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

Jennifer C. Sedlachek
Project Manager

ExxonMobil

February 28, 2013

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 ***Semi-Annual Groundwater Monitoring Report, First Quarter 2013,*** dated February 28, 2013, 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 ***Semi-Annual Groundwater Monitoring Report, First Quarter 2013,*** dated February 28, 2013

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

w/o attachment
Rebekah A. Westrup, Cardno ERI

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February 28, 2013
Cardno ERI 2783C.Q131

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

SUBJECT **Semi-Annual Groundwater Monitoring Report, First Quarter 2013**
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 first quarter 2013 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

Gauging and sampling date:		01/25/13
Wells gauged and sampled:		MW2, MW3, MW5
Presence of NAPL:		Sheen in well MW5
Laboratory:		Calscience Environmental Laboratories, Inc. Garden Grove, California
Analyses performed:	EPA Method 8015B	TPHd, TPHg
	EPA Method 8260B	BTEX, MTBE, TAME, TBA, DIPE, EDB, 1,2-DCA
Waste disposal:		89 gallons purge and decon water delivered to Instrat, Inc. of Rio Vista, California, on 01/31/13

CONCLUSION

Maximum hydrocarbon concentrations were reported in well MW5 (downgradient of the former dispenser islands). Sheen was observed in well MW5. TPHd (22,000 µg/L) and TPHg (4,900 µg/L) concentrations in well MW5 decreased during the first quarter. Both the TPHd and TPHg results were footnoted by the laboratory as not matching the specified standard. The TPHd and TPHg concentrations likely represent weathered fuels. Benzene was reported at 46 µg/L in well MW5. The benzene concentration in well MW5 increased from the previous quarter. Reported concentrations in wells MW2 and MW3 show stable or declining trends.

The groundwater flow direction was towards the west and well MW3 with a hydraulic gradient of 0.16 during the first quarter.

RECOMMENDATIONS

Cardno ERI recommends evaluating remedial alternatives and continuing semi-annual monitoring and sampling.

WORK IN PROGRESS

Cardno ERI submitted the October 25, 2012, *Site Conceptual Model Update, Low-Threat Closure Evaluation, and Feasibility Study/Corrective Action Plan*, proposing the installation of an additional well and performing remedial activities at the site. Cardno ER has not received a response from the Alameda County Health Care Services Agency to date.

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. Rebekah A. Westrup, Cardno ERI's project manager for this site, at rebekah.westrup@cardno.com or at (707) 766-2000 with any questions regarding this report.

Sincerely,

SCANNED IMAGE

SCANNED IMAGE

PROFESSIONAL GEOLOGIST
DAVID RICHARD DANIELS
No. 8737
EXP. 7/31/13
STATE OF CALIFORNIA

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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

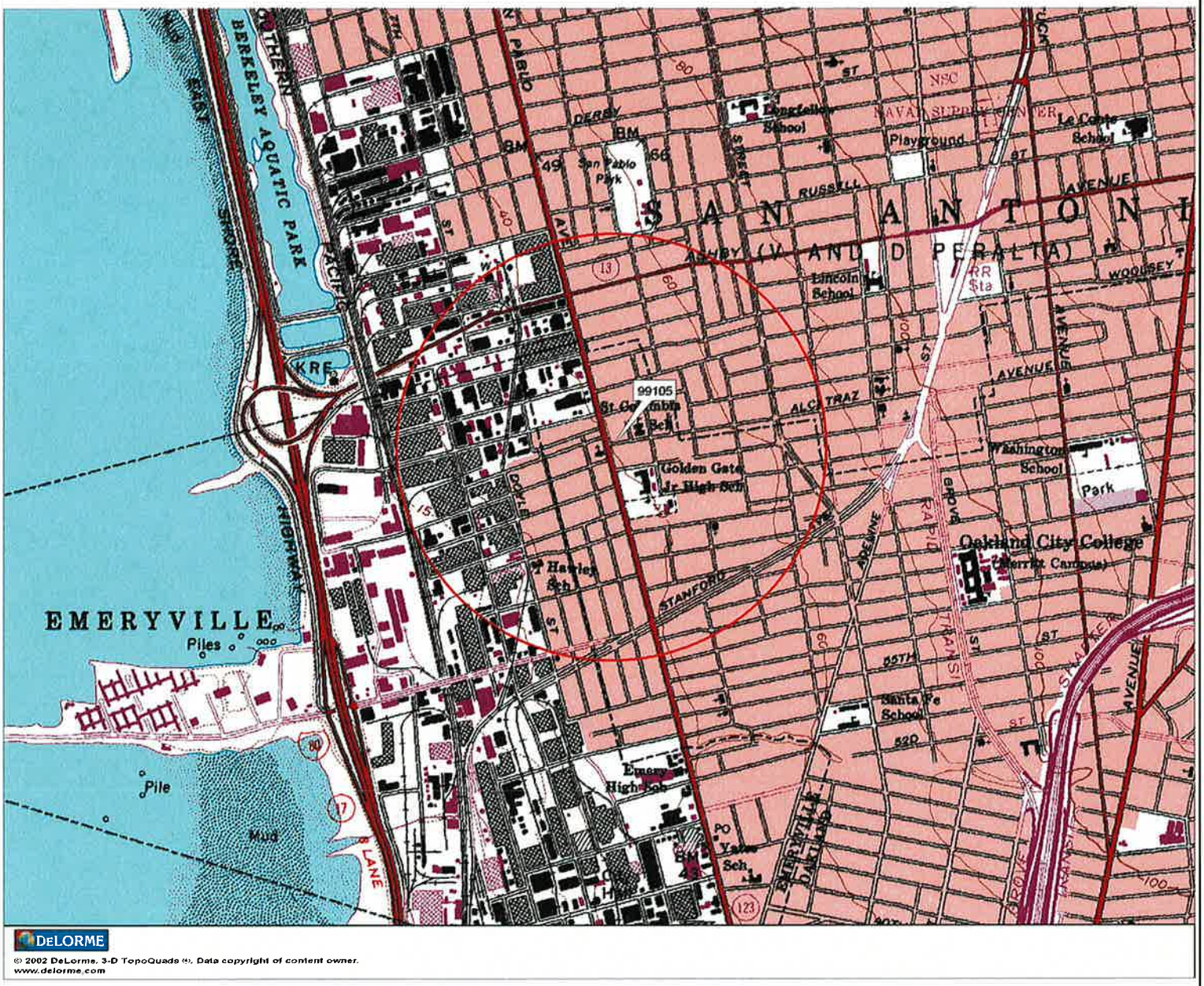
cc: Barbara Jakub, Alameda County Health Care Services Agency, 1131 Harbor Bay Parkway, 2nd Floor, Alameda, California, 94502

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

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

ACRONYM LIST

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



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EXPLANATION

1/2-mile radius circle

N

APPROXIMATE SCALE

0 0.5 1 mile

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

Cardno ERI
Shaping the Future

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 January 25, 2013

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

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

APPROXIMATE SCALE

0 30 60 Feet

FN 2783 13 1QTR QM

Cardno ERI
Shaping the Future

SELECT ANALTYICAL RESULTS
January 25, 2013

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

EXPLANATION

MW5 Groundwater Monitoring Well

MW4 Destroyed Groundwater Monitoring Well

MP6 Destroyed Observation Well

PROJECT NO. 2783

PLATE 2

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APPROXIMATE SCALE

0 30 60 Feet

FN 2783 13 1QTR QM

Cardno ERI
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GROUNDWATER ELEVATION MAP
January 25, 2013
FORMER MOBIL SERVICE STATION 99105
6301 San Pablo Avenue
Oakland, California

EXPLANATION

- MW5 — Groundwater Monitoring Well
- 35.85 — Groundwater elevation in feet; datum is mean sea level
- MP6 — Destroyed Observation Well
- MW4 — Destroyed Groundwater Monitoring Well
- 36.5 ----- Line of Equal Groundwater Elevation; datum is mean sea level

PROJECT NO. 2783

PLATE 3

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

Well ID	Sampling Date		TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8020/8021 (µg/L)	MTBE 8240/8260 (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
Environmental Screening Levels (May 2008)														
Groundwater is a current drinking water source (Table F-1a)							100	100	5.0	5.0	1.0	40	30	20
MW1	03/14/96		32.79	4.50	28.29	No	**450**	**610**	---	---	0.75	0.54	1.5	**59**
MW1	05/21/96		32.79	5.64	27.15	No	ND	ND	---	---	ND	ND	ND	ND
MW1	08/13/96		32.79	9.76	23.03	No	ND	ND	---	---	ND	ND	ND	ND
MW1	11/08/96		32.79	10.24	22.55	No	ND	ND	ND	---	ND	0.92	ND	2.1
MW1	01/31/97		32.79	3.83	28.96	No	ND	ND	2.6	ND	ND	0.85	ND	ND
MW1	04/22/97		32.79	9.14	23.65	No	ND	ND	ND	---	ND	ND	ND	ND
MW1	07/29/97	a	32.79	10.18	22.61	No	60e	ND	**36**	---	0.84	0.95	ND	1.6
MW1	10/09/97	a	32.79	10.46	22.33	No	56e	ND	ND	---	ND	ND	ND	ND
MW1	01/23/98	a	32.79	3.95	28.84	No	33	ND	ND	---	ND	ND	ND	ND
MW1	04/22/98		32.79	5.33	27.46	No	ND	ND	ND	---	ND	ND	ND	ND
MW1	07/21/98		32.79	9.17	23.62	No	---	ND	ND	---	ND	ND	ND	ND
MW1	10/20/98		32.79	10.41	22.38	No	---	ND	ND	---	ND	ND	ND	ND
MW1	01/27/99		32.79	5.51	27.28	No	---	ND	ND	---	ND	ND	ND	ND
MW1	Apr-99		Destroyed during construction activities.											
MW2	03/14/96		32.80	4.51	28.29	No	**250**	**560**	---	---	**2.0**	0.96	4.3	11
MW2	05/21/96		32.80	5.65	27.15	No	**560**	**730**	---	---	**5.1**	1.4	6.7	5.9
MW2	08/13/96		32.80	10.14	22.66	No	**380b**	**490**	---	---	**25**	3.5	7.2	13
MW2	11/08/96		32.80	10.70	22.10	No	**160d**	**520**	**6.1**	---	**80**	2.7	14	**66**
MW2	01/31/97		32.80	3.84	28.96	No	**130b**	74	ND	---	ND	ND	ND	ND
MW2	04/22/97		32.80	9.61	23.19	No	**430**	**260**	ND	---	**2.7**	ND	2.5	ND
MW2	07/29/97	a	32.80	10.53	22.27	No	**150d**	**320**	ND	---	**28**	1.2	10	ND
MW2	10/09/97	a	32.80	10.87	21.93	No	**160b**	**460**	2.6	---	**43**	2.8	2.0	2.6
MW2	01/23/98	a	32.80	3.75	29.05	No	54	ND	ND	---	ND	ND	ND	ND
MW2	04/22/98		32.80	5.36	27.44	No	**540**	**180**	ND	---	**1.2**	0.3	0.4	ND
MW2	07/21/98		32.80	9.55	23.25	No	---	80	ND	---	**8.9**	2.1	0.6	2.5
MW2	10/20/98		32.80	10.75	22.05	No	---	50	ND	---	0.8	0.7	ND	0.8
MW2	01/27/99		32.80	5.53	27.27	No	---	ND	ND	---	0.6	ND	ND	ND
MW2	07/27/99		32.80	6.20	26.60	No	---	ND	ND	---	ND	0.6	ND	ND
MW2	12/08/99		32.80	9.98	22.82	No	---	ND	ND	---	**1.2**	0.43	ND	ND
MW2	10/25/00		39.34	11.30	28.04	No	---	<20	<0.30	---	**2.0**	0.59	0.46	1.3
MW2	01/15/01		39.34	9.41	29.93	No	---	<20	<0.30	---	<0.20	0.46	<0.20	<0.60
MW2	04/10/01		39.34	6.16	33.18	No	---	23	<1.0	---	0.28	<0.20	<0.20	<0.60
MW2	07/24/01		39.34	10.70	28.64	No	---	<50	<0.30	---	<0.20	0.93	<0.20	0.82
MW2	11/27/01		39.34	10.15	29.19	No	---	<50	<0.30	---	**1.2**	0.22	<0.20	<0.60
MW2	01/18/02		41.99	5.46	36.53	No	---	<50.0	1.40	---	<0.50	<0.50	<0.50	<0.50
MW2	04/10/02		41.99	6.48	35.51	No	---	<50.0	1.80	---	<0.50	<0.50	<0.50	<0.50
MW2	07/12/02		41.99	10.45	31.54	No	---	<50.0	<0.50	---	<0.50	<0.50	<0.50	<0.50
MW2	10/14/02		41.99	11.46	30.53	No	---	<50.0	<0.5	---	<0.5	4.1	0.6	4.0
MW2	01/20/03		41.99	5.39	36.60	No	---	<50.0	0.6	---	<0.50	<0.50	<0.50	<0.50
MW2	04/28/03		41.99	5.87	36.12	No	---	<50.0	<0.50	---	<0.50	<0.50	<0.50	<0.50

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

Well ID	Sampling Date		TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8020/8021 (µg/L)	MTBE 8240/8260 (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
Environmental Screening Levels (May 2008)														
Groundwater is a current drinking water source (Table F-1a)							100	100	5.0	5.0	1.0	40	30	20
MW2	07/15/03		41.99	10.31	31.68	No	---	<50	<0.5	---	<0.5	<0.5	<0.5	<0.5
MW2	10/08/03		41.99	11.20	30.79	No	---	<50	<0.5	---	<0.5	<0.5	<0.5	<0.5
MW2	01/15/04		41.99	5.36	36.63	No	---	63.3	1.0	---	0.70	<0.5	<0.5	<0.5
MW2	Well not sampled from 2004 to 2010.													
MW2	09/17/10		41.99	10.72	31.27	No	<50	<50	---	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	12/15/10		42.24	Well resurveyed.										
MW2	09/14/11		42.24	10.02	32.22	No	**110g**	<50	---	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	01/18/12		42.24	11.24	31.00	No	---	<50	---	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	01/27/12		42.24	9.65	32.59	No	<50	---	---	---	---	---	---	---
MW2	07/09/12		42.24	10.07	32.17	No	<50	<50	---	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	01/25/13		42.24	5.62	36.62	No	<50	<50	---	<0.50	<0.50	<0.50	<0.50	<0.50
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**
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

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

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8020/8021 (µg/L)	MTBE 8240/8260 (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
Environmental Screening Levels (May 2008)													
Groundwater is a current drinking water source (Table F-1a)						100	100	5.0	5.0	1.0	40	30	20
MW3	Well not sampled from 2004 to 2010.												
MW3	09/17/10	41.71	11.46	30.25	No	99	**2,500**	---	<0.50	**2.6**	0.31f	1.8	1.8
MW3	12/15/10	42.18	Well resurveyed.										
MW3	09/14/11	42.18	11.37	30.81	No	**270g**	**1,200**	---	<0.50	**18**	0.95	1.7	1.3
MW3	01/18/12	42.18	12.11	30.07	No	---	**910g**	---	<0.50	0.89	<0.50	<0.50	0.88
MW3	01/27/12	42.18	10.18	32.00	No	**1,000g**	---	---	---	---	---	---	---
MW3	07/09/12	42.18	11.15	31.03	No	**420g**	**350g**	---	<0.50	**7.9**	<0.50	<0.50	<0.50
MW3	01/25/13	42.18	9.41	32.77	No	**120g**	**390g**	---	<0.50	**2.8**	<0.50	<0.50	<0.50
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**
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.										

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

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8020/8021 (µg/L)	MTBE 8240/8260 (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
Environmental Screening Levels (May 2008)													
Groundwater is a current drinking water source (Table F-1a)						100	100	5.0	5.0	1.0	40	30	20
MW5	09/14/11	41.86	7.33	34.53	No	**1,600g**	**7,200**	---	<2.0	**23**	<2.0	8.6	<2.0
MW5	01/18/12	41.86	9.46	32.40	No	---	**3,600g**	---	<1.0	**14**	<1.0	7.6	<1.0
MW5	01/27/12	41.86	8.81	33.05	No	**3,100g**	---	---	---	---	---	---	---
MW5	07/09/12	41.86	8.91	32.95	No	**29,000g**	**9,300g**	---	<2.5	**21**	<2.5	6.9	<2.5
MW5	01/25/13	41.86	6.01	35.85	Sheen	**22,000g**	**4,900g**	---	<2.0	**46**	<2.0	4.5	<2.0
Grab Groundwater Samples													
Former Gasoline Tank Cavity													
TW1	01/04/96	---	6.00	---	No	**700**	ND	---	---	ND	ND	ND	ND
Used-Oil Tank Cavity													
WW1	01/04/96	---	3.00	---	No	---	ND	---	---	ND	ND	ND	ND
AB1	03/05/98	---	4.5	---	No	---	**1,600**	ND	---	**31**	5.3	**79**	**130**
AB2	03/05/98	---	8.0	---	No	---	ND	ND	---	ND	2.9	0.9	5.7
AB3	03/05/98	---	5.5	---	No	---	**6,800**	**230**	---	**680**	100	**1,500**	**2,300**
AB4	03/05/98	---	4.0	---	No	---	**8,500**	ND	---	**240**	ND	**260**	**720**
AB6	03/05/98	---	4.5	---	No	---	**12,000**	ND	---	**350**	ND	**310**	**100**
AB9	03/05/98	---	6.0	---	No	---	**1,000**	ND	---	**57**	12	**44**	**93**
AB10	03/05/98	---	2.0	---	No	---	**200**	ND	---	**3.0**	1.2	3.2	2.8
AB11	03/05/98	---	8.5	---	No	---	ND	ND	---	ND	ND	ND	ND
AB12	03/05/98	---	6.0	---	No	---	**8,800**	**37**	---	**660**	50	**630**	940
AB13	03/05/98	---	8.0	---	No	---	**210**	ND	---	**11**	0.8	10	15
HA1	01/25/00	---	---	---	---	---	**<500**	**<5.0**	---	<0.3	<0.3	<0.3	<0.6
B1	11/18/10	---	Dry	---	---	---	---	---	---	---	---	---	---
B2	11/19/10	---	Dry	---	---	---	---	---	---	---	---	---	---
B3	11/19/10	---	8.45	---	---	<50	<50	---	<0.50	<0.50	<0.50	0.053f	0.21f
B4	11/19/10	---	Dry	---	---	---	---	---	---	---	---	---	---
B5	11/18/10	---	8.95	---	---	<50	<50	---	<0.50	<0.50	<0.50	0.047f	0.21f
W-15-B6	06/19/12	---	15	---	---	<50	<50	---	<0.50	<0.50	<0.50	<0.50	<0.50
W-15-B7	06/19/12	---	15	---	---	<50	<50	---	<0.50	<0.50	<0.50	<0.50	<0.50
W-9.5-B8	06/19/12	---	9.5	---	---	**230g**	<50	---	<0.50	<0.50	<0.50	<0.50	<0.50

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

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	=	Chromatographic pattern does not match that of the specified standard.

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

Well ID	Sampling Date	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Ethanol (µg/L)
Environmental Screening Levels (May 2008)								
Groundwater is a current drinking water source (Table F-1a)		---	---	---	12	0.50	0.05	---
MW1	03/14/96 - 01/27/99	Not analyzed for these analytes						
MW1	Apr-99	Destroyed during construction activities.						
MW2	03/14/96 - 01/15/04	Not analyzed for these analytes						
MW2	09/17/10	<0.50	<0.50	<0.50	<10	<0.50	**<0.50**	---
MW2	09/14/11	<0.50	<0.50	<0.50	<5.0	<0.50	**<0.50**	<50
MW2	01/18/12	<0.50	<0.50	<0.50	<5.0	<0.50	**<0.50**	<50
MW2	01/27/12	---	---	---	---	---	---	---
MW2	07/09/12	<0.50	<0.50	<0.50	<5.0	<0.50	**<0.50**	---
MW2	01/25/13	<0.50	<0.50	<0.50	<5.0	<0.50	**<0.50**	---
MW3	03/14/96 - 01/15/04	Not analyzed for these analytes						
MW3	09/17/10	0.17f	<0.50	<0.50	9.8f	**1.9**	**<0.50**	---
MW3	09/14/11	<0.50	<0.50	<0.50	<5.0	<0.50	**<0.50**	<50
MW3	01/18/12	<0.50	<0.50	<0.50	**23**	<0.50	**<0.50**	<50
MW3	01/27/12	---	---	---	---	---	---	---
MW3	07/09/12	<0.50	<0.50	<0.50	9.1	**1.1**	**<0.50**	---
MW3	01/25/13	<0.50	<0.50	<0.50	9.6	**1.1**	**<0.50**	---
MW4	03/14/96 - 01/27/99	Not analyzed for these analytes						
MW4	Apr-99	Destroyed during construction activities.						
MW5	10/25/00 - 01/15/04	Not analyzed for these analytes						
MW5	09/17/10	<5.0	<5.0	<5.0	**<100**	**<5.0**	**<5.0**	---
MW5	09/14/11	<2.0	<2.0	<2.0	**25**	**<2.0**	**<2.0**	<200
MW5	01/18/12	<1.0	<1.0	<1.0	**37**	**<1.0**	**<1.0**	<100
MW5	01/27/12	---	---	---	---	---	---	---
MW5	07/09/12	<2.5	<2.5	<2.5	**36**	**<2.5**	**<2.5**	---
MW5	01/25/13	<2.0	<2.0	<2.0	**45**	**<2.0**	**<2.0**	---
Grab Groundwater Samples								
Not analyzed for these analytes prior to 2010.								
B1	11/18/10	---	---	---	---	---	---	---
B3	11/19/10	---	---	---	---	**8.7**	---	---
B4	11/19/10	---	---	---	---	---	---	---
B5	11/18/10	---	---	---	---	0.099f	---	---
W-15-B6	06/19/12	<0.50	<0.50	<0.50	<5.0	---	---	---
W-15-B7	06/19/12	<0.50	<0.50	<0.50	<5.0	---	---	---
W-9.5-B8	06/19/12	<0.50	<0.50	<0.50	<5.0	---	---	---

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

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	=	Chromatographic pattern does not match that of the specified standard.

TABLE 2
WELL CONSTRUCTION DETAILS
Former Mobil Service Station 99105
6301 San Pablo Avenue
Oakland, California

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

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

APPENDIX A

GROUNDWATER SAMPLING PROTOCOL

GROUNDWATER SAMPLING PROTOCOL

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

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

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

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

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

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

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

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

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

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

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

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

APPENDIX B

FIELD NOTES

Daily Field Report

Cardno ERI

Cardno ERI
Shaping the Future

Project ID #: 2783				**Cardno ERI Job # 99105**	
Subject:	**M&S**			**Date:**	**01/25/13**
Equipment Used:	**Sub.Pump, PH/Cond. Meter, DTW tape**			**Sheet:**	1 of 1
Name(s):	**Azat R. Magdanov**				
Time Arrived On Site:	**4:15**	**Time Departed Site:**	**8:45**	**Total Travel**	**1.75**

04:15	Arrived on site, set up exclusion zone.
04:15-04:30	Conducted H&S meeting.
04:30-04:45	Opened wells.
04:45-05:30	Setup Decon station, let the wells to equalizwe. (No water on site).
05:30-05:45	DTW wells.
05:55-06:56	Purged: MW2, MW3, MW5.
07:40-08:20	Sampled: MW2,MW3, MW5.
08:45	Off site.

* QCBB was collected on site.

TOTAL PURGED GALLONS: _59_

TOTAL DECON GALLONS: _30_

TOTAL WATER GALLONS: _89_

ERI Groundwater M+S
Depth To Water

Case Volume= $H(r^2 x 0.163)$

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

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

Project	Location	Date	Name
2783	99105	01/25/13	Azam R. Magdanov

WELL ID	WELL DIAMETER	ODOR? SHEEN?	TOTAL DEPTH	Pre-Purge DTW	Depth To PRODUCT	PRODUCT THICKNESS	COMMENTS
MW2	4"		18.59	5.62			
MW3	4"	Odor.	18.18	9.41			Double checked DTW - 9.41
MW5	4"	Sheen/ Odor.	19.94	6.01			

WATER SAMPLING SITE STATUS

Date: 01/25/2013

Inspected by: Azat R. Magdanov

Cardno ERI Job No.: 2783 Station No.: 99105 Site Address: 6301 San Pablo Ave., Oakland, CA

Well ID	Well Head Screws	Rubber Gasket	Well Cap Locking	Lock on Well Cap	Concrete Well Seal	Well Head PVC	Water in Well Vault	Tabs	Well Cover	Fence/Gate Condition	# Drums	Drum Contents	Building Condition	Site Appearance	Comments / Well Covers
	N/R/ok	N/R/ok	N/R/ok	N/R/ok	N/R/ok	N/R/ok	Y / N	N/R/ok	N/R/ok	N/R/ok		s/w/e	g/v/o	N/R/ok	
MW2	NA	OK	OK	OK	OK	OK	N	NA	OK	NA	NA	NA	OK	OK	
MW3	NA	OK	OK	OK	OK	OK	N	NA	OK	NA	NA	NA	OK	OK	
MW5	OK	OK	N	N	OK	OK	Y	OK	OK	NA	NA	NA	OK	OK	

N = Not repairable in time available-see comments.
R = Repaired-see comments
ok = No action needed.

Y = Yes.
N = No.

s = Soil.
w = Water.
e = Empty.

g = Graffitti on walls.
v = Vagrants (or evidence of).
o = Open (not secured).

Depth to Water Data	1st		2013			TD - DTW X Conversion Factor = Case Volume			
ERI #	2783	PM:	Rebekah Westrup			2" WELL x 0.163			
Site #	99105	Date:	1/25/13			4" WELL x 0.652			
Address:	6301 San Pablo Ave., Oakland					6" WELL x 1.467			
Tech:	Azat R. Magdanov					r (squared) x 0.163			
DTW Time			Recharge formula:						
Start:	5:30		Step 1▶	Calc 80% in feet▶		TD - PreDTW x .80 (ft) =			
Finish:	5:45		Step 2▶	Calc PostDTW (ft)▶		TD - PostDTW (ft) =			
WELL ID	**TD**	**PreDTW**	**CASE D**	**CASE V**	**PostDTW**	**Rechrg 80%**	**Sample Time**	**Date**	**Prd Thick**
MW2	18.59	5.62	4	8.45644	5.65	99.77	7:40	01/25/213	
MW3	18.18	9.41	4	5.71804	13.65	51.65	8:00	01/25/213	Does not recover to 80%
MW5	19.94	6.01	4	9.08236	16.73	23.04	8:20	01/25/213	Does not recover to 80%

GROUNDWATER MONITORING - FIELD LOG

Client: Exxon Mobil **1st** **2013** **PM: R. Westrup**

SITE LOCATION: 99105

FIELD CREW: Azat R. Magdanov **ERI # 2783**

DATE: 1/25/13 **PURGE VOLUME:** 59

		PRG			
WELL #	**TIME**	**VOL**	**TEMP**	**COND**	**pH**
MW2	5:55	8.46	°C	uS	
	5:59	9	12.5	343	6.39
	6:04	18	13.2	313	6.23
		27			
Total Purge		24			

COMMENTS: Dry @ 24 gal.

		PRG			
WELL #	**TIME**	**VOL**	**TEMP**	**COND**	**pH**
MW3	6:24	5.72	°C	uS	
	6:28	6	13.7	978	6.63
	6:32	12	14.3	897	6.63
		18			
Total Purge		14			

COMMENTS: Dry @ 14 gal.

		PRG			
WELL #	**TIME**	**VOL**	**TEMP**	**COND**	**pH**
MW5	6:46	9.08	°C	uS	
	6:51	10	13.7	793	6.69
	6:56	20	14.4	812	6.55
		30			
Total Purge		21			

COMMENTS: Dry @ 21 gal.

APPENDIX C

LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY RECORD

Calscience Environmental Laboratories, Inc.

CALSCIENCE

WORK ORDER NUMBER: 13-01-1609

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

RECEIVED
FEB 11 2013
BY:_____

Analytical Report For

Client: Cardno ERI

Client Project Name: ExxonMobil 99105/022783C

Attention: Rebekah Westrup
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Cecile deGuia

Approved for release on 02/7/2013 by:
Cecile deGuia
Project Manager

ResultLink ▸

Email your PM ▸

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

Calscience Environmental Laboratories, Inc.

Contents

Client Project Name: ExxonMobil 99105/022783C
Work Order Number: 13-01-1609

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Cardno ERI		Date Received:	01/29/13
601 North McDowell Blvd.		Work Order No:	13-01-1609
Petaluma, CA 94954-2312		Preparation:	EPA 3510C
		Method:	EPA 8015B (M)

Project: ExxonMobil 99105/022783C

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-6-MW2	**13-01-1609-2-G**	**01/25/13 07:40**	**Aqueous**	**GC 46**	**01/30/13**	**01/31/13 18:32**	**130130B09**

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

Surrogates:	REC (%)	Control Limits	Qual
n-Octacosane	86	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-14-MW3	**13-01-1609-3-G**	**01/25/13 08:00**	**Aqueous**	**GC 46**	**01/30/13**	**01/31/13 18:49**	**130130B09**

Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	120	50	1	SG,HD	ug/L

Surrogates:	REC (%)	Control Limits	Qual
n-Octacosane	83	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-17-MW5	**13-01-1609-4-G**	**01/25/13 08:20**	**Aqueous**	**GC 46**	**01/30/13**	**02/01/13 10:34**	**130130B09**

Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	22000	500	10	SG,HD	ug/L

Surrogates:	REC (%)	Control Limits	Qual
n-Octacosane	90	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-304-234**	**N/A**	**Aqueous**	**GC 46**	**01/30/13**	**01/31/13 16:12**	**130130B09**

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

Surrogates:	REC (%)	Control Limits	Qual
n-Octacosane	79	68-140	

Return to Contents

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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Cardno ERI		Date Received:	01/29/13
601 North McDowell Blvd.		Work Order No:	13-01-1609
Petaluma, CA 94954-2312		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)

Project: ExxonMobil 99105/022783C

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-6-MW2	**13-01-1609-2-E**	**01/25/13 07:40**	**Aqueous**	**GC 42**	**01/29/13**	**01/29/13 22:12**	**130129B02**

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

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	79	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-14-MW3	**13-01-1609-3-E**	**01/25/13 08:00**	**Aqueous**	**GC 42**	**01/29/13**	**01/29/13 22:46**	**130129B02**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	390	50	1	HD	ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	101	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-17-MW5	**13-01-1609-4-E**	**01/25/13 08:20**	**Aqueous**	**GC 42**	**01/29/13**	**01/29/13 23:22**	**130129B02**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	4900	250	5	HD	ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	103	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-436-8,244**	**N/A**	**Aqueous**	**GC 42**	**01/29/13**	**01/29/13 12:54**	**130129B02**

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

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	76	38-134	

Return to Contents

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Cardno ERI		Date Received:	01/29/13
601 North McDowell Blvd.		Work Order No:	13-01-1609
Petaluma, CA 94954-2312		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L

Project: ExxonMobil 99105/022783C

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-6-MW2	**13-01-1609-2-A**	**01/25/13 07:40**	**Aqueous**	**GC/MS L**	**01/29/13**	**01/30/13 00:57**	**130129L02**

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	1,2-Dibromoethane	ND	0.50	1	U
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	U	1,2-Dichloroethane	ND	0.50	1	U
Tert-Butyl Alcohol (TBA)	ND	5.0	1	U					

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	93	68-120		Dibromofluoromethane	102	80-127	
1,2-Dichloroethane-d4	106	80-128		Toluene-d8	98	80-120	

W-14-MW3	13-01-1609-3-A	01/25/13 08:00	Aqueous	GC/MS L	01/29/13	01/30/13 01:25	130129L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	2.8	0.50	1		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	1,2-Dibromoethane	ND	0.50	1	U
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	U	1,2-Dichloroethane	1.1	0.50	1	
Tert-Butyl Alcohol (TBA)	9.6	5.0	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	100	68-120		Dibromofluoromethane	103	80-127	
1,2-Dichloroethane-d4	107	80-128		Toluene-d8	100	80-120	

W-17-MW5	13-01-1609-4-A	01/25/13 08:20	Aqueous	GC/MS L	01/29/13	01/30/13 01:54	130129L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	46	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	4.5	2.0	4		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	4	U
Xylenes (total)	ND	2.0	4	U	1,2-Dibromoethane	ND	2.0	4	U
Methyl-t-Butyl Ether (MTBE)	ND	2.0	4	U	1,2-Dichloroethane	ND	2.0	4	U
Tert-Butyl Alcohol (TBA)	45	20	4						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	94	68-120		Dibromofluoromethane	97	80-127	
1,2-Dichloroethane-d4	98	80-128		Toluene-d8	100	80-120	

Return to Contents

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Cardno ERI		Date Received:	01/29/13
601 North McDowell Blvd.		Work Order No:	13-01-1609
Petaluma, CA 94954-2312		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L

Project: ExxonMobil 99105/022783C

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-884-983**	**N/A**	**Aqueous**	**GC/MS L**	**01/29/13**	**01/30/13 00:28**	**130129L02**

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	1,2-Dibromoethane	ND	0.50	1	U
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	U	1,2-Dichloroethane	ND	0.50	1	U
Tert-Butyl Alcohol (TBA)	ND	5.0	1	U					

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	95	68-120		Dibromofluoromethane	103	80-127	
1,2-Dichloroethane-d4	106	80-128		Toluene-d8	97	80-120	

Return to Contents

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

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

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Cardno ERI		Date Received:	01/29/13
601 North McDowell Blvd.		Work Order No:	13-01-1609
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	MS/MSD Batch Number
13-01-1486-2	**Aqueous**	**GC 42**	**01/29/13**	**01/29/13**	**130129S01**

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	ND	2000	2095	105	1855	93	68-122	12	0-18	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Cardno ERI		Date Received:	01/29/13
601 North McDowell Blvd.		Work Order No:	13-01-1609
Petaluma, CA 94954-2312		Preparation:	EPA 5030C
		Method:	EPA 8260B

Project ExxonMobil 99105/022783C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
13-01-1584-1	Aqueous	GC/MS L	01/29/13	01/29/13	130129S01

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	ND	10.00	9.882	99	10.46	105	77-121	6	0-21	
Toluene	ND	10.00	9.374	94	9.907	99	78-120	6	0-25	
Ethylbenzene	ND	10.00	9.831	98	10.42	104	78-120	6	0-23	
Xylenes (total)	ND	30.00	29.79	99	31.51	105	74-122	6	0-23	
Methyl-t-Butyl Ether (MTBE)	ND	10.00	8.480	85	8.605	86	57-144	1	0-31	
Tert-Butyl Alcohol (TBA)	ND	50.00	57.14	114	52.56	105	43-170	8	0-38	
Diisopropyl Ether (DIPE)	ND	10.00	8.798	88	10.45	105	70-130	17	0-35	
Ethyl-t-Butyl Ether (ETBE)	ND	10.00	9.548	95	9.723	97	70-130	2	0-35	
Tert-Amyl-Methyl Ether (TAME)	ND	10.00	9.295	93	9.789	98	70-130	5	0-35	
1,2-Dibromoethane	ND	10.00	9.084	91	9.904	99	74-130	9	0-22	
1,2-Dichloroethane	ND	10.00	9.498	95	9.838	98	72-130	4	0-25	

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RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Cardno ERI		Date Received:	N/A
601 North McDowell Blvd.		Work Order No:	13-01-1609
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
099-15-304-234	**Aqueous**	**GC 46**	**01/30/13**	**01/31/13**	**130130B09**

Parameter	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Diesel	2000	1922	96	1897	95	75-117	1	0-13	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Cardno ERI		Date Received:	N/A
601 North McDowell Blvd.		Work Order No:	13-01-1609
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
099-12-436-8,244	**Aqueous**	**GC 42**	**01/29/13**	**01/29/13**	**130129B02**

Parameter	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	2000	2151	108	2110	106	78-120	2	0-10	

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RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Cardno ERI		Date Received:	N/A
601 North McDowell Blvd.		Work Order No:	13-01-1609
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
099-12-884-983	Aqueous	GC/MS L	01/29/13	01/29/13	130129L02

Parameter	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	10.00	10.21	102	9.932	99	80-120	73-127	3	0-20	
Toluene	10.00	9.745	97	10.12	101	80-120	73-127	4	0-20	
Ethylbenzene	10.00	10.08	101	10.21	102	80-120	73-127	1	0-20	
Xylenes (total)	30.00	30.21	101	30.78	103	75-125	67-133	2	0-25	
Methyl-t-Butyl Ether (MTBE)	10.00	9.454	95	9.729	97	69-123	60-132	3	0-20	
Tert-Butyl Alcohol (TBA)	50.00	47.08	94	48.57	97	63-123	53-133	3	0-20	
Diisopropyl Ether (DIPE)	10.00	9.361	94	9.997	100	59-137	46-150	7	0-37	
Ethyl-t-Butyl Ether (ETBE)	10.00	9.913	99	10.12	101	69-123	60-132	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	10.00	10.70	107	10.24	102	70-120	62-128	4	0-20	
1,2-Dibromoethane	10.00	10.30	103	10.21	102	79-121	72-128	1	0-20	
1,2-Dichloroethane	10.00	10.30	103	10.04	100	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

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 13-01-1609

Qualifier	Definition
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.
HO	High concentration matrix spike recovery out of limits
HT	Analytical value calculated using results from associated tests.
HX	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS 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.
LP	The LCS and/or LCSD recoveries for this analyte were above the upper control limit. The associated sample was non-detected. Therefore, the sample data was reported without further clarification.
LQ	LCS recovery above method control limits.
LR	LCS recovery below method control limits.
ND	Parameter not detected at the indicated reporting limit.
QO	Compound did not meet method-described identification guidelines. Identification was based on additional GC/MS characteristics.
RU	LCS/LCSD Recovery Percentage is within Marginal Exceedance (ME) Control Limit range.
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.
MPN - Most Probable Number

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Sandy Tat

From: David R. Daniels [david.daniels@cardno.com]
Sent: Tuesday, January 29, 2013 5:07 PM
To: Sandy Tat; Lisa Corderman
Cc: azat magdanov
Subject: RE: ExxonMobil 99105/022783C (13-01-1609)
Attachments: 13-01-1609 Revised.pdf

Sandy,

I revised the COC.

David R. Daniels, PG 8737
PROJECT GEOLOGIST
CARDNO ERI

Phone (+1) 707-766-2000 Fax (+1) 707-789-0414 Direct (+1) 707-766-2024 Mobile (+1) 707-338-6997
Address 601 North McDowell Blvd., Petaluma, CA 94954-2312 USA
Email david.daniels@cardno.com Web www.cardno.com www.cardnoeri.com

---

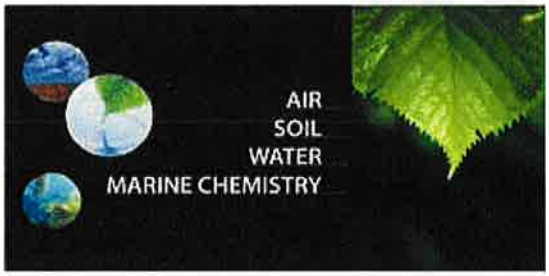
From: Sandy Tat [mailto:stat@calscience.com]
Sent: Tuesday, January 29, 2013 4:57 PM
To: David R. Daniels; Lisa Corderman
Subject: ExxonMobil 99105/022783C (13-01-1609)
Importance: High

Hi David / Lisa,

Please verify the Cardno ERI Project Name. Should the Project Name be "022783C" instead of "2783C"? Please advise. Thanks!

Sandy Tat
Project Manager Assistant

Calscience
7440 Lincoln Way
Garden Grove, CA 92841-1427
(714) 895-5494
www.calscience.com



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Calscience Environmental Laboratories, Inc.

7440 Lincoln Way
Garden Grove, CA 92841

Phone: 714-895-5494
Fax: 714-894-7501

ExxonMobil 13-01-1609

Consultant Name: Cardno ERI
Consultant Address: 601 N McDowell
Consultant City/State/Zip: Petaluma, CA 94954
ExxonMobil Project Mgr: Jennifer Sedlachek
Consultant Project Mgr: Rebekah Westrup
Consultant Telephone Number: (707) 766-2000 Fax No.: (707) 789-0414
Sampler Name (Print): Alex R. Hogdanec
Sampler Signature:

Account #: NA PO#: Direct Bill Cardno ERI
Invoice To: Direct Bill Cardno ERI
Report To: ~~Paula Sims~~ Rebekah Westrup
Project Name: ~~Rebekah Westrup~~ 02 2783C
ExxonMobil Site #: 99105 Major Project (AFE #):
Site Address: 5301 San Pablo Ave
Site City, State, Zip: Oakland, CA
Oversight Agency: Alameda County Environmental Health Department

	Sample ID	Field Point Name	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Preservative: Methanol	Sodium Bisulfate	HCl	NaOH	H_2SO_4 Plastic	H_2SO_4 Glass	HNO_3	Ice	Other	None	Matrix: Groundwater	Wastewater	Drinking Water	Sludge	Soil	Air	Other (specify): Distilled Water	Analyze For: TPHd 8015B*	*silica gel clenup	TPHg 8015B	BTEX 8260B	Methanol by 8015	8260 see list		Ethanol	RUSH TAT (Pre-Scheduled)	5-day TAT	Standard 10-day TAT	Due Date of Report
1	QCBB	QCBB	01/25/13	0550	3V	x					x					x									x		H	O	L	D						x	
2	W- 6 -MW2	MW2	01/25/13	0740	6V/2A	x					6V					x		2A	x							x	x	x	x		x					x	
3	W- 14 -MW3	MW3	01/25/13	0800	6V/2A	x					6V					x		2A	x							x	x	x	x		x					x	
4	W- 17 -MW5	MW5	01/25/13	0820	6V/2A	x					6V					x		2A	x							x	x	x	x		x					x	

Comments/Special Instructions: Only include requested data in report
OXY's report MTBE, DIPE, TBA, TAME, EDB, ETBE, 1,2 DCA

PLEASE E-MAIL ALL PDF FILES TO
GLOBAL ID # T0600101855 ERI-EIMLABS@eri-us.com pmccallabs@eri-us.com

Relinquished by:	Date	Time	Received by:	Date	Time
R. Hogdanec	1/28/13	1145	To Molly CDC	1/28/13	1145
Relinquished by:	Date	Time	Received by (Lab personnel):	Date	Time
To Molley TO 6-50	1/28/13	1730	Greg A. Cox	1/29/13	12:00

Laboratory Comments:
Temperature Upon Receipt:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
QC Deliverables (please circle one)
Level 2
Level 3
Level 4
Site Specific - if yes, please attach pre-schedule w/ Calscience Project Manager or attach specific instructions

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Calscience Environmental Laboratories, Inc.
7440 Lincoln Way
Garden Grove, CA 92841
Phone: 714-895-5494
Fax: 714-894-7501

ExxonMobil (1609)

Consultant Name: Cardno ERI
Consultant Address: 601 N McDowell
Consultant City/State/Zip: Petaluma, CA 94954
ExxonMobil Project Mgr: Jennifer Sedlachek
Consultant Project Mgr: Rebekah Westrup
Consultant Telephone Number: (707) 766-2000 Fax No.: (707) 789-0414
Sampler Name (Print): Azar R. Magdamow
Sampler Signature:

Account #: NA PO#: Direct Bill Cardno ERI
Invoice To: Direct Bill Cardno ERI
Report To: ~~Paula Sime~~ Rebekah Westrup
Project Name: ~~Rebekah Westrup~~ 27830
ExxonMobil Site #: 99105 Major Project (AFE #):
Site Address: 6301 San Pablo Ave
Site City, State, Zip: Oakland, CA
Oversight Agency: Alameda County Environmental Health Department

	Sample ID	Field Point Name	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Preservative: Methanol	Sodium Bisulfate	HCl	NaOH	H_2SO_4 Plastic	H_2SO_4 Glass	HNO_3	Ice	Other	None	Matrix: Groundwater	Wastewater	Drinking Water	Sludge	Soil	Air	Other (specify): Distilled Water	Analyze For: TPHd 8015B*	*silica gel clenup	TPHg 8015B	BTEX 8260B	Methanol by 8015	8260 see list		Ethanol	RUSH TAT (Pre-Schedule	5-day TAT	Standard 10-day TAT	Due Date of Report
1	QCBB	QCBB	01/25/13	0550	3V	x					x					x									x		H	O	L	D						x	
2	W-6-MW2	MW2	01/25/13	0740	6V/2A	x					6V					x		2A	x							x	x	x	x		x					x	
3	W-14-MW3	MW3	01/25/13	0800	6V/2A	x					6V					x		2A	x							x	x	x	x		x					x	
4	W-17-MW5	MW5	01/25/13	0820	6V/2A	x					6V					x		2A	x							x	x	x	x		x					x	

Comments/Special Instructions: Only include requested data in report
OXY's report MTBE, DIPE, TBA, TAME, EDB, ETBE, 1,2 DCA
PLEASE E-MAIL ALL PDF FILES TO
GLOBAL ID # T0600101855 ERI-EIMLABS@eri-us.com

Laboratory Comments:
Temperature Upon Receipt:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N

Relinquished by:	Date	Time	Received by:	Date	Time
Azar R. Magdamow	1/28/13	1145	To Omally CEL	1/28/13	1145
Tom Omalley TO GSO	1/28/13	1730	Received by (Lab personnel): [illegible]	1/29/13	12:00

QC Deliverables (please circle one)
Level 2
Level 3
Level 4
Site Specific - if yes, please attach pre-schedule w/ Calscience Project Manager or attach specific instructions

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Calscience Environmental Laboratories, Inc.

7440 Lincoln Way
Garden Grove, CA 92841

Phone: 714-895-5494
Fax: 714-894-7501

ExxonMobil
13-01-1609

Consultant Name: Cardno ERI | Account #: NA | PO#: Direct Bill Cardno ERI
Consultant Address: 601 N McDowell | Invoice To: Direct Bill Cardno ERI
Consultant City/State/Zip: Petaluma, CA 94954 | Report To: Paula Sime
ExxonMobil Project Mgr: Jennifer Sedlachek | Project Name: Rebekah Westrup
Consultant Project Mgr: Rebekah Westrup | ExxonMobil Site #: 99105 | Major Project (AFE #):
Consultant Telephone Number: (707) 766-2000 | Fax No.: (707) 789-0414 | Site Address: 6301 San Pablo Ave
Sampler Name (Print): Aron R Magdaner | Site City, State, Zip: Oakland, CA
Sampler Signature: | Oversight Agency: Alameda County Environmental Health Department

	Sample ID	Field Point Name	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Preservative: Methanol	Sodium Bisulfate	HCl	NaOH	H_2SO_4 Plastic	H_2SO_4 Glass	HNO_3	Ice	Other	None	Matrix: Groundwater	Wastewater	Drinking Water	Sludge	Soil	Air	Other (specify): Distilled Water	Analyze For: TPHd 8015B*	*silica gel clenup	TPHg 8015B	BTEX 8260B	Methanol by 8015	8260 see list		Ethanol	RUSH TAT (Pre-Schedule)	5-day TAT	Standard 10-day TAT	Due Date of Report
1	QCBB	QCBB	01/25/13	0550	3V	x					x					x									x		H	O	L	D					x	
2	W- 6 -MW2	MW2	01/25/13	0740	6V/2A	x					6V					x		2A	x							x	x	x	x		x					x	
3	W- 14 -MW3	MW3	01/25/13	0800	6V/2A	x					6V					x		2A	x							x	x	x	x		x					x	
4	W- 17 -MW5	MW5	01/25/13	0820	6V/2A	x					6V					x		2A	x							x	x	x	x		x					x	

Comments/Special Instructions: Only include requested data in report
OXY's report MTBE, DIPE, TBA, TAME, EDB, ETBE, 1,2 DCA

PLEASE E-MAIL ALL PDF FILES TO
GLOBAL ID # T0600101855 ERI-EIMLABS@eri-us.com norcallabs@eri-us.com

Laboratory Comments:
Temperature Upon Receipt:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
QC Deliverables (please circle one)
Level 2
Level 3
Level 4
Site Specific - if yes, please attach pre-schedule w/ Calscience Project Manager or attach specific instructions

Relinquished by:	Date	Time	Received by:	Date	Time
R. Magdaner	1/28/13	1145	To Molly CCL	1/28/13	1145
To Molly to CCL	1/28/13	1730	Received by (Lab personnel):	1/29/13	12:00

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1609

GSO

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, PORT COSTA

Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Tracking #: 520961084

NPS

ORC

A

GARDEN GROVE

D92841A

8672549

Print Date : 01/28/13 13:52 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.

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 13-01-1609

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Cardno ERI

DATE: 01/29/13

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

Temperature 1.9 °C - 0.2 °C (CF) = 1.7 °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: JS

CUSTODY SEALS INTACT:

☑ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☐ N/A Initial: JS

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Initial: JH

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	☐	☐	☑

CONTAINER TYPE:

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

Water: ☐VOA ☑VOAh (6) ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☑500AGJ (2) ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

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

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

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:**$Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered **Scanned by:**

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 13-01-1609

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 (-2) 1 of 2 500mL Amber received broken.
  - ☐ **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:** _____

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: 01/29/13

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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)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No. ERI 2783

2. Page 1 of 1

3. Generator's Name and Mailing Address EM# 99105
6301 SAN PABLO AVE
OAKLAND, CA

CARDNO ERI

4. Generator's Phone ( )

5. Transporter 1 Company Name: CARDNO ERI

6. US EPA ID Number

A. State Transporter's ID

B. Transporter 1 Phone

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
DEBTRAT, INC.
1165 C AIRPORT RD.
RIO VISTA, CA 94571

10. US EPA ID Number

E. State Facility's ID

F. Facility's Phone (707) 374-3534

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. NON-HAZ PURGE WATER	#1	POLY	89	GAL
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above
CLEAR, NO ODOR / SOLID

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name | Signature | Date: Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Neal E. Magdaleno | Signature | Date: Month 01 Day 31 Year 13

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name: MICHAEL WHITEHEAD | Signature | Date: Month 1 Day 3 Year 13

NON-HAZARDOUS WASTE

GENERATOR