ExxonMobil Environmental Services Company 4096 Piedmont Avenue #194 Oakland, California 94611 510 547 8196 Telephone 510 547 8706 Facsimile Jennifer C. Sedlachek Project Manager

### **E**‰onMobil

September 10, 2014

### RECEIVED

By Alameda County Environmental Health at 10:02 am, Sep 11, 2014

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

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

Dear Ms. Detterman:

Attached for your review and comment is a copy of the letter report entitled *Well Installation and Feasibility Study*, dated September 10, 2014, for the above-referenced site. The report was prepared by Cardno ERI of Petaluma, California, and details activities at the subject site.

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

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

Sincerely,

Jourifer C. Sedlachek Project Manager

Attachment: Cardno ERI's Well Installation and Feasibility Study, dated September 10, 2014

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

> w/o attachment Mr. Greg Gurss, Cardno ERI



Cardno ERI License A/C10/C36-611383

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September 10, 2014 Cardno ERI 2783C.R03

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

#### SUBJECT Well Installation and Feasibility Study Former Mobil Service Station 99105 6301 San Pablo Avenue, Oakland, California

Ms. Sedlachek:

At the request of ExxonMobil Environmental Services (EMES), on behalf of ExxonMobil Oil Corporation, Cardno ERI prepared this well installation and feasibility study for the subject site (Plate 1). Cardno ERI submitted the *Site Conceptual Model Update, Low-Threat Closure Evaluation, and Feasibility Study/Corrective Action Plan* (CAP), dated October 25, 2012 (Cardno ERI, 2012), and the *Corrective Action Plan Addendum* (CAP Addendum), dated September 24, 2013 (Cardno ERI, 2013a), proposing the installation of a well (MW6) in the vicinity of the former dispenser islands and the performance of DPE testing on well MW5 and newly-installed well MW6 to remediation hydrocarbon concentrations at the site. The Alameda County Health Care Services (ACEH) approved the proposed work and requested an additional work plan to outline the strategy and schedule for performance monitoring in groundwater and soil vapor in a letter dated September 24, 2013 (Appendix A). Cardno ERI submitted the *Second Addendum to Corrective Action Plan* (Second CAP Addendum), dated December 12, 2013 (Cardno ERI, 2013b), proposing the installation of two monitoring wells (MW7 and MW8) in addition to the work proposed in the CAP and CAP Addendum. The work was approved in electronic correspondence dated July 9, 2014 (Appendix A).

#### SITE DESCRIPTION

The site (Assessor's Parcel Number 16-1455-10) is located at 6301 San Pablo Avenue, on the northwest corner of San Pablo Avenue and 63<sup>rd</sup> Street, in Oakland, California (Plate 1). The site was operated as a Mobil service station from 1951 to 1980, then used as a rental car lot, and is currently an automobile oil change facility. Four 2,000-gallon gasoline USTs and one 350-gallon used-oil UST were present on the property. The tanks were not used after 1980 and were removed in 1994. The locations of the former USTs, former dispenser islands, groundwater monitoring wells, and select site features are shown on Plate 2.

The site is located at an elevation of approximately 42 feet above msl. Properties in the site vicinity are occupied by mixed-use residential and commercial developments. An elementary school is located across San Pablo Avenue to the east, residential properties are located to the west and south, and Saint Paul Primitive Baptist Church is located adjacent to the site to the southwest (Plate 2).

Additional site information, including geology, hydrogeology, and previous work, is presented in the CAP (Cardno ERI, 2012) and CAP Addendum (Cardno ERI, 2013a).

#### FIELD ACTIVITIES

Cardno ERI collected soil vapor samples in tedlar bags from vapor wells VW1, VW3, VW4, and VW5 for screening purposes; installed and sampled three wells (MW6 through MW8); and used a mobile DPE remediation system to extract soil vapor and groundwater from wells MW5 and MW6. Cardno ERI performed the fieldwork in accordance with the CAP, CAP Addendum, Second CAP Addendum, Cardno ERI's standard field protocol (Appendix B), a site-specific health and safety plan, and applicable regulatory guidelines under the advisement of a professional geologist.

#### Pre-Drilling Activities

Prior to drilling activities, Cardno ERI obtained well installation permits from the Alameda County Public Works Agency (Appendix C), notified Underground Service Alert, and contracted a private utility-locating company to locate underground utilities at the site. On August 11 and 15, 2014, Cardno ERI observed Gregg Drilling & Testing, Inc. (Gregg) clear locations for monitoring wells MW6 through MW8 to a depth of 5 feet bgs using hand tools. The location of wells MW7 and MW8 were adjusted from the proposed locations based on conflicts with overhead and subsurface utilities.

