
W-10-MW1			11-07-1241-2-A		07/18/11 11:05	Aqueous	GC/MS L	07/21/11	07/22/11 00:06		110721L04
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	<u>DF</u>	Qual
Benzene	ND	0.50	1	U	Diisopropyl E	ther (DIPE)		ND	0.50	1	U
Toluene	ND	0.50	1	U	Ethyl-t-Butyl I	Ether (ETBE))	ND	0.50	1	U
Ethylbenzene	ND	0.50	1	U	Tert-Amyl-Me	ethyl Ether (T.	AME)	ND	0.50	1	U
Xylenes (total)	ND	0.50	1	U	1,2-Dibromoe	ethane		ND	0.50	1	U
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	U	1,2-Dichloroe	thane		ND	0.50	1	U
Tert-Butyl Alcohol (TBA)	ND	5.0	1	U							
Surrogates:	REC (%)	Control Limits	Qua	<u>al</u>	Surrogates:			REC (%)	Control Limits	<u>, C</u>	<u>lual</u>
1,4-Bromofluorobenzene	99	68-120			Dibromofluoro	omethane		100	80-127		
1,2-Dichloroethane-d4	96	80-128			Toluene-d8			97	80-120		
W-11-MW2			11-07-1241-3-A		07/18/11 11:20	Aqueous	GC/MS L	07/21/11	07/22/11 01:56		110721L04
Parameter	Result	<u>RL</u>	DF	Qual	<u>Parameter</u>			Result	<u>RL</u>	<u>DF</u>	Qual
Benzene	ND	0.50	1	U	Diisopropyl El	ther (DIPE)		ND	0.50	1	U
Toluene	ND	0.50	1	U	Ethyl-t-Butyl E			ND	0.50	1	U
Ethylbenzene	ND	0.50	1	U	Tert-Amyl-Methyl Ether (TAME)		ND	0.50	1	U	
Xylenes (total)	ND	0.50	1	U	1,2-Dibromoethane		ND	0.50	1	U	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	U	1,2-Dichloroe	thane		ND	0.50	1	U
Tert-Butyl Alcohol (TBA)	ND	5.0	1	U							
Surrogates:	<u>REC (%)</u>	Control Limits	<u>Qual</u>		Surrogates:			REC (%)	Control Qual Limits		
1,4-Bromofluorobenzene	96	68-120			Dibromofluoro	methane		101	80-127		
1,2-Dichloroethane-d4	98	80-128			Toluene-d8			94	80-120		
W-11-MW3			11-07-1	241-4-A	07/18/11 11:35	Aqueous	GC/MS L	07/21/11	07/22 02:2		110721L04
<u>Parameter</u>	Result	RL	DE	Qual	Parameter			Result	RL	DF	Qual
Benzene	650	10	20		Diisopropyl Et	her (DIPF)			10	20	U
Foluene	140	10	20		Ethyl-t-Butyl E	, ,			10	20	Ü
Ethylbenzene	660	10	20			ND	10	20	Ü		
(ylenes (total)	220	10	20		1.2-Dibromoel		/		10	20	Ü
Methyl-t-Butyl Ether (MTBE)	ND	10	20	U	1,2-Dichloroet				10	20	Ü

RL - Reporting Limit ,

DF - Dilution Factor ,

99

100

Control

Limits

68-120

80-128

Qual - Qualifiers

Qual

Surrogates:

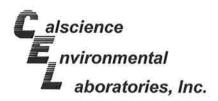
1,4-Bromofluorobenzene

1,2-Dichloroethane-d4

Surrogates:

Toluene-d8

Dibromofluoromethane



Cardno ERI

601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received:

Work Order No: Preparation:

Method: Units:

11-07-1241 **EPA 5030C EPA 8260B**

ug/L

07/20/11

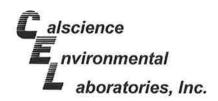
Project: ExxonMobil 79	374/02273	5C								Pa	ge 2 of 3
Client Sample Number				ib Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/ Anal		QC Batch ID
W-8-MW4		11-07-1241-5-A		07/18/11 11:55			07/21/11	1 07/22/11 02:51		110721L04	
Parameter	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	RL	DF	Qual
Benzene	570	10	20		Diisopropyl E	ther (DIPE)		ND	10	20	U
Toluene	66	10	20		Ethyl-t-Butyl I	, ,)	ND	10	20	Ü
Ethylbenzene	320	10	20		Tert-Amyl-Me	•	,	ND	10	20	ū
Xylenes (total)	510	10	20		1,2-Dibromoe	•	,	ND	10	20	ŭ
Methyl-t-Butyl Ether (MTBE)	ND	10	20	U	1,2-Dichloroe			ND	10	20	ŭ
Tert-Butyl Alcohol (TBA)	ND	100	20	U							_
Surrogates:	REC (%)	Control Limits	Qua	<u>il</u>	Surrogates:			REC (%)	Control Limits	<u>C</u>	Qual
1,4-Bromofluorobenzene	100	68-120			Dibromofluoro	omethane		99	80-127		
1,2-Dichloroethane-d4	97	80-128			Toluene-d8	omounano		98	80-120		
W-10-MW5			11-07-1241-6-A		07/18/11 12:05	Aqueous GC/MS L		07/21/11	07/22 03:		110721L04
										_	
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>
Benzene	340	25	50		Diisopropyl Et	, ,		ND	2.5	5	U
Toluene	160	2.5	5		Ethyl-t-Butyl E	Ether (ETBE))	ND	2.5	5	U
Ethylbenzene	990	25	50		Tert-Amyl-Me	thyl Ether (T	AME)	ND	2.5	5	U
Xylenes (total)	1800	25	50		1,2-Dibromoe			ND	2.5	5	U
Methyl-t-Butyl Ether (MTBE)	ND	2.5	5	U	1,2-Dichloroet	thane		ND	2.5	5	U
Tert-Butyl Alcohol (TBA)	ND	25	5	U							
Surrogates:	REC (%)	Control Limits	<u>Qua</u>	l	Surrogates:			REC (%)	Control Limits	<u>C</u>	<u>lual</u>
1,4-Bromofluorobenzene	101	68-120			Dibromofluoro	methane		100	80-127		
1,2-Dichloroethane-d4	97	80-128			Toluene-d8			101	80-120		
W-13-MW6			11-07-1241-7-В		07/18/11 12:20	Aqueous	GC/MS BB	07/22/11	07/22 19:4		110722L02
Parameter	Result	RL	DE	Qual	Parameter			Result	RL	DE	Qual
Benzene	2.5	0.50	1		Diisopropyl Et	hor (DIDE)		ND	0.50	1	U
Toluene	2.5 ND	0.50	1	U	Ethyl-t-Butyl E	, ,		ND ND	0.50		U
Ethylbenzene	3.8	0.50	1	· Q	Tert-Amyl-Met	, ,		ND	0.50	1	U
Xylenes (total)	3.5	0.50	1		1.2-Dibromoet	- '	niviE)	ND	0.50	1	U
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	U	1,2-Dibromoei			ND	0.50	1	U
Tert-Butyl Alcohol (TBA)	ND	5.0	1	U	1,2-DICHIOTOEL	iliaile		IAD	0.50	100	U
Surrogates:	REC (%)	Control Limits	Qual	-	Surrogates:			REC (%)	Control Limits	2	ual
1,4-Bromofluorobenzene	106	68-120			Dibromofluoro	mothana		90	80-127		
·	103	80-128				memane					
1,2-Dichloroethane-d4	103	80-128			Toluene-d8			104	80-120		



DF - Dilution Factor ,

Qual - Qualifiers

07/20/11



Cardno ERI

601 North McDowell Blvd.

Petaluma, CA 94954-2312

Analytical Report

Date Received:

Work Order No:

