

**ExxonMobil  
Environmental Services Company**

4096 Piedmont Avenue #194  
Oakland, California 94611  
510 547 8196 Telephone  
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**Jennifer C. Sedlachek**  
Project Manager

**RECEIVED**

**2:51 pm, Nov 01, 2011**

Alameda County  
Environmental Health

**ExxonMobil**

October 25, 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 Mobil RAS #99105/6301 San Pablo 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 2011*, dated October 25, 2011, for the above-referenced site. The report was prepared by Cardno ERI of Petaluma, California, and details activities at the subject site.

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

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

Sincerely,



Jennifer C. Sedlachek  
Project Manager

Attachment: Cardno ERI's *Groundwater Monitoring Report, Third Quarter 2011*, dated October 25, 2011

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

w/o attachment  
Paula Sime, Cardno ERI



Shaping the Future

Cardno ERI  
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October 25, 2011  
Cardno ERI 278313.Q113

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

**SUBJECT** Groundwater Monitoring Report, Third Quarter 2011  
Former Mobil Service Station 99105  
6301 San Pablo Avenue, Oakland, California

## INTRODUCTION

At the request of ExxonMobil Environmental Services (EMES), on behalf of ExxonMobil Oil Corporation, Cardno ERI performed 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 operates as an oil change facility.

## GROUNDWATER MONITORING AND SAMPLING SUMMARY

<b>Gauging and sampling date:</b>	09/14/11
<b>Wells gauged and sampled:</b>	MW2, MW3, MW5
<b>Presence of NAPL:</b>	Not observed
<b>Laboratory:</b>	Calscience Environmental Laboratories, Inc. Garden Grove, California
<b>Analyses performed:</b>	EPA Method 8015B TPHd, TPHg EPA Method 8260B BTEX, MTBE, TAME, TBA, DIPE, EDB, 1,2-DCA, ethanol
<b>Waste disposal:</b>	80 gallons purge and decon water delivered to InStrat, Inc., of Rio Vista, California, on 10/07/11

October 25, 2011  
 Cardno ERI 278313.Q113 Former Mobil Service Station 99105, Oakland, California

## CONCLUSION

The groundwater flow direction was towards the northwest with a hydraulic gradient of 0.075 during the third quarter.

## RECOMMENDATIONS

Cardno ERI recommends implementing the work proposed in the *Work Plan for Soil Borings and Soil Vapor Sampling*, dated September 16, 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 (707) 766-2000 or at [paula.sime@cardno.com](mailto:paula.sime@cardno.com) with any questions regarding this report.

Sincerely,

SCANNED  
 IMAGE  


Jennifer L. Lacy  
 Senior Staff Scientist  
 for Cardno ERI  
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SCANNED  
 IMAGE  


David Daniels  
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October 25, 2011  
Cardno ERI 278313.Q113 Former Mobil Service Station 99105, Oakland, California

**Enclosures:**

**Acronym List**

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

cc: Barbara Jakub, Alameda County Health Care Services Agency, 1131 Harbor Bay Parkway, 2<sup>nd</sup> Floor,  
Alameda, California, 94502

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

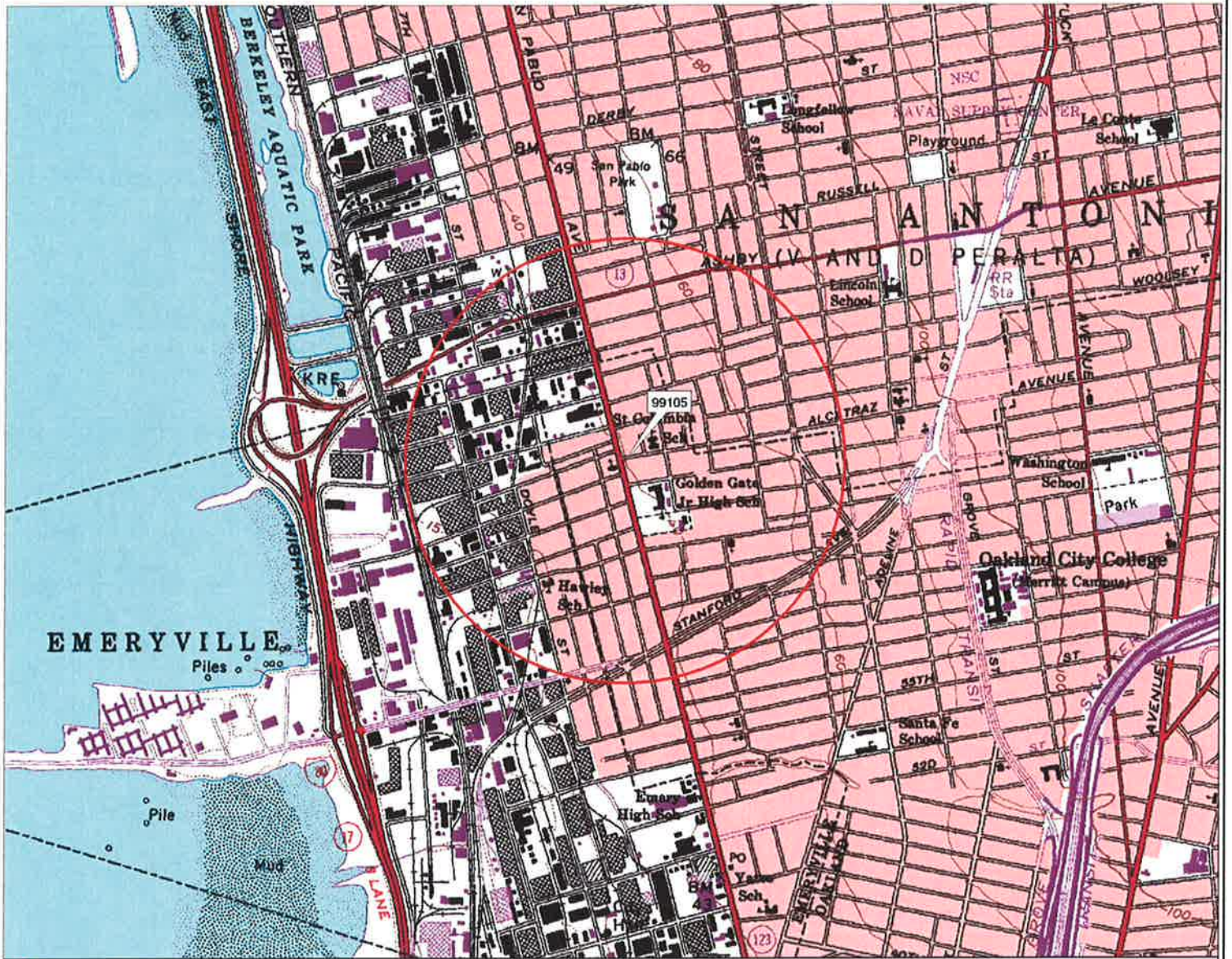
On Dan and Nathan Lam, 200 El Dorado Terrace, San Francisco, California, 94112

October 25, 2011  
 Cardno ERI 278313.Q113 Former Mobil Service Station 99105, Oakland, California

## ACRONYM LIST

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





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FN 2783TOPO

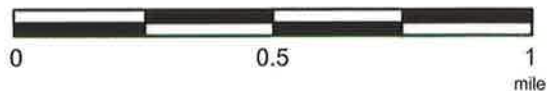
**EXPLANATION**



1/2-mile radius circle



**APPROXIMATE SCALE**



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



**SITE VICINITY MAP**

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

**PROJECT NO.**

2783

**PLATE**

1



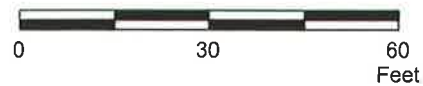
Analyte Concentrations in ug/L  
 Sampled September 14, 2011

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

< Less Than the Stated Laboratory  
 Reporting Limit  
 ug/L Micrograms per Liter  
 h Chromatogram is not typical of the  
 standard fuel quantitation range.



APPROXIMATE SCALE



FN 2783 11 3QTR QM

### SELECT ANALYTICAL RESULTS September 14, 2011

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

#### EXPLANATION

- MW5 Groundwater Monitoring Well
- MP6 Destroyed Observation Well

- MW4 Destroyed Groundwater Monitoring Well

PROJECT NO.

2783

PLATE

2





APPROXIMATE SCALE



FN 2783 11 3QTR QM



**GROUNDWATER ELEVATION MAP**  
**September 14, 2011**  
FORMER MOBIL SERVICE STATION 99105  
6301 San Pablo Avenue  
Oakland, California

**EXPLANATION**

- MW5 Groundwater Monitoring Well
- 34.53 Groundwater elevation in feet; datum is mean sea level
- MP6 Destroyed Observation Well

MW4 Destroyed Groundwater Monitoring Well

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

**PROJECT NO.**

2783

**PLATE**

3



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

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8020/8021 (µg/L)	MTBE 8240/8260 (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
TW1	01/04/96	---	6.00	---	No	700	ND	---	---	ND	ND	ND	ND
WW1	01/04/96	---	3.00	---	No	---	ND	---	---	ND	ND	ND	ND
MW1	03/14/96	32.79	4.50	28.29	No	450	610	---	---	0.75	0.54	1.5	59
MW1	05/21/96	32.79	5.64	27.15	No	ND	ND	---	---	ND	ND	ND	ND
MW1	08/13/96	32.79	9.76	23.03	No	ND	ND	---	---	ND	ND	ND	ND
MW1	11/08/96	32.79	10.24	22.55	No	ND	ND	ND	---	ND	0.92	ND	2.1
MW1	01/31/97	32.79	3.83	28.96	No	ND	ND	2.6	ND	ND	0.85	ND	ND
MW1	04/22/97	32.79	9.14	23.65	No	ND	ND	ND	---	ND	ND	ND	ND
MW1	07/29/97	a 32.79	10.18	22.61	No	60e	ND	36	---	0.84	0.95	ND	1.6
MW1	10/09/97	a 32.79	10.46	22.33	No	56e	ND	ND	---	ND	ND	ND	ND
MW1	01/23/98	a 32.79	3.95	28.84	No	33	ND	ND	---	ND	ND	ND	ND
MW1	04/22/98	32.79	5.33	27.46	No	ND	ND	ND	---	ND	ND	ND	ND
MW1	07/21/98	32.79	9.17	23.62	No	---	ND	ND	---	ND	ND	ND	ND
MW1	10/20/98	32.79	10.41	22.38	No	---	ND	ND	---	ND	ND	ND	ND
MW1	01/27/99	32.79	5.51	27.28	No	---	ND	ND	---	ND	ND	ND	ND
MW1	Apr-99	Destroyed during construction activities.											
MW2	03/14/96	32.80	4.51	28.29	No	250	560	---	---	2.0	0.96	4.3	11
MW2	05/21/96	32.80	5.65	27.15	No	560	730	---	---	5.1	1.4	6.7	5.9
MW2	08/13/96	32.80	10.14	22.66	No	380b	490	---	---	25	3.5	7.2	13
MW2	11/08/96	32.80	10.70	22.10	No	160d	520	6.1	---	80	2.7	14	66
MW2	01/31/97	32.80	3.84	28.96	No	130b	74	ND	---	ND	ND	ND	ND
MW2	04/22/97	32.80	9.61	23.19	No	430	260	ND	---	2.7	ND	2.5	ND
MW2	07/29/97	a 32.80	10.53	22.27	No	150d	320	ND	---	28	1.2	10	ND
MW2	10/09/97	a 32.80	10.87	21.93	No	160b	460	2.6	---	43	2.8	2.0	2.6
MW2	01/23/98	a 32.80	3.75	29.05	No	54	ND	ND	---	ND	ND	ND	ND
MW2	04/22/98	32.80	5.36	27.44	No	540	180	ND	---	1.2	0.3	0.4	ND
MW2	07/21/98	32.80	9.55	23.25	No	---	80	ND	---	8.9	2.1	0.6	2.5
MW2	10/20/98	32.80	10.75	22.05	No	---	50	ND	---	0.8	0.7	ND	0.8
MW2	01/27/99	32.80	5.53	27.27	No	---	ND	ND	---	0.6	ND	ND	ND
MW2	07/27/99	32.80	6.20	26.60	No	---	ND	ND	---	ND	0.6	ND	ND
MW2	12/08/99	32.80	9.98	22.82	No	---	ND	ND	---	1.2	0.43	ND	ND
MW2	10/25/00	39.34	11.30	28.04	No	---	<20	<0.30	---	2.0	0.59	0.46	1.3
MW2	01/15/01	39.34	9.41	29.93	No	---	<20	<0.30	---	<0.20	0.46	<0.20	<0.60
MW2	04/10/01	39.34	6.16	33.18	No	---	23	<1.0	---	0.28	<0.20	<0.20	<0.60
MW2	07/24/01	39.34	10.70	28.64	No	---	<50	<0.30	---	<0.20	0.93	<0.20	0.82

**TABLE 1A**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Mobil Service Station 99105  
6301 San Pablo Avenue  
Oakland, California  
(Page 2 of 5)

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8020/8021 (µg/L)	MTBE 8240/8260 (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW2	11/27/01	39.34	10.15	29.19	No	---	<50	<0.30	---	1.2	0.22	<0.20	<0.60
MW2	01/18/02	41.99	5.46	36.53	No	---	<50.0	1.40	---	<0.50	<0.50	<0.50	<0.50
MW2	04/10/02	41.99	6.48	35.51	No	---	<50.0	1.80	---	<0.50	<0.50	<0.50	<0.50
MW2	07/12/02	41.99	10.45	31.54	No	---	<50.0	<0.50	---	<0.50	<0.50	<0.50	<0.50
MW2	10/14/02	41.99	11.46	30.53	No	---	<50.0	<0.5	---	<0.5	4.1	0.6	4.0
MW2	01/20/03	41.99	5.39	36.60	No	---	<50.0	0.6	---	<0.50	<0.50	<0.50	<0.50
MW2	04/28/03	41.99	5.87	36.12	No	---	<50.0	<0.50	---	<0.50	<0.50	<0.50	<0.50
MW2	07/15/03	41.99	10.31	31.68	No	---	<50	<0.5	---	<0.5	<0.5	<0.5	<0.5
MW2	10/08/03	41.99	11.20	30.79	No	---	<50	<0.5	---	<0.5	<0.5	<0.5	<0.5
MW2	01/15/04	41.99	5.36	36.63	No	---	63.3	1.0	---	0.70	<0.5	<0.5	<0.5
MW2	Well not sampled from 2004 to 2010.												
MW2	09/17/10	41.99	10.72	31.27	No	<50	<50	---	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	12/15/10	42.24	Well resurveyed.										
<b>MW2</b>	<b>09/14/11</b>	<b>42.24</b>	<b>10.02</b>	<b>32.22</b>	<b>No</b>	<b>110h</b>	<b>&lt;50</b>	<b>---</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>
MW3	03/14/96	32.80	9.55	23.25	No	1,200	4,200	---	---	220	30	140	520
MW3	05/21/96	32.80	10.16	22.64	No	2,800	8,500	---	---	710	110	440	1,700
MW3	08/13/96	32.80	11.18	21.62	No	2,300c	5,000	---	---	430	ND	200	360
MW3	11/08/96	32.80	11.51	21.29	No	2,900b	8,400	73	ND	890	82	790	1,700
MW3	01/31/97	32.80	7.90	24.90	No	7,500b	16,000	ND	---	660	85	960	1,800
MW3	04/22/97	32.80	10.64	22.16	No	2,700	8,000	200	ND	340	33	400	490
MW3	07/29/97	a 32.80	11.36	21.44	No	2,300b	9,800	ND	---	330	ND	530	530
MW3	10/09/97	a 32.80	11.52	21.28	No	2,600b	7,300	270	ND	300	ND	430	460
MW3	01/23/98	a 32.80	7.50	25.30	No	2,300	6,100	ND	---	190	23	330	320
MW3	04/22/98	32.80	6.81	25.99	No	2,600	4,900	ND	ND	140	12	250	230
MW3	07/21/98	32.80	10.65	22.15	No	---	7,400	74	ND	250	16	400	370
MW3	10/20/98	32.80	11.57	21.23	No	---	6,700	ND	ND	200	18	350	350
MW3	01/27/99	32.80	9.11	23.69	No	---	3,100	13	---	74	4	94	39
MW3	07/27/99	32.80	7.27	25.53	No	---	8,900	ND	---	170	21	360	440
MW3	12/08/99	32.80	10.63	22.17	No	---	4,800	ND	---	94	13	170	210
MW3	10/25/00	39.27	12.08	27.19	No	---	3,800	<50	<5	63	2.9	100	65
MW3	01/15/01	39.27	10.29	28.98	No	---	4,300	<5.0	---	76	9.5	47	76
MW3	04/10/01	39.27	10.11	29.16	No	---	2,700	<20	---	55	4.4	100	37
MW3	07/24/01	39.27	11.57	27.70	No	---	3,100	<1.0	---	110	6.9	110	81
MW3	11/27/01	39.27	10.93	28.34	No	---	2,400	<0.30	---	47	8.9	25	35
MW3	01/18/02	41.71	9.47	32.24	No	---	1,130	13.6	---	15.3	2.30	42.0	24.6
MW3	04/10/02	41.71	10.14	31.57	No	---	916	11.2	---	35.1	3.00	22.5	13.8
MW3	07/12/02	41.71	11.34	30.37	No	---	2,330	15.4	---	60.5	2.90	39.8	50.9

**TABLE 1A**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Mobil Service Station 99105  
6301 San Pablo Avenue  
Oakland, California  
(Page 3 of 5)

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8020/8021 (µg/L)	MTBE 8240/8260 (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW3	10/14/02	41.71	12.10	29.61	No	---	2,550	<0.5	---	36.9	3.8	20.3	48.0
MW3	01/20/03	41.71	9.20	32.51	No	---	1,750	10.7	---	20.4	304.0	60.7	22.0
MW3	04/28/03	41.71	9.37	32.34	No	---	2,730	11.2	---	10.0	2.7	42.7	20.1
MW3	07/15/03	41.71	11.15	30.56	No	---	1,790	5.6	---	68.8	3.6	39.0	44.7
MW3	10/08/03	41.71	11.89	29.82	No	---	1,320	7.1	---	35.1	4.0	23.6	31.8
MW3	01/15/04	41.71	9.16	32.55	No	---	791	3.4	---	24.4	1.3	40.1	14.7
MW3	Well not sampled from 2004 to 2010.												
MW3	09/17/10	41.71	11.46	30.25	No	99	2,500	---	<0.50	2.6	0.31f	1.8	1.8
MW3	12/15/10	42.18	Well resurveyed.										
<b>MW3</b>	<b>09/14/11</b>	<b>42.18</b>	<b>11.37</b>	<b>30.81</b>	<b>No</b>	<b>270h</b>	<b>1,200</b>	<b>---</b>	<b>&lt;0.50</b>	<b>18</b>	<b>0.95</b>	<b>1.7</b>	<b>1.3</b>
MW4	03/14/96	31.50	4.92	26.58	No	3,500	12,000	---	---	2,200	140	880	2,000
MW4	05/21/96	31.50	8.60	22.90	No	4,200	11,000	---	---	1,700	ND	930	470
MW4	08/13/96	31.50	10.02	21.50	0.02	---	---	---	---	---	---	---	---
MW4	11/08/96	31.50	10.28	21.33	0.15	---	---	---	---	---	---	---	---
MW4	01/31/97	31.50	7.88	23.62	No	8,200b	23,000	ND	---	980	68	1,100	1,400
MW4	04/22/97	31.50	7.40	24.10	No	4,500	8,800	ND	---	950	ND	610	130
MW4	07/29/97	31.50	9.85	21.74	0.12	---	---	---	---	---	---	---	---
MW4	10/09/97	31.50	10.35	21.38	0.30	---	---	---	---	---	---	---	---
MW4	01/23/98	31.50	4.68	27.51	0.92	---	---	---	---	---	---	---	---
MW4	04/22/98	31.50	6.39	25.22	0.14	---	---	---	---	---	---	---	---
MW4	07/21/98	31.50	7.10	24.55	0.20	---	---	---	---	---	---	---	---
MW4	10/20/98	31.50	9.03	22.60	0.17	---	---	---	---	---	---	---	---
MW4	01/27/99	31.50	5.37	26.18	0.07	---	---	---	---	---	---	---	---
MW4	Apr-99	Destroyed during construction activities.											
MW5	10/25/00	39.18	10.92	28.26	No	---	2,500	<20	---	79	3.8	66	<20
MW5	01/15/01	39.18	8.32	30.86	No	---	3,900	<5.0	---	120	7.9	280	52
MW5	04/10/01	39.18	7.21	31.97	No	---	8,000	<50	<5	280	4.4	410	100
MW5	07/24/01	39.18	9.54	29.64	No	---	7,000	<1.0	---	360	7.4	380	67
MW5	11/27/01	39.18	8.84	30.34	No	---	5,000	8.9	<2	64	11	340	52
MW5	01/18/02	41.59	6.52	35.07	No	---	6,330	21.8	---	99.1	2.30	103	19.6
MW5	04/10/02	41.59	7.20	34.39	No	---	2,140	<2.50	---	275	8.00	183	24.5
MW5	07/12/02	41.59	8.83	32.76	No	---	3,940	20	<0.50	350	<0.50	268	14
MW5	10/14/02	41.59	10.74	30.85	No	---	4,040	<2.5	---	98.5	9.0	169	29.0
MW5	01/20/03	41.59	6.45	35.14	No	---	7,660	59	<0.50	421	10.0	743	96.0
MW5	04/28/03	41.59	6.68	34.91	No	---	7,510	47	<0.50	403	5.5	524	50.5
MW5	07/15/03	41.59	8.68	32.91	No	---	6,080	52.9	<2.5	406	19.8	412	34.7



**TABLE 1A**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Mobil Service Station 99105  
6301 San Pablo Avenue  
Oakland, California  
(Page 4 of 5)

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8020/8021 (µg/L)	MTBE 8240/8260 (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW5	10/08/03	41.59	10.56	31.03	No	---	2,460	54.3	<0.5	160	12.8	173	31.7
MW5	01/15/04	41.59	6.56	35.03	No	---	4,630	37.4	<0.5	181	6.0	312	38.5
MW5	Well not sampled from 2004 to 2010.												
MW5	09/17/10	41.59	9.99	31.60	No	5,700	6,600	---	<5.0	19	<5.0	16	1.4f
MW5	12/15/10	41.86	Well resurveyed.										
<b>MW5</b>	<b>09/14/11</b>	<b>41.86</b>	<b>7.33</b>	<b>34.53</b>	<b>No</b>	<b>1,600h</b>	<b>7,200</b>	<b>---</b>	<b>&lt;2.0</b>	<b>23</b>	<b>&lt;2.0</b>	<b>8.6</b>	<b>&lt;2.0</b>

**Grab Groundwater Samples**

AB1	03/05/98	---	---	---	---	---	1,600	ND	---	31	5.3	79	130
AB2	03/05/98	---	---	---	---	---	ND	ND	---	ND	2.9	0.9	5.7
AB3	03/05/98	---	---	---	---	---	6,800	230	---	680	100	1,500	2,300
AB4	03/05/98	---	---	---	---	---	8,500	ND	---	240	ND	260	720
AB6	03/05/98	---	---	---	---	---	12,000	ND	---	350	ND	310	100
AB9	03/05/98	---	---	---	---	---	1,000	ND	---	57	12	44	93
AB10	03/05/98	---	---	---	---	---	200	ND	---	3.0	1.2	3.2	2.8
AB11	03/05/98	---	---	---	---	---	ND	ND	---	ND	ND	ND	ND
AB12	03/05/98	---	---	---	---	---	8,800	37	---	660	50	630	940
AB13	03/05/98	---	---	---	---	---	210	ND	---	11	0.8	10	15
HA1	01/25/00	---	---	---	---	---	<500	<5.0	---	<0.3	<0.3	<0.3	<0.6

**TABLE 1A  
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**

Former Mobil Service Station 99105  
6301 San Pablo Avenue  
Oakland, California  
(Page 5 of 5)

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8020/8021 (µg/L)	MTBE 8240/8260 (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
<b>Soil Borings</b>													
B1	11/18/10	---	---	---	---	---	---	---	---	---	---	---	---
B2	11/19/10	---	---	---	---	---	---	---	---	---	---	---	---
B3	11/19/10	---	---	---	---	<50g	<50	---	<0.50	<0.50	<0.50	0.053f	0.21f
B4	11/19/10	---	---	---	---	---	---	---	---	---	---	---	---
B5	11/18/10	---	---	---	---	<50g	<50	---	<0.50	<0.50	<0.50	0.047f	0.21f

Notes: Adapted from ETIC's *Report of Groundwater Monitoring, Third Quarter 2010*.

- TOC Elev. = Top of casing elevation.
- DTW = Depth to water.
- GW Elev. = Groundwater elevation.
- NAPL = Non-aqueous phase liquid.
- TPHd = Total petroleum hydrocarbons as diesel analyzed using EPA Method 8015B.
- TPHg = Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015B.
- MTBE 8020/8021 = Methyl tertiary butyl ether analyzed using EPA Method 8020 or 8021B.
- MTBE 8240/8260 = Methyl tertiary butyl ether analyzed using EPA Method 8260B or 8240.
- BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8260B.
- DIPE = Di-isopropyl ether analyzed using EPA Method 8260B.
- ETBE = Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
- TAME = Tertiary amyl methyl ether analyzed using EPA Method 8260B.
- TBA = Tertiary butyl alcohol analyzed using EPA Method 8260B.
- 1,2-DCA = 1,2-dichloroethane analyzed using EPA Method 8260B.
- EDB = 1,2-dibromoethane analyzed using EPA Method 8260B.
- Ethanol = Ethanol analyzed using EPA Method 8260B.
- ND = Not detected at or above the laboratory reporting limit.
- µg/L = Micrograms per liter.
- < = Less than the stated laboratory reporting limit.
- = Not analyzed/Not applicable.
- a = Well sampled using no-purge method.
- b = Diesel and unidentified hydrocarbons <C15.
- c = Diesel and unidentified hydrocarbons <C15>C25.
- d = Diesel and unidentified hydrocarbons >C20.
- e = Unidentified hydrocarbons >C18.
- f = Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit.
- g = The sample extract was subjected to Silica Gel treatment prior to analysis.
- h = Chromatogram is not typical of the standard fuel quantitation range.

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

Well ID	Sampling Date	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Ethanol (µg/L)
TW1	01/04/96	---	---	---	---	---	---	---
WW1	01/04/96	---	---	---	---	---	---	---
MW1	03/14/96 - 01/27/99	Not analyzed for these analytes.						
MW1	Apr-99	Destroyed during construction activities.						
MW2	03/14/96 - 01/15/04	Not analyzed for these analytes.						
MW2	09/17/10	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---
<b>MW2</b>	<b>09/14/11</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;5.0</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;50</b>
MW3	03/14/96 - 01/15/04	Not analyzed for these analytes.						
MW3	09/17/10	0.17f	<0.50	<0.50	9.8f	1.9	<0.50	---
<b>MW3</b>	<b>09/14/11</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;5.0</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;50</b>
MW4	03/14/96 - 01/27/99	Not analyzed for these analytes.						
MW4	Apr-99	Destroyed during construction activities.						
MW5	10/25/00 - 01/15/04	Not analyzed for these analytes.						
MW5	09/17/10	<5.0	<5.0	<5.0	<100	<5.0	<5.0	---
<b>MW5</b>	<b>09/14/11</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>25</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;200</b>

**Grab Groundwater Samples**

Not analyzed for these analytes.

**Soil Borings**

B1	11/18/10	---	---	---	---	---	---	---
B2	11/19/10	---	---	---	---	---	---	---
B3	11/19/10	---	---	---	---	8.7	---	---
B4	11/19/10	---	---	---	---	---	---	---
B5	11/18/10	---	---	---	---	0.099f	---	---



**TABLE 1B  
ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**

Former Mobil Service Station 99105

6301 San Pablo Avenue

Oakland, California

(Page 2 of 2)

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

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

Well ID	Well Installation Date	Well Destruction Date	TOC Elevation (feet)	Well Casing Material	Total Depth (feet)	Well Depth (feet)	Borehole Diameter (inches)	Casing Diameter (inches)	Screened Interval (feet)	Slot Size (inches)	Filter Pack Interval (feet)	Filter Pack Material
MW1	03/02/00	Apr-99	32.79	PVC	21.5	20	10	4	5-20	0.010	4.5-21.5	#12 Sand
MW2	03/02/00	---	42.24	PVC	21.5	20	10	4	5-20	0.010	4.5-21.5	#12 Sand
MW3	03/02/00	---	42.18	PVC	21.5	20	10	4	5-20	0.010	4.5-21.5	#12 Sand
MW4	03/02/00	Apr-99	31.50	PVC	26.5	25	10	4	5-25	0.010	4.5-21.5	#12 Sand
MW5	09/07/04	---	41.86	PVC	21.5	20	10	4	5-20	0.010	4-21.5	#2/12 Sand
VW1	11/01/10	---	---	Stainless Steel	6	6	4	0.25	5.25-5.75	0.0057	5-6	#2/12 Sand
VW2	11/02/10	---	---	Stainless Steel	6	6	4	0.25	5.25-5.75	0.0057	5-6	#2/12 Sand
VW3	11/01/10	---	---	Stainless Steel	6	6	4	0.25	5.25-5.75	0.0057	5-6	#2/12 Sand
VW4	11/02/10	---	---	Stainless Steel	6	6	4	0.25	5.25-5.75	0.0057	5-6	#2/12 Sand
VW5	11/02/10	---	---	Stainless Steel	6	6	4	0.25	5.25-5.75	0.0057	5-6	#2/12 Sand

Notes:

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

**APPENDIX A**  
**GROUNDWATER SAMPLING PROTOCOL**



## GROUNDWATER SAMPLING PROTOCOL

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

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

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

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

r	=	radius of the well casing in feet
h	=	column of water in the well in feet (depth to bottom - depth to water)
7.48	=	conversion constant from cubic feet to gallons
$\pi$	=	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

Cardno ERI



Project ID #: 99105

Cardno ERI Job # 022783C

Subject: GW SAMPLING

Date: 9/14/2011

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

Sheet: 1

Name(s): CHURCH, STEVE

Time Arrived On Site: 8:0

Time Departed Site: 11:30

08:00 -ARRIVED ON SITE

-INFORMED STATION OF WORK TO BE DONE

-SET UP EXCLUSION ZONE AND CHOCKED THE WHEELS ON VEHICLE

-REVIEWED APPLICABLE JSA'S

-STARTED PAPERWORK FOR SITE AND LABELS

-SET UP DECON/WORK AREA AND DECON'D EQUIPMENT

08:00 -HELD H&S MEETING/REVIEWED HOSPITAL ROUTE /FINISHED AT 08:15

08:15 -OPENED WELLS AND ALLOWED WELLS TO CHARGE

08:30 -STARTED MEASURING /FINISHED AT 08:45

09:06 -STARTED PURGING /FINISHED AT 10:37

09:30 -STARTED SAMPLING /FINISHED AT 10:50

11:30 -CARDNO ERI OFF SITE

12:30 -STARTED PURGE WATER TREATMENT (TRAILER) /FINISHED AT 12:45

\*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

TOTAL PURGED GALLONS: 60

DECON WATER GALLONS: 20

\*0 T/C SET UPS





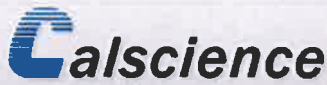




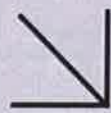


**APPENDIX C**

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



Environmental & Marine Chemistry Laboratories



# CALSCIENCE

WORK ORDER NUMBER: 11-09-1167

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

RECEIVED  
SEP 30 2011

BY: .....

### Analytical Report For

**Client:** Cardno ERI

**Client Project Name:** ExxonMobil 99105/022783C

**Attention:** Paula Sime  
601 North McDowell Blvd.  
Petaluma, CA 94954-2312

*Cecile de Guia*

Approved for release on 09/29/2011 by:  
Cecile deGuia  
Project Manager

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

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Client Project Name: ExxonMobil 99105/022783C

Work Order Number: 11-09-1167

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	1.2 EPA 8015B (M) TPH Gasoline (Aqueous) . . . . .	4
	1.3 EPA 8260B Volatile Organics (Aqueous) . . . . .	5
2	Quality Control Sample Data . . . . .	7
	2.1 MS/MSD and/or Duplicate . . . . .	7
	2.2 LCS/LCSD . . . . .	10
3	Glossary of Terms and Qualifiers . . . . .	14
4	Chain of Custody/Sample Receipt Form . . . . .	15



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

Date Received: 09/17/11  
 Work Order No: 11-09-1167  
 Preparation: EPA 3510C  
 Method: EPA 8015B (M)

Project: ExxonMobil 99105/022783C

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-11-MW2	11-09-1167-1-H	09/14/11 09:30	Aqueous	GC 45	09/21/11	09/22/11 14:32	110921B06

Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	110	50	1	HD,SG	ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	102	68-140	

W-13-MW3	11-09-1167-2-H	09/14/11 10:05	Aqueous	GC 45	09/21/11	09/22/11 14:48	110921B06
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Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	270	50	1	HD,SG	ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	99	68-140	

W-10-MW5	11-09-1167-3-H	09/14/11 10:50	Aqueous	GC 45	09/21/11	09/22/11 15:03	110921B06
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Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	1600	50	1	HD,SG	ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	97	68-140	

Method Blank	099-12-330-2,012	N/A	Aqueous	GC 45	09/21/11	09/21/11 20:39	110921B06
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Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	ND	50	1	U	ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	97	68-140	

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

Return to Contents



**Analytical Report**



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

Date Received: 09/17/11  
 Work Order No: 11-09-1167  
 Preparation: EPA 5030C  
 Method: EPA 8015B (M)

Project: ExxonMobil 99105/022783C

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-11-MW2	11-09-1167-1-D	09/14/11 09:30	Aqueous	GC 29	09/20/11	09/20/11 16:45	110920B01

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

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	92	38-134	

W-13-MW3	11-09-1167-2-D	09/14/11 10:05	Aqueous	GC 29	09/20/11	09/20/11 17:20	110920B01
----------	----------------	----------------	---------	-------	----------	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	1200	50	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	111	38-134	

W-10-MW5	11-09-1167-3-D	09/14/11 10:50	Aqueous	GC 29	09/20/11	09/20/11 17:55	110920B01
----------	----------------	----------------	---------	-------	----------	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	7200	250	5		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	109	38-134	

Method Blank	099-12-436-6,639	N/A	Aqueous	GC 29	09/20/11	09/20/11 12:41	110920B01
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1	U	ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	102	38-134	

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

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**Analytical Report**



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

Date Received: 09/17/11  
Work Order No: 11-09-1167  
Preparation: EPA 5030C  
Method: EPA 8260B  
Units: ug/L

Project: ExxonMobil 99105/022783C

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-11-MW2	11-09-1167-1-A	09/14/11 09:30	Aqueous	GC/MS BB	09/19/11	09/19/11 21:50	110919L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1	U	Diisopropyl Ether (DIPE)	ND	0.50	1	U
Toluene	ND	0.50	1	U	Ethyl-t-Butyl Ether (ETBE)	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	Ethanol	ND	50	1	U
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	U	1,2-Dibromoethane	ND	0.50	1	U
Tert-Butyl Alcohol (TBA)	ND	5.0	1	U	1,2-Dichloroethane	ND	0.50	1	U
<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>	
1,4-Bromofluorobenzene	83	68-120			Dibromofluoromethane	88	80-127		
1,2-Dichloroethane-d4	96	80-128			Toluene-d8	93	80-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-13-MW3	11-09-1167-2-A	09/14/11 10:05	Aqueous	GC/MS BB	09/19/11	09/19/11 22:20	110919L02

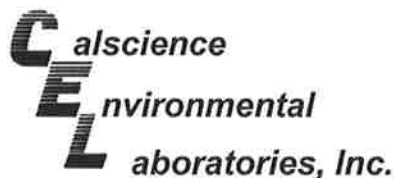
Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	18	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	U
Toluene	0.95	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	U
Ethylbenzene	1.7	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	U
Xylenes (total)	1.3	0.50	1		Ethanol	ND	50	1	U
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	U	1,2-Dibromoethane	ND	0.50	1	U
Tert-Butyl Alcohol (TBA)	ND	5.0	1	U	1,2-Dichloroethane	ND	0.50	1	U
<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>	
1,4-Bromofluorobenzene	101	68-120			Dibromofluoromethane	95	80-127		
1,2-Dichloroethane-d4	106	80-128			Toluene-d8	114	80-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-10-MW5	11-09-1167-3-B	09/14/11 10:50	Aqueous	GC/MS BB	09/20/11	09/21/11 10:59	110920L03

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	23	2.0	4		Diisopropyl Ether (DIPE)	ND	2.0	4	U
Toluene	ND	2.0	4	U	Ethyl-t-Butyl Ether (ETBE)	ND	2.0	4	U
Ethylbenzene	8.6	2.0	4		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	4	U
Xylenes (total)	ND	2.0	4	U	Ethanol	ND	200	4	U
Methyl-t-Butyl Ether (MTBE)	ND	2.0	4	U	1,2-Dibromoethane	ND	2.0	4	U
Tert-Butyl Alcohol (TBA)	25	20	4		1,2-Dichloroethane	ND	2.0	4	U
<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>	
1,4-Bromofluorobenzene	102	68-120			Dibromofluoromethane	100	80-127		
1,2-Dichloroethane-d4	89	80-128			Toluene-d8	114	80-120		

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

Return to Contents



Analytical Report



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

Date Received: 09/17/11  
Work Order No: 11-09-1167  
Preparation: EPA 5030C  
Method: EPA 8260B  
Units: ug/L

Project: ExxonMobil 99105/022783C

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-884-685	N/A	Aqueous	GC/MS BB	09/19/11	09/19/11 17:16	110919L02

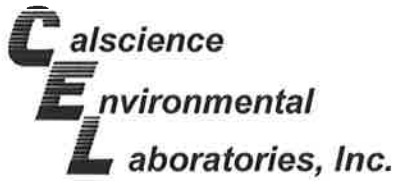
Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1	U	Diisopropyl Ether (DIPE)	ND	0.50	1	U
Toluene	ND	0.50	1	U	Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	U
Ethylbenzene	ND	0.50	1	U	Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	U
Xylenes (total)	ND	0.50	1	U	Ethanol	ND	50	1	U
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	U	1,2-Dibromoethane	ND	0.50	1	U
Tert-Butyl Alcohol (TBA)	ND	5.0	1	U	1,2-Dichloroethane	ND	0.50	1	U
<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>	<b>Qual</b>		<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>	<b>Qual</b>	
1,4-Bromofluorobenzene	83	68-120			Dibromofluoromethane	99	80-127		
1,2-Dichloroethane-d4	99	80-128			Toluene-d8	89	80-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-884-687	N/A	Aqueous	GC/MS BB	09/20/11	09/21/11 02:21	110920L03

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1	U	Diisopropyl Ether (DIPE)	ND	0.50	1	U
Toluene	ND	0.50	1	U	Ethyl-t-Butyl Ether (ETBE)	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	Ethanol	ND	50	1	U
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	U	1,2-Dibromoethane	ND	0.50	1	U
Tert-Butyl Alcohol (TBA)	ND	5.0	1	U	1,2-Dichloroethane	ND	0.50	1	U
<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>	<b>Qual</b>		<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>	<b>Qual</b>	
1,4-Bromofluorobenzene	84	68-120			Dibromofluoromethane	98	80-127		
1,2-Dichloroethane-d4	95	80-128			Toluene-d8	87	80-120		

Return to Contents

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



Quality Control - Spike/Spike Duplicate



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

Date Received: 09/17/11  
Work Order No: 11-09-1167  
Preparation: EPA 5030C  
Method: EPA 8015B (M)

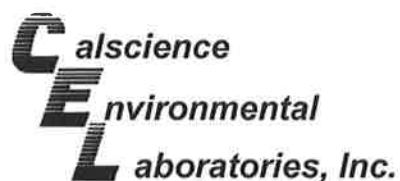
Project ExxonMobil 99105/022783C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
11-09-1148-1	Aqueous	GC 29	09/20/11	09/20/11	110920S01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	2000	108	106	68-122	2	0-18	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit



## Quality Control - Spike/Spike Duplicate



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

Date Received: 09/17/11  
Work Order No: 11-09-1167  
Preparation: EPA 5030C  
Method: EPA 8260B

Project ExxonMobil 99105/022783C

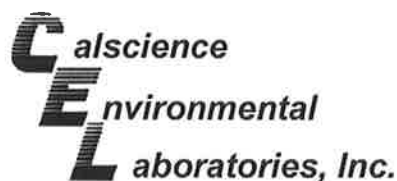
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
11-09-1079-1	Aqueous	GC/MS BB	09/19/11	09/19/11	110919S01

<u>Parameter</u>	<u>SPIKE ADDED</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Benzene	10.00	90	90	76-124	1	0-20	
Toluene	10.00	93	94	80-120	2	0-20	
Ethylbenzene	10.00	91	88	78-126	3	0-20	
Methyl-t-Butyl Ether (MTBE)	10.00	96	93	67-121	3	0-49	
Tert-Butyl Alcohol (TBA)	50.00	90	89	36-162	1	0-30	
Diisopropyl Ether (DIPE)	10.00	97	96	60-138	1	0-45	
Ethyl-t-Butyl Ether (ETBE)	10.00	101	100	69-123	1	0-30	
Tert-Amyl-Methyl Ether (TAME)	10.00	92	91	65-120	0	0-20	
Ethanol	100.0	138	97	30-180	34	0-72	
1,2-Dibromoethane	10.00	88	85	80-120	3	0-20	
1,2-Dichloroethane	10.00	90	90	80-120	0	0-20	

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RPD - Relative Percent Difference , CL - Control Limit

7440 Lincoln Way, Garden Grove, CA 92841-1427 • TEL:(714) 895-5494 • FAX: (714) 894-7501



## Quality Control - Spike/Spike Duplicate



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

Date Received: 09/17/11  
Work Order No: 11-09-1167  
Preparation: EPA 5030C  
Method: EPA 8260B

Project ExxonMobil 99105/022783C

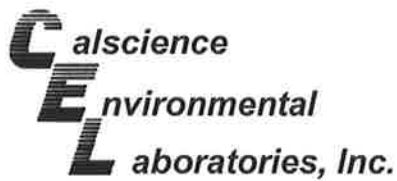
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
11-09-1165-1	Aqueous	GC/MS BB	09/20/11	09/21/11	110920S02

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	10.00	29	23	76-124	1	0-20	HX
Toluene	10.00	1	0	80-120	2	0-20	HX
Ethylbenzene	10.00	8	0	78-126	2	0-20	HX
Methyl-t-Butyl Ether (MTBE)	10.00	87	92	67-121	5	0-49	
Tert-Butyl Alcohol (TBA)	50.00	63	69	36-162	9	0-30	
Diisopropyl Ether (DIPE)	10.00	89	90	60-138	1	0-45	
Ethyl-t-Butyl Ether (ETBE)	10.00	90	94	69-123	4	0-30	
Tert-Amyl-Methyl Ether (TAME)	10.00	83	87	65-120	4	0-20	
Ethanol	100.0	61	70	30-180	14	0-72	
1,2-Dibromoethane	10.00	83	83	80-120	1	0-20	
1,2-Dichloroethane	10.00	113	115	80-120	2	0-20	

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RPD - Relative Percent Difference, CL - Control Limit





Quality Control - LCS/LCS Duplicate



Cardno ERI	Date Received:	N/A
601 North McDowell Blvd.	Work Order No:	11-09-1167
Petaluma, CA 94954-2312	Preparation:	EPA 3510C
	Method:	EPA 8015B (M)

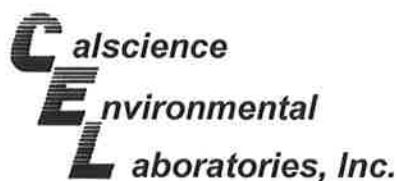
Project: ExxonMobil 99105/022783C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-330-2,012	Aqueous	GC 45	09/21/11	09/21/11	110921B06

<u>Parameter</u>	<u>SPIKE ADDED</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
TPH as Diesel	2000	92	93	75-117	1	0-13	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate



Cardno ERI	Date Received:	N/A
601 North McDowell Blvd.	Work Order No:	11-09-1167
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8015B (M)

Project: ExxonMobil 99105/022783C

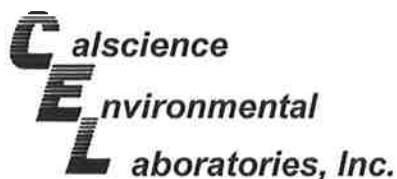
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-436-6,639	Aqueous	GC 29	09/20/11	09/20/11	110920B01

<u>Parameter</u>	<u>SPIKE ADDED</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
TPH as Gasoline	2000	109	108	78-120	0	0-10	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Cardno ERI	Date Received:	N/A
601 North McDowell Blvd.	Work Order No:	11-09-1167
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B

Project: ExxonMobil 99105/022783C

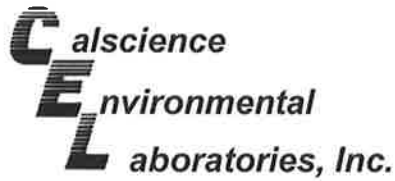
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
<b>099-12-884-685</b>	<b>Aqueous</b>	<b>GC/MS BB</b>	<b>09/19/11</b>	<b>09/19/11</b>	<b>110919L02</b>			
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	10.00	91	88	80-120	73-127	3	0-20	
Toluene	10.00	96	93	80-120	73-127	2	0-20	
Ethylbenzene	10.00	92	86	80-120	73-127	6	0-20	
Methyl-t-Butyl Ether (MTBE)	10.00	92	93	69-123	60-132	0	0-20	
Tert-Butyl Alcohol (TBA)	50.00	87	79	63-123	53-133	9	0-20	
Diisopropyl Ether (DIPE)	10.00	96	93	59-137	46-150	3	0-37	
Ethyl-t-Butyl Ether (ETBE)	10.00	99	98	69-123	60-132	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	10.00	94	92	70-120	62-128	2	0-20	
Ethanol	100.0	93	87	28-160	6-182	6	0-57	
1,2-Dibromoethane	10.00	88	85	79-121	72-128	3	0-20	
1,2-Dichloroethane	10.00	93	93	80-120	73-127	1	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

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Cardno ERI	Date Received:	N/A
601 North McDowell Blvd.	Work Order No:	11-09-1167
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B

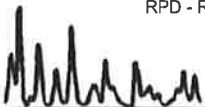
Project: ExxonMobil 99105/022783C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
<b>099-12-884-687</b>	<b>Aqueous</b>	<b>GC/MS BB</b>	<b>09/20/11</b>	<b>09/21/11</b>	<b>110920L03</b>			
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	10.00	91	89	80-120	73-127	3	0-20	
Toluene	10.00	94	92	80-120	73-127	3	0-20	
Ethylbenzene	10.00	97	90	80-120	73-127	7	0-20	
Methyl-t-Butyl Ether (MTBE)	10.00	86	85	69-123	60-132	2	0-20	
Tert-Butyl Alcohol (TBA)	50.00	89	80	63-123	53-133	11	0-20	
Diisopropyl Ether (DIPE)	10.00	90	88	59-137	46-150	3	0-37	
Ethyl-t-Butyl Ether (ETBE)	10.00	91	89	69-123	60-132	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	10.00	86	85	70-120	62-128	1	0-20	
Ethanol	100.0	88	85	28-160	6-182	4	0-57	
1,2-Dibromoethane	10.00	92	86	79-121	72-128	7	0-20	
1,2-Dichloroethane	10.00	94	92	80-120	73-127	3	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



RPD - Relative Percent Difference . CL - Control Limit



Work Order Number: 11-09-1167

<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.
B	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.
DF	Reporting limits elevated due to matrix interferences.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
GE	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to 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.
IL	Relative percent difference out of control.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
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 range.
RV	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
SG	A silica gel cleanup procedure was performed.
SN	See applicable analysis comment.
U	Undetected 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.

**Sandy Tat**

---

**From:** Jake Prowse [jake.prowse@cardno.com]  
**Sent:** Tuesday, September 20, 2011 9:33 AM  
**To:** Sandy Tat  
**Attachments:** 2766\_20110920113048.pdf; 2783\_20110920113143.pdf



Here is the corrected COC's for 10GC8 and 99105

**Jake Prowse**

Staff Geologist

**Cardno ERI**

601 North McDowell Blvd., Petaluma, CA 94954

**Phone:** 707 766 2000 **Direct:** 707 766 2003 **Fax:** 707 789 0414

Email: [jake.prowse@cardno.com](mailto:jake.prowse@cardno.com)

Cardno ERI Web: [www.cardnoeri.com](http://www.cardnoeri.com)

Cardno Web: [www.cardno.com](http://www.cardno.com)

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1167

		<b>&lt; WebShip &gt; &gt; &gt; &gt;</b> <b>800-322-5555 www.gso.com</b>	
<b>Ship From:</b> ALAN KEMP CAL SCIENCE- CONCORD 5063 COMMERCIAL CIRCLE #H CONCORD, CA 94520		<b>Tracking #:</b> 517426442 	<b>SDS</b>
<b>Ship To:</b> SAMPLE RECEIVING CEL 7440 LINCOLN WAY GARDEN GROVE, CA 92841		<b>ORC</b> <span style="float: right;"><b>D</b></span> <b>GARDEN GROVE</b>	
<b>COD:</b> \$0.00		<b>D92843A</b>  94373863	
<b>Reference:</b> ERI		<b>Print Date :</b> 09/16/11 17:35 PM	
<b>Delivery Instructions:</b>		<b>Signature Type:</b> SIGNATURE REQUIRED	

Package 1 of 1

Print All

**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:****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 are not limited to, artwork, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.

WORK ORDER #: **11-09-**

**SAMPLE RECEIPT FORM**

Cooler 1 of 1

CLIENT: Cardno ERI

DATE: 09/17/11

**TEMPERATURE:** Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 2.0 °C + 0.5 °C (CF) = 2.5 °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 Initial: YL

**CUSTODY SEALS INTACT:**

Cooler  \_\_\_\_\_  No (Not Intact)  Not Present  N/A Initial: YL

Sample  \_\_\_\_\_  No (Not Intact)  Not Present Initial: MS

**SAMPLE CONDITION:**

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
pH / Res. Chlorine / Diss. Sulfide / Diss. Oxygen received within 24 hours...	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTAINER TYPE:**

Solid:  4ozCGJ  8ozCGJ  16ozCGJ  Sleeve (\_\_\_\_)  EnCores®  TerraCores®  \_\_\_\_\_

Water:  VOA  VOA<sup>h</sup>  VOAna<sub>2</sub>  125AGB  125AGBh  125AGBp  1AGB  1AGBna<sub>2</sub>  1AGBs

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

250PB  250PBn  125PB  125PBz<sub>2</sub>na  100PJ  100PJna<sub>2</sub>  \_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_

Air:  Tedlar®  Summa® Other:  \_\_\_\_\_ Trip Blank Lot#: \_\_\_\_\_ Labeled/Checked by: MS

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

Preservative: h: HCL n: HNO<sub>3</sub> na<sub>2</sub>:Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> z<sub>2</sub>na: ZnAc<sub>2</sub>\*NaOH f: Field-filtered Scanned by: MS

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## SAMPLE ANOMALY FORM

**SAMPLES - CONTAINERS & LABELS:**

**Comments:**

- Sample(s) NOT RECEIVED but listed on COC
- Sample(s) received but NOT LISTED on COC
- Holding time expired – list sample ID(s) and test
- Insufficient quantities for analysis – list test
- Improper container(s) used – list test
- Improper preservative used – list test
- No preservative noted on COC or label – list test & notify lab
- Sample labels illegible – note test/container type
- Sample label(s) do not match COC – Note in comments
  - Sample ID
  - Date and/or Time Collected
  - Project Information
  - # of Container(s)
  - Analysis
- Sample container(s) compromised – Note in comments
  - Water present in sample container
  - Broken
- Sample container(s) not labeled
- Air sample container(s) compromised – Note in comments
  - Flat
  - Very low in volume
  - Leaking (Not transferred - duplicate bag submitted)
  - Leaking (transferred into Calscience Tedlar® Bag\*)
  - Leaking (transferred into Client's Tedlar® Bag\*)
- Other: \_\_\_\_\_

*(1) to (3) received preserved  
 vials for Methanol Sol.*

**HEADSPACE – Containers with Bubble > 6mm or ¼ inch:**

Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Cont. received	Analysis

**Comments:** \_\_\_\_\_

\*Transferred at Client's request.

Initial / Date:   NS   09/17/11

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**APPENDIX D**  
**WASTE DISPOSAL DOCUMENTATION**

# NON-HAZARDOUS WASTE MANIFEST

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

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No.		Manifest Document No. ERI 11-2783	2. Page 1 of 1
3. Generator's Name and Mailing Address Exxon-Mobil # 99105 6301 San Pablo Ave. Oakland CA		Cardno - ERI			
4. Generator's Phone ( )		6. US EPA ID Number		A. State Transporter's ID	
5. Transporter 1 Company Name Cardno - ERI		8. US EPA ID Number		B. Transporter 1 Phone	
7. Transporter 2 Company Name		10. US EPA ID Number		C. State Transporter's ID	
9. Designated Facility Name and Site Address In Street Inc. 1105 S Airport Rd Rio Vista CA		12. Containers		D. Transporter 2 Phone	
11. WASTE DESCRIPTION		13. Total Quantity		E. State Facility's ID	
a.		No.	Type	F. Facility's Phone (707) 374-3834	
Non HAZARDOUS Purge water		1	Poly	80	gal
b.					
c.					
d.					
G. Additional Descriptions for Materials Listed Above			H. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information					
<p><b>16. GENERATOR'S CERTIFICATION:</b> 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.</p>					
Printed/Typed Name				Date	
Signature				Month	Day Year
17. Transporter 1 Acknowledgement of Receipt of Materials				Date	
Printed/Typed Name Steven Church				Month	Day Year
Signature				10	7 11
18. Transporter 2 Acknowledgement of Receipt of Materials				Date	
Printed/Typed Name				Month	Day Year
Signature					
19. Discrepancy Indication Space					
20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.					
Printed/Typed Name P. M. Koughlin				Date	
Signature				Month	Day Year
				10	7 11

NON-HAZARDOUS WASTE

GENERATOR

TRANSPORTER

FACILITY