#### Groundwater Monitoring Well Installation and Sampling

On August 11 and 15, 2014, Cardno ERI observed Gregg install wells MW6 through MW8. The installation of well MW8 was delayed due to the presence of an inactive water pipe within the concrete core at the original location. Well MW7 was completed as a 2-inch diameter, Schedule 40 PVC well. Wells MW6 and MW8 were completed as 4-inch diameter, schedule 40 PVC wells. Select soil samples were preserved for laboratory analysis. Well construction details are presented on the boring logs in Appendix D and in Table 2.

On August 14, 2014, Cardno ERI developed wells MW6 and MW7. Well MW8 was not developed due to the delays associated with the installation, the pending feasibility test, and the pending report deadline. On August 18, 2014, the existing groundwater monitoring wells were gauged and wells MW6 through MW8 were purged and sampled in accordance with the field protocol included in Appendix B. Field data sheets are included in Appendix E. A groundwater elevation map is included as Plate 3.

Cardno ERI submitted groundwater and soil samples for analysis to a state-certified laboratory for the analyses listed in Tables 1A and 1B and 3, respectively, using the methods listed in the respective tables. Laboratory analytical reports are included in Appendix F. Select groundwater and soil analytical results are illustrated on Plates 4 and 5, respectively.

#### Site Survey

On August 18, 2014, Cardno ERI observed Morrow Surveying survey the locations and elevations of the newly-installed wells. Survey data is included in Appendix G.

#### **Dual-Phase Extraction Feasibility Test**

From August 18 to 22, 2014, Cardno ERI conducted two 2-hour individual-well DPE tests and an 86-hour multi-well DPE test. Wells MW5 and MW6 were used as the extraction wells. A trailer-mounted DPE system was used during the test. The DPE system consisted of an LRP connected to an air-water separator, pressure gauges, temperature gauges, and flow gauges. A catalytic oxidizer was used for vapor-phase abatement.

Vacuum was applied to each extraction well for a minimum of two hours during the tests. Induced vacuum was measured in surrounding wells VW1, VW3 through VW5, MW2, MW3, and MW5 through MW8 (excluding the active extraction wells) a minimum of once every two hours during the tests. Groundwater levels were monitored in wells MW2, MW3, and MW5 through MW8 (excluding the active extraction wells) prior to initiating the tests and a minimum of every four hours during the tests.

Soil vapor samples were collected from the influent vapor stream at the beginning and end of each individual well test and once every eight hours during the multi-well test. An effluent sample was collected at the beginning of the multi-well test. Grab groundwater samples were collected from wells MW5 through MW8 at the end of feasibility testing.

Results of the feasibility tests are summarized in Tables 4 through 9.

#### Soil Vapor Monitoring

On August 1 and 18, 2014, prior to feasibility testing, and on August 22, 2014, at the end of the feasibility tests, soil vapor samples were collected in tedlar bags from vapor wells VW1, VW3, VW4, and VW5. The vapor samples were analyzed in the field using a PID. PID readings are summarized in the following table.

Date	VW1	VW2	VW3	VW4	VW5
08/01/14	559 ppm	118 ppm	146 ppm	>7,000 ppm	500 ppm
08/18/14	317 ppm	1.9 ppm	85.8 ppm	1,780 ppm	395 ppm
08/22/14	62.0 ppm	0.4 ppm	122 ppm	>9,000 ppm	473 ppm

#### PID Readings

#### Waste Management

The decontamination rinsate water and drill cuttings were temporarily stored on site in DOT-approved, sealed 55-gallon drums. On August 22, 2014, 160 gallons of water processed during feasibility testing were transported for recycling to InStrat, Inc., of Rio Vista, California. On August 29, 2014, 5 gallons of purge and decon water generated during well development and 25 gallons of purge and decon water generated during were transported for recycling to InStrat, Inc. Disposal documentation is included in Appendix H. Disposal documentation for the soil waste generated during drilling is not currently available and will be submitted under separate cover.

#### **RESULTS OF INVESTIGATION**

#### Site Geology and Hydrogeology

Sediments observed during well installation primarily consisted of sand and clay with lesser amounts of silt to 18 feet bgs, the maximum depth investigated. Groundwater was encountered at 9 feet bgs in boring MW8. Groundwater was not encountered in borings MW6 or MW7. Boring logs are included in Appendix D.

The groundwater flow direction at the site has historically been to the west toward well MW3, but was previously based on three data points. The groundwater flow direction with the newly-installed wells was outward from well MW5 and primarily towards the southwest (Plate 3).