11-07-1241 Preparation: **EPA 5030C**

Method: **EPA 8260B** Units: ug/L

96

80-127

80-120

Project: ExxonMobil 79374/022735C Page 3 of 3

Client Sample Number				b Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/ Anal		QC Batch II
Method Blank			099-12	-884-648	N/A	Aqueous	GC/MS L	07/21/11	07/2 23:		110721L04
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	Parameter			Result	<u>RL</u>	DE	Qual
Benzene	ND	0.50	1	U	Diisopropyl E	ther (DIPE)		ND	0.50	ĩ	U
Toluene	ND	0.50	1	U	Ethyl-t-Butyl E	Ether (ETBE)	ND	0.50	1	Ü
Ethylbenzene	ND	0.50	1	U	Tert-Amyl-Me	thyl Ether (T	AME)	ND	0.50	1	U
Xylenes (total)	ND	0.50	1	U	1,2-Dibromoe	thane		ND	0.50	1	U
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	U	1,2-Dichloroe	thane		ND	0.50	1	U
Tert-Butyl Alcohol (TBA)	ND	5.0	1	U							
Surrogates:	REC (%)	Control Limits	Qua	<u>I</u>	Surrogates:			REC (%)	Control Limits	<u>C</u>	Qual
1,4-Bromofluorobenzene	96	68-120			Dibromofluoro	methane		102	80-127		
1,2-Dichloroethane-d4	99	80-128			Toluene-d8			98	80-120		
Method Blank			099-12-	884-649	N/A	Aqueous	GC/MS BB	07/22/11	07/22 14:		110722L02
Parameter	Result	RL	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	<u>DF</u>	Qual
Benzene	ND	0.50	1	U	Diisopropyl Et	her (DIPE)		ND	0.50	4	U
Toluene	ND	0.50	1	U	Ethyl-t-Butyl E	ther (ETBE)	1	ND	0.50	1	U
Ethylbenzene	ND	0.50	1	U	Tert-Amyl-Me	thyl Ether (T.	AME)	ND	0.50	4	U
Xylenes (total)	ND	0.50	1	U	1,2-Dibromoe	thane		ND	0.50	1	U
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	U	1,2-Dichloroet	thane		ND	0.50	4	U
Fert-Butyl Alcohol (TBA)	ND	5.0	1	U							
Surrogates:	<u>REC (%)</u>	Control Limits	Qual		Surrogates:			REC (%)	Control Limits	<u>C</u>	<u>Qual</u>
4 Daniel Comp.	0.7	00.400						00	00 100		





1,4-Bromofluorobenzene

1,2-Dichloroethane-d4

97

103

68-120

80-128

Dibromofluoromethane

Toluene-d8



Quality Control - Spike/Spike Duplicate

nel c

Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received: Work Order No: Preparation: Method: 07/20/11 11-07-1241 EPA 5030C EPA 8015B (M)

11-07-1242-1	Aqueous	GC 29	07/21/11	07/22/11	110721502
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number

<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD	RPD ÇL	Qualifiers
TPH as Gasoline	99	100	68-122	1	0-18	





Quality Control - Spike/Spike Duplicate

inel o

Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received: Work Order No: Preparation: Method: 07/20/11 11-07-1241 EPA 5030C EPA 8015B (M)

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
11-07-1164-1	Aqueous	GC 29	07/25/11	07/25/11	110725801

<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	<u>Qualifiers</u>
TPH as Gasoline	108	106	68-122	2	0-18	



C alscience nvironmental aboratories, Inc.

Quality Control - Spike/Spike Duplicate

Date Received: 07/20/11 11-07-1241 Work Order No: **EPA 5030C** Preparation: **EPA 8260B** Method:

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

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date Analyzed	MS/MSD Batch Number	
W-10-MW1	Aqueous	GC/MS L	07/21/11		07/22/11	110721S02	
1							
Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers	
Benzene	100	113	76-124	13	0-20		
Toluene	101	100	80-120	1	0-20		
Ethylbenzene	102	110	78-126	7	0-20		
Methyl-t-Butyl Ether (MTBE)	115	122	67-121	6	0-49	HX	
Tert-Butyl Alcohol (TBA)	126	116	36-162	8	0-30		
Diisopropyl Ether (DIPE)	107	116	60-138	8	0-45		
Ethyl-t-Butyl Ether (ETBE)	104	123	69-123	17	0-30		
Tert-Amyl-Methyl Ether (TAME)	102	120	65-120	17	0-20		
Ethanol	121	104	30-180	15	0-72		
1,2-Dibromoethane	100	112	80-120	12	0-20		
1,2-Dichloroethane	97	110	80-120	12	0-20		





Quality Control - Spike/Spike Duplicate

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

Date Received: Work Order No: Preparation:

07/20/11 11-07-1241 **EPA 5030C**

Method:

EPA 8260B

11-07-1165-16	Aqueous	GC/MS BB	07/22/11	07/22/11	110722S01
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number

<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	103	105	76-124	2	0-20	
Toluene	104	106	80-120	2	0-20	
Ethylbenzene	106	107	78-126	1	0-20	
Methyl-t-Butyl Ether (MTBE)	110	107	67-121	2	0-49	
Tert-Butyl Alcohol (TBA)	108	118	36-162	8	0-30	
Diisopropyl Ether (DIPE)	105	106	60-138	0	0-45	
Ethyl-t-Butyl Ether (ETBE)	103	105	69-123	2	0-30	
Tert-Amyl-Methyl Ether (TAME)	100	100	65-120	0	0-20	
Ethanol	120	145	30-180	19	0-72	
1,2-Dibromoethane	101	100	80-120	1	0-20	
1,2-Dichloroethane	115	110	80-120	4	0-20	







nelic

Cardno ERI 601 North McDowell Blvd.

Petaluma, CA 94954-2312

Date Received: Work Order No: Preparation:

Method:

N/A 11-07-1241 EPA 3510C EPA 8015B (M)

Quality Control Sample ID	Matrix	Matrix Instrument		Da ed Anal	ite yzed	LCS/LCSD Bate Number	h
099-12-234-889	Aqueous	GC 46	07/22/1	1 07/2	5/11	110722B08	
<u>Parameter</u>	LCS %	6REC LCSD	%REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Motor Oil	81	82		75-117	2	0-13	





nel c

Cardno ERI

601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received:

Work Order No:

Preparation:

Method:

N/A

11-07-1241

EPA 3510C

EPA 8015B (M)

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed		.CSD Bato lumber	:h
099-12-330-1,961	Aqueous	GC 46	07/22/11	07/25/11	11	110722B07	
<u>Parameter</u>	LCS %	REC LCSD	%REC %I	REC CL R	<u>PD</u> R	<u>PD ÇL</u>	Qualifiers
TPH as Diesel	87	86		75-117	2	0-13	









Cardno ERI

601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received:

Work Order No:

Preparation:

Method:

N/A 11-07-1241

EPA 5030C EPA 8015B (M)

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	i	LCS/LCSD Batc Number	h
099-12-436-6,428	Aqueous	GC 29	07/21/11	07/22/11		110721B02	
<u>Parameter</u>	LCS %	<u> 6REC LCSD</u>	<u>%REC</u> %	REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	104	104	1	78-120	0	0-10	







Cardno ERI

601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received:

Work Order No:

Preparation:

Method:

N/A 11-07-1241

EPA 5030C

EPA 8015B (M)

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Da d Anal	721	LCS/LCSD Bato Number	h
099-12-436-6,432	Aqueous	GC 29	07/25/11 07/25/11		5/11	110725B01	
<u>Parameter</u>	LCS %	REC LCSE) %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	107	10	3	78-120	3	0-10	







Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received: Work Order No: Preparation: Method: N/A 11-07-1241 EPA 5030C EPA 8260B

Project: ExxonMobil 79374/022735C

Quality Control Sample ID	Matrix	Instrument	Date Prepared		ate yzed	LCS/LCSD Batch Number				
099-12-884-648	Aqueous	GC/MS L	07/21/11	07/21	/11	110721L04				
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers			
Benzene	108	99	80-120	73-127	8	0-20				
Toluene	98	99	80-120	73-127	1	0-20				
Ethylbenzene	102	101	80-120	73-127	1	0-20				
Methyl-t-Butyl Ether (MTBE)	106	112	69-123	60-132	5	0-20				
Tert-Butyl Alcohol (TBA)	102	100	63-123	53-133	2	0-20				
Diisopropyl Ether (DIPE)	109	111	59-137	46-150	2	0-37				
Ethyl-t-Butyl Ether (ETBE)	105	110	69-123	60-132	4	0-20				
Tert-Amyl-Methyl Ether (TAME)	108	103	70-120	62-128	4	0-20				
Ethanol	105	113	28-160	6-182	7	0-57				
1,2-Dibromoethane	96	100	79-121	72-128	3	0-20				
1,2-Dichloroethane	103	99	80-120	73-127	4	0-20				

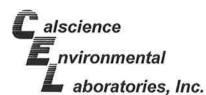
Total number of LCS compounds: 11

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass





nel c

Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received: Work Order No: Preparation: Method:

11-07-1241 EPA 5030C EPA 8260B

N/A

Project: ExxonMobil 79374/022735C

Quality Control Sample ID	Matrix	Instrument	Date Prepared		ate yzed	LCS/LCSD Batch Number			
099-12-884-649	Aqueous	GC/MS BB	07/22/11	07/22	/11	110722L	02		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers		
Benzene	99	100	80-120	73-127	1	0-20			
Toluene	100	101	80-120	73-127	1	0-20			
Ethylbenzene	100	103	80-120	73-127	3	0-20			
Methyl-t-Butyl Ether (MTBE)	102	103	69-123	60-132	1	0-20			
Tert-Butyl Alcohol (TBA)	109	97	63-123	53-133	12	0-20			
Diisopropyl Ether (DIPE)	100	100	59-137	46-150	0	0-37			
Ethyl-t-Butyl Ether (ETBE)	100	99	69-123	60-132	1	0-20			
Tert-Amyl-Methyl Ether (TAME)	97	97	70-120	62-128	0	0-20			
Ethanol	125	122	28-160	6-182	3	0-57			
1,2-Dibromoethane	91	95	79-121	72-128	5	0-20			
1,2-Dichloroethane	104	100	80-120	73-127	4	0-20			

Total number of LCS compounds: 11

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass





Glossary of Terms and Qualifiers



Work Order Number: 11-07-1241

<u>Qualifier</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.
В	Analyte was present in the associated method blank.
BA	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.
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.
CJ	Concentration exceeds the calibration range.
DF	Reporting limits elevated due to matrix interferences.
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 a matrix interference effect. The associated batch LCS/LCSD was in control and,
	hence, the associated sample data was reported without further clarification.
HD	Chromat. profile inconsistent with pattern(s) of ref. fuel stnds.
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 and/or LCSD was in control
	and, therefore, the sample data was reported without further clarification.
J	Analyte was detected at a concentration below the reporting limit and above the
	laboratory method detection limit. Reported value is estimated.
LD	Analyte presence was not confirmed by second column or GC/MS analysis.
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/LCSD Recovery Percentage is within Marginal Exceedance (ME) Control Limit
D) /	range.
RV	Surrogate compound recovery was out of control due to a required sample dilution,
SN	therefore, the sample data was reported without further clarification. See applicable analysis comment.
	Undetected at detection limit.
U	Ondetected at detection limit.

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.



Calscience Environmental Laboratories, Inc.

7440 Lincoln Way

Garden Grove, CA 92841

Phone: 714-895-5494

Fax: 714-894-7501





Con	sultant Name:	Cardno	ERI														_	Acc	count	#:_	NA					P	O#:	C)irect Bi	шС	ardı	no El	રા	
Consul	tant Address:	601 N.	McDowel	i Bou	levar	1												inve	oice T	o:	Dire	ct Bill C	ardr	юΕ	RI									
Consultant (City/State/Zip:	Petaku	ma, Califo	mia,	94954	1												Re	port T	·o:	Pau	la Sime												
Exxoniiob	li Project Mgr:	Jennif	er Sedlad	hek													Pn	ojec	t Nam	18:	02 2	735 C												
Consultan	t Project Mgr	Paula :	Sime													Exxo	n M	obli	Site #	j: [79	374	}			Major Proje	ect (AFI	E #)				
Consultant Telepi	none Number:	707-76	6-2000						o.: <u>7</u>	07-7	89-0	414			_		SI	te A	ddres	18:	990	San Pa	blo /	Avei	nue									
Sampler	r Name (Print):	- 0	Jak	e	P	Syle C	وجا	ر								Site	City	, St	ate, Z	lp:	Alba	iny, Cal	forn	ia										
Samp	ler Signature:				1	11/1	L	1	-	ı						Ove	orsi	ght /	Agenc	y:	Alar	neda C	ount	y En	viro	nme	enta	il Health Depar	tment					
				1	P					P	rese	rvati	ve				M	latrix		_				_	Α	nal	yze	For:		1				
Sample ID	Field Point Name	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Methanol	Sodium Bisulfate	HCI	NaOH H ₂ SO ₂ Plastic	H ₂ SO ₄ Glass	HNO ₃	Other Homesened	None None	Groundwater	Wastewater	Drinking Water	Soil	Air	Other (specify): Distilled Water	TPHa 8015M	TPH4 8015M	TPHmo 8015M	BTEX 8260B	7 Ovvnenates 8260B				RUSH TAT (Pre-Schedule)	5-day TAT	Standard 10-day TAT		Due Date of Report
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W- 11 -MW2	MW2	П	1130	8				П	1	3v	1	Ħ	1	2	A	x	П	\top	1	П	П	×	X	_	_	1	_			T	T	x	-	
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W- 8 -MW4	MW4		1155	8				П	_	6v	1	Ħ	\dagger	-	A	1 _x	П	\forall	\top	П	П	x	1×	_	1	1	_		\neg	✝	+	1x	_	
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Comments/Special Instructions: PLEASE E-MAIL ALL norcaliabs@eri-us.com; ERI-EI			n			Oxy	silica genat TBA r	es =	MT	BE, 1	ETB	E, DI	PE,	TAI	Æ,		1,2	P-DC	A, ED	В	Lab	oratory Tempe Sample	ratur	e U	pon	Rec				Y		N		
GLOBAL ID # T0619716673			* :					υρυ.		WET Y			-		.							VOCs								Ý		N		
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Page 23 of 26





〈WebShip〉〉〉〉〉

800-322-5555 WWW.gso.com

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

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

COD: \$0.00

Reference: CARDNO ERI, NCAL HOLDING BLANKS

Delivery Instructions:

Signature Type: SIGNATURE REQUIRED

517013882 Tracking #: NPS GARDEN GROVE D92843A

> Print Date: 07/19/11 13:35 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:

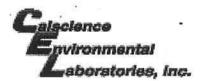
By giving us your shipment to deliver, you agree to all the service terms and conditions described in this section. Our liability for loss or damage to any package is limited to your actual damages or \$100 whichever is less, unless you pay for and declare a higher authorized value. If you declare a 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 or not limited to, artwork, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.



WORK ORDER #: 11-07- 1 2 4 1

SAMPLE RECEIPT FORM	Cooler \ of \
	07/20/11
TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C - 6.0 °C, not frozen)	
Temperature 3 . 2 °C + 0.5 °C (CF) = 3 . 7 °C ☐ Blank ☐ Sample(s) outside temperature criteria (PM/APM contacted by:).	□ Sample
☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sample	ling.
☐ Received at ambient temperature, placed on ice for transport by Courier.	00
Ambient Temperature: Air Filter	Initial:
CUSTODY SEALS INTACT: Secondar	Initial:
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.	
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.	
Sampler's name indicated on COC	
Sample container label(s) consistent with COC	
Sample container(s) intact and good condition	
Proper containers and sufficient volume for analyses requested	
Analyses received within holding time	
pH / Res. Chlorine / Diss. Sulfide / Diss. Oxygen received within 24 hours □	
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	
Solid: □4ozCGJ □8ozCGJ □16ozCGJ □Sleeve () □EnCores® □Terra	Cores [®] □
Water: □VOA ØVOAh □VOAna₂ □125AGB □125AGBh □125AGBp □1AGB	□1AGBna₂ □1AGBs
□500AGB ☑500AGJ □500AGJs □250AGB □250CGB □250CGBs □1PB [□500PB □500 PBna
□250PB □250PBn □125PB □125PBznna □100PJ □100PJna₂ □ □	
Air: Tedlar® Summa® Other: Trip Blank Lot#: 391210 A Labeled/6 Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope R	Checked by: 7/

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



WORK ORDER #: 11-07- [] [2] (学]

SAMPLE ANOMALY FORM

SAMPL	ES - CO	NIATNC	ERS & L	ABELS:			Comm	ents:		
☐ Sam ☐ Sam ☐ Hold ☐ Insu ☐ Impu ☐ Impu ☐ No p	aple(s)/O aple(s)/O ding time ifficient roper co roper propers aple labe aple labe	Containe Containe e expire quantiti ontainer eservati ative not els illegi el(s) do r	r(s) NOT r(s) recei d — list sa es for ana s) used — ve used — ed on CO ble — note	RECEIVED ved but NO mple ID(s) a alysis – list te - list test - list test C or label – test/contain a COC – Not	T LISTEI and test test - list test ter type	O on COC		ents:		
☐ Project Information ☐ # of Container(s)										
	Analys	,	9)				7			
	-		comproi	mised - Not	e in comi	ments			-	
	•		•	container			4		160	
	Broken						* *			
☐ Sam	ple con	tainer(s)	not labe	led						
	Flat Very Io Leakin Leakin	w in vol g (Not tr g (transi	ume ansferred	promised – d - duplicate o Calscienc o Client's To	bag sul	bmitted) [®] Bag*)				
☐ Othe	r:		1.				V			
HEADSI	PACE -	Contai	ners wit	h Bubble >	6mm o	r ¼ inch:				
Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(a)	# of Cont.	: Analysis	
1	A, B	2				L (/f)				
-										
Comment	is:	!				- a				
*Transferr	ed at Clie	nt's requ	est.			¥	. Ir	itial / Dat	e: b. L 07 /20/11	

suus

APPENDIX D WASTE DISPOSAL DOCUMENTATION

NON-HA	ZARDOUS	WASTE	MANIFEST

Plea	se 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	E2111-0224	2. Page 1
	3. Generator's Name and Mailing Address	7 0371				
1818	3. Generator's Name and Mailing Address Extended To Sense (1) 4. Generator's Phone (1)	610 Ave.		CAR	DNOFLE	
like	4. Generator's Phone () Albany	P				
	5. Transporter 1 Company Name 6.	US EPA ID Number		A. State Trans	porter's ID	
100	CAO 00.0 - ERT.			B. Transporter	1 Phone	
	7. Transporter 2 Company Name 8.	US EPA ID Number		C. State Trans	sporter's ID	
W.	l.			D. Transporter	2 Phone	
1000	Designated Facility Name and Site Address 10.	US EPA ID Number	_	E. State Facili	ty's ID	
	Luciana lace					
lin.	1105- C AIRPERT RID	(ARCOOLS 959'	7	F. Facility's Ph	ione	
	RIO VISTA, CA	(/ 1000			707-374-38	34
4	11. WASTE DESCRIPTION		12. Co			14.
			No.	Туре	13. Total Quantity	Unit Wt./Vol.
-	a.					1
	Now Hospisons wantoning my	WATOR	Ì	POLY	51	ger
G	b.					
GEZER						
P						
R	C.					
A						
6						
O R	d.					
100						
Item	G. Additional Descriptions for Materials Listed Above			H. Handling Co	odes for Wastes Listed Above	
- 10	CKCN					
1	COLORS - GLOV					
	COLORS - Gray CHORS - FINES					
4	SOLIOS - FINES					
No.	15. Special Handling Instructions and Additional Information					
The second						
100						
	16. GENERATOR'S CERTIFICATION: Phereby certify that the contents of this shipme in proper condition for transport. The materials described on this manifest are not s	ent are fully and accurately described a	and are in	all respects		18
	In proper condition for transport. The materials described on the manifest are not of	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,			
7						Date
	Printed/Typed Name	Signature			Month	Day Year
9						4_4_
Į,	17. Transporter 1 Acknowledgement of Receipt of Materials	I Pianotura	10.5		44	Date
A	Printed/Typed Name	Signature		Section 1	Month	Day Year
SP	Cost to Fra Control White	1				Date Date
잁	18. Transporter 2 Acknowledgement of Receipt of Materials	Signature			Month	Date Day Year
TRANSPORTER	Printed/Typed Name	Signature			WOTH	Day Tear
	19. Discrepancy Indication Space					
F A						
Ĉ	10					
	20. Facility Owner or Operator; Certification of receipt of the waste materials covered by	y this manifest, except as noted in iter	m 19			
님.	T > T	<u></u>				Date
T	Printed/Typed Name	Signature / /	21		Month	Day Year
Y	T. II hough le	7/			7	15 11



NON-HAZARDOUS WASTE