#### Groundwater

Approximately 160 gallons of water were extracted during the combined 90 hours of testing, resulting in an average groundwater flow rate of approximately 0.03 gpm. The calculated rate and observed groundwater drawdown indicates that groundwater extraction alone is not an effective remedial technology and Cardno ERI did not further analyze the hydraulic data collected during the tests.

Maximum dissolved-phase concentrations were reported in well MW5. Concentrations of TPHd and TPHg in well MW5 following the testing were an order of magnitude lower than concentrations reported in the well during the July 2014 groundwater monitoring and sampling event (Cardno ERI, 2014); however, BTEX concentrations increased to near the maximum concentrations reported during the monitoring program. Concentrations of TPHd and TPHg were reported in wells MW6 and MW8 and BTEX constituents were reported in well MW8. Petroleum hydrocarbon concentrations were higher in well MW6 and lower in well MW8 in the samples collected at the end of feasibility testing. Petroleum hydrocarbons were not reported in well MW7 in the pre-testing sampling event; well MW7 was dry during the post-testing sampling event and was unable to be sampled. Each of the newly-installed wells had concentrations less than well MW5. Groundwater results, including the July 2014 sampling event, are summarized in Tables 1A, 1B, and 7, and select results are illustrated on Plate 4.

Cardno ERI estimates that approximately 0.063 pound each of TPHd and TPHg was removed from well MW5 and that approximately 0.001 pound each of TPHd and TPHg was removed from well MW6 in the dissolved phase (Table 9).

#### <u>Soil</u>

Concentrations of TPHd, TPHg, BTEX, and naphthalene were reported in soil samples collected during this investigation. Maximum concentrations were reported between 5 and 10 feet bgs in borings MW6 and MW8. Maximum TPHg (22 mg/kg) and benzene (0.044 mg/kg) concentrations were reported in samples collected at 8 and 10 feet bgs, respectively, from boring MW8. Petroleum hydrocarbons were not reported in soil samples collected from boring MW7. Concentrations of benzene were not reported in boring MW6. Soil results are summarized in Table 3 and select soil results are illustrated on Plate 5.

#### Vapor

Maximum PID readings were recorded in soil vapor well VW4, consistent with previous results. Baseline and post-testing PID readings were consistent in wells VW3 through VW5. PID readings decreased in wells VW1 and VW2 during testing.

Vapor-phase concentrations in soil vapor samples collected throughout the feasibility tests were generally consistent, with the exception of TPHg concentrations in the initial sample collected at the beginning of the multi-well test, which was an order of magnitude lower than the other concentrations. The concentration is likely related to the addition of dilution air to maintain effective operation of the equipment. MTBE was not reported in the samples. Total and individual mass removal rates are summarized in the following table and in Table 8. Cardno ERI's protocol for calculating mass removal is included in Appendix B.

Extraction Wells	Estimated Mass Removed (pounds)								
Extraction wens	TPHg	MTBE	Benzene						
MW5 Test	0.845	<0.0001	0.001						
MW6 Test	0.227	<0.0001	0.001						
MW5 and MW6 Test	36.347	<0.002	0.041						
Total	37.419	<0.002	0.042						

#### Estimated Mass Removed

#### Feasibility Results

The system operated at a maximum flow rate of 37.5 scfm. Based on an induced vacuum of 0.1 inch of water column being effective, an ROI of up to approximately 31 (MW5) to 54 (MW6) feet was achieved during DPE testing (Plate 6 and Graphs 1 and 2). Influent concentrations were consistent at approximately 5,000 mg/m<sup>3</sup> with an average mass removal of approximately 0.44 pound of TPHg per hour or 10.4 pounds per day (Table 6). Maximum induced vacuum was observed in wells VW4 and VW5 at between approximately 2 and 6 inches of water (Table 5).

#### CONCLUSIONS

Based on the current investigation and cumulative site data, Cardno ERI concludes that:

- Maximum dissolved-phase concentrations are localized near well MW5.
- Maximum soil vapor concentrations are present in wells VW4 and VW5.
- DPE events using wells MW5 and MW6 effect wells VW4 and VW5 as evidenced by the induced vacuum observed.
- DPE HIT events may be a feasible remedial technology at the site.

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September 10, 2014 Cardno ERI 2783C.R03 Former Mobil Service Station 99105, Oakland, California

#### RECOMMENDATIONS

Cardno ERI anticipated sampling soil vapor wells VW1, VW3, VW4, and VW5 during fourth quarter 2014 based on the CAP and CAP addendum recommendations. Based on the PID readings in well VW4 (over range of the PID following testing), the collection of vapor samples in Summa<sup>™</sup> canisters may not be warranted as the results will likely continue to exceed screening levels. Cardno ERI proposes that vapor samples be collected in tedlar bags and field screened with a PID on a quarterly basis during fourth quarter 2014 and first quarter 2015 during the groundwater sampling events to further evaluate the need for additional HIT events. If the results of the quarterly vapor sampling indicate that additional DPE events do not appear to be warranted, an additional sampling event (using Summa<sup>™</sup> canisters) will be conducted in accordance with the field protocol included in Appendix B. Results of the soil vapor screening will be included in the semi-annual monitoring and sampling reports.

Cardno ERI recommends developing well MW8, sampling the newly-installed groundwater monitoring wells on a quarterly basis, and gauging the existing wells to further evaluate the groundwater gradient.

#### **CONTACT INFORMATION**

The responsible party contact is Ms. Jennifer C. Sedlachek, ExxonMobil Environmental Services Company, 4096 Piedmont Avenue #194, Oakland, California, 94611. The consultant contact is Mr. Greg Gurss, Cardno ERI, 601 North McDowell Boulevard, Petaluma, California, 94954. The agency contact is Ms. Karel Detterman Alameda County Health Care Services, Environmental Health Services, Environmental Protection, 1131 Harbor Bay Parkway, Suite 250, Alameda, California, 94502.

#### LIMITATIONS

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

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

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

Sincerely,

histmager Capwell

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

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



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Enclosures:

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#### References

Acronym List

Plate 1	Site Vicinity Map
Plate 2	Generalized Site Plan
Plate 3	Groundwater Elevation Map
Plate 4	Select Groundwater Analytical Results
Plate 5	Select Soil Analytical Results
Plate 6	Radii of Influence
Graph 1	Vacuum Radius of Influence – Well MW5
Graph 2	Vacuum Radius of Influence – Well MW6
Table 1A	Cumulative Groundwater Monitoring and Sampling Data
Table 1B	Additional Cumulative Groundwater Monitoring and Sampling Data
Table 2	Well Construction Details
Table 3	Cumulative Soil Analytical Results
Table 4	Dual-Phase Extraction Tests – Extraction Well Data
Table 5	Dual-Phase Extraction Tests – Observation Well Data
Table 6	Dual-Phase Extraction Tests – Soil Vapor Analytical Results
Table 7	Dual-Phase Extraction Tests – Groundwater Analytical Results
Table 8	Dual-Phase Extraction Tests – Vapor-Phase Hydrocarbon Removal
Table 9	Dual-Phase Extraction Tests - Dissolved-Phase Hydrocarbon Removal
Appendix A	Correspondence
Appendix B	Protocols
Appendix C	Permits
Appendix D	Boring Logs
Appendix E	Field Data Sheets
Appendix F	Laboratory Analytical Reports
Appendix G	Survey Data
Appendix H	Waste Disposal Documentation

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cc: Ms. Karel Detterman, Health Care Services Agency, Environmental Health Services, Environmental Protection, 1131 Harbor Bay Parkway, Second Floor, Alameda, California, 94502

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

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

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#### REFERENCES

Cardno ERI. October 25, 2012. Site Conceptual Model Update, Low-Threat Closure Evaluation, and Feasibility Study/Corrective Action Plan, Former Mobil Service Station 99105, 6301 San Pablo Avenue, Oakland, California.

Cardno ERI. May 14, 2013a. Corrective Action Plan Addendum, Former Mobil Service Station 99105, 6301 San Pablo Avenue, Oakland, California.

Cardno ERI. December 12, 2013b. Second Addendum to Corrective Action Plan, Former Mobil Service Station 99105, 6301 San Pablo Avenue, Oakland, California.

Cardno ERI. August 21, 2014. Semi-Annual Groundwater Monitoring Report, Third Quarter 2014, Former Mobil Service Station 99105, 6301 San Pablo Avenue, Oakland, California.

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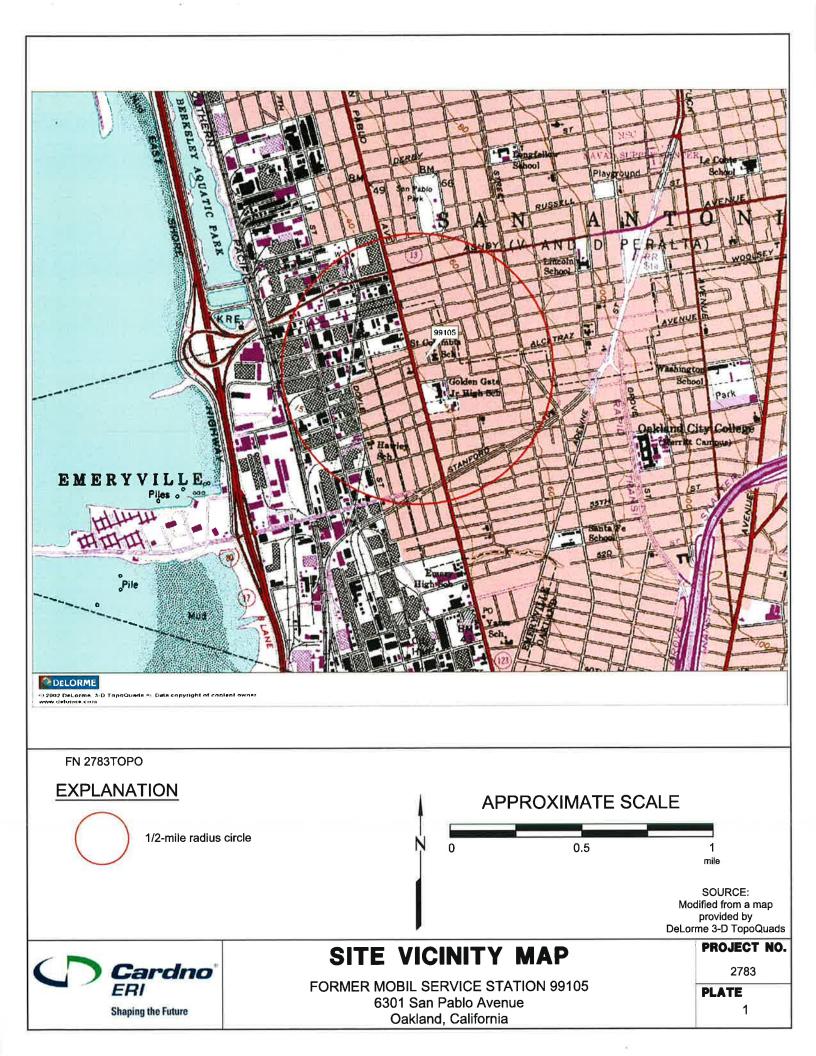
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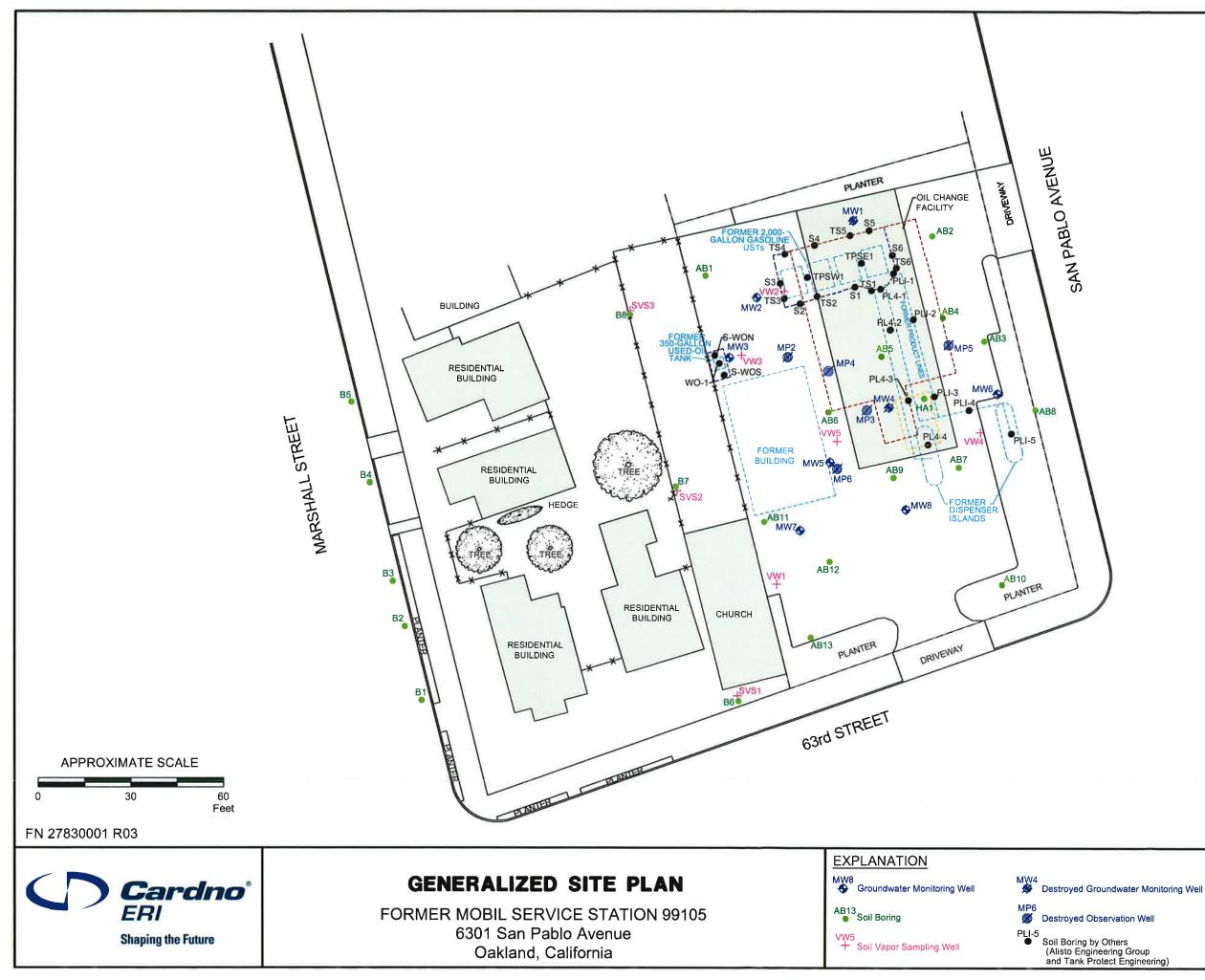
September 10, 2014 Cardno ERI 2783C.R03 Former Mobil Service Station 99105, Oakland, California

#### **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 <sup>3</sup>	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 NGVD	National Environmental Policy Act National Geodetic Vertical Datum
NPDES	National Pollutant Discharge Elimination System
O&M ORP	Operations and Maintenance
OSHA	Oxidation-reduction potential 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 USCS	Upper confidence level Unified Soil Classification System
USGS	United States Geologic Survey
USUS	Underground storage tank
VCP	Voluntary Cleanup Program
VOC	Volatile organic compound
VPC	Vapor-phase carbon



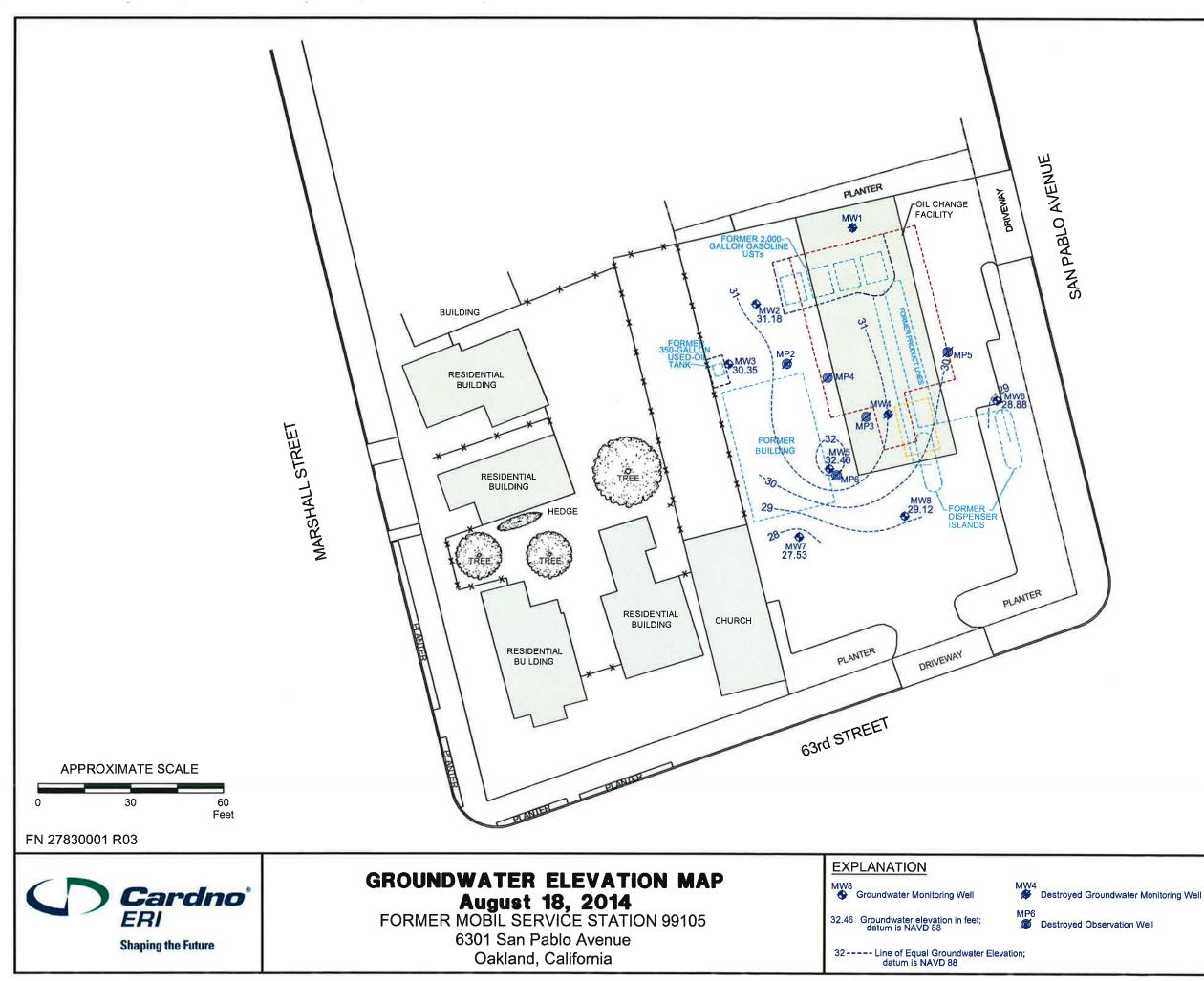


---- 1994 Areas of Excavation ---- 1996 Area of Excavation ---- 1999 Area of Excavation

PROJECT NO. 2783

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PLATE 2

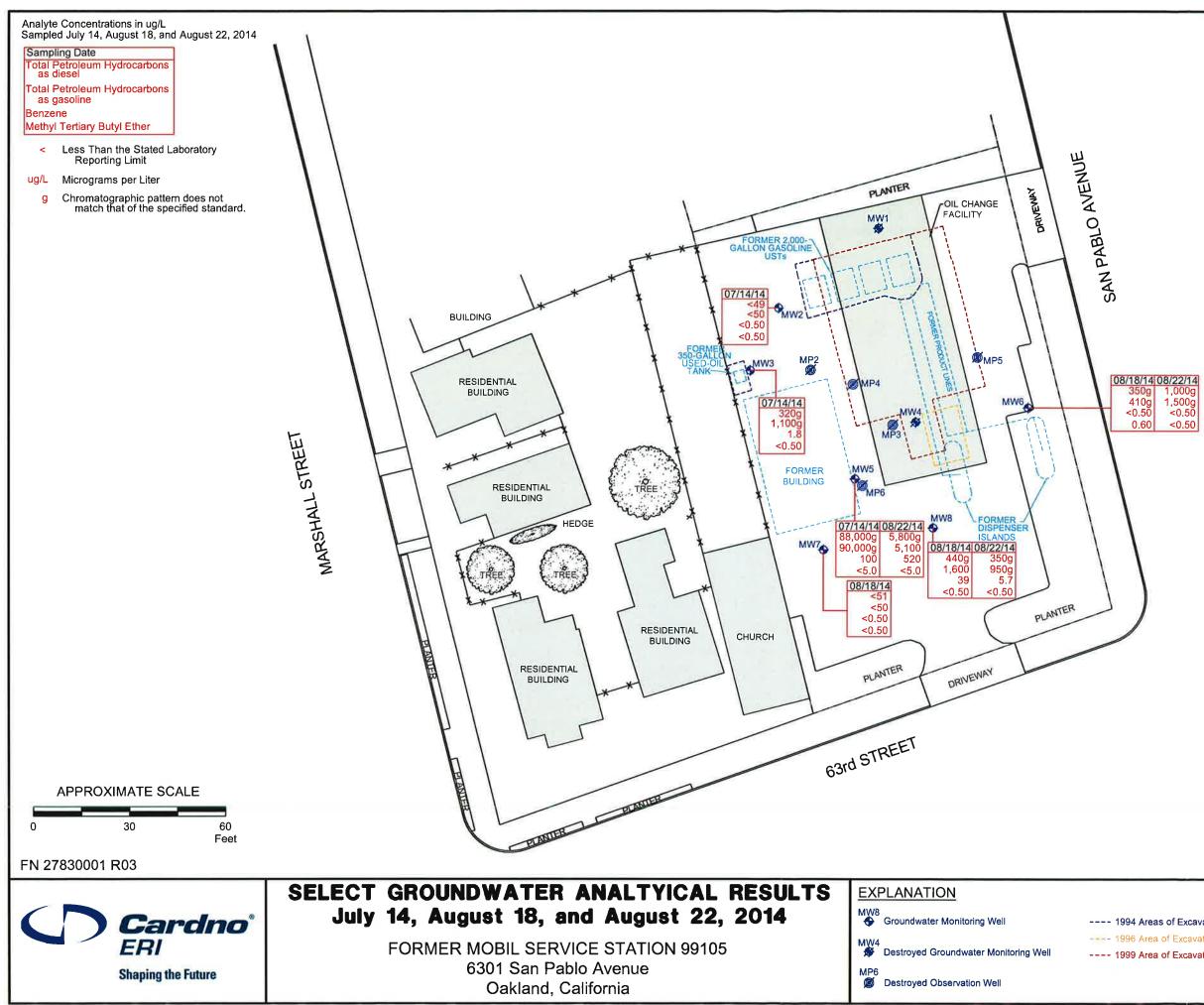


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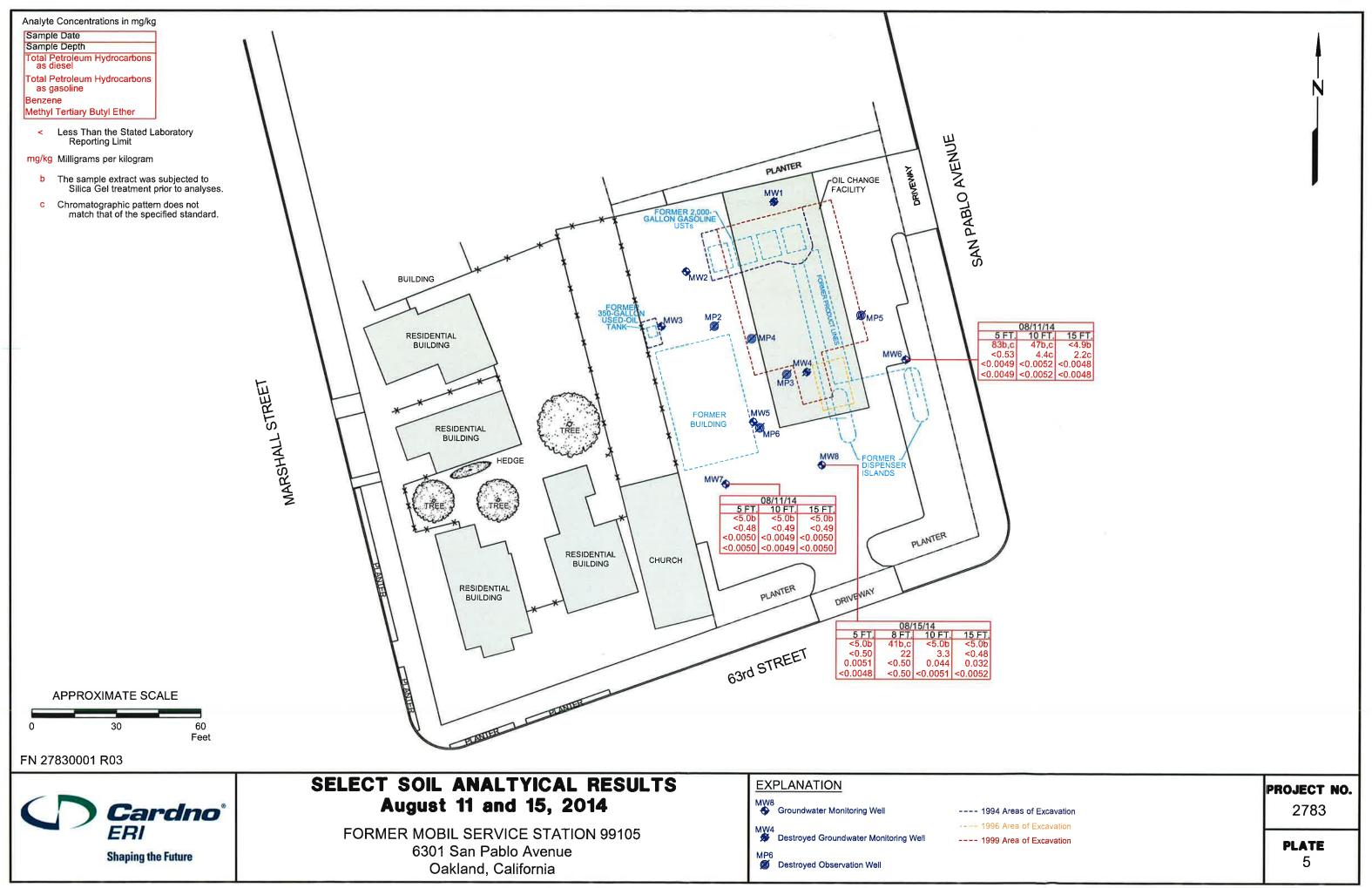
---- 1999 Area of Excavation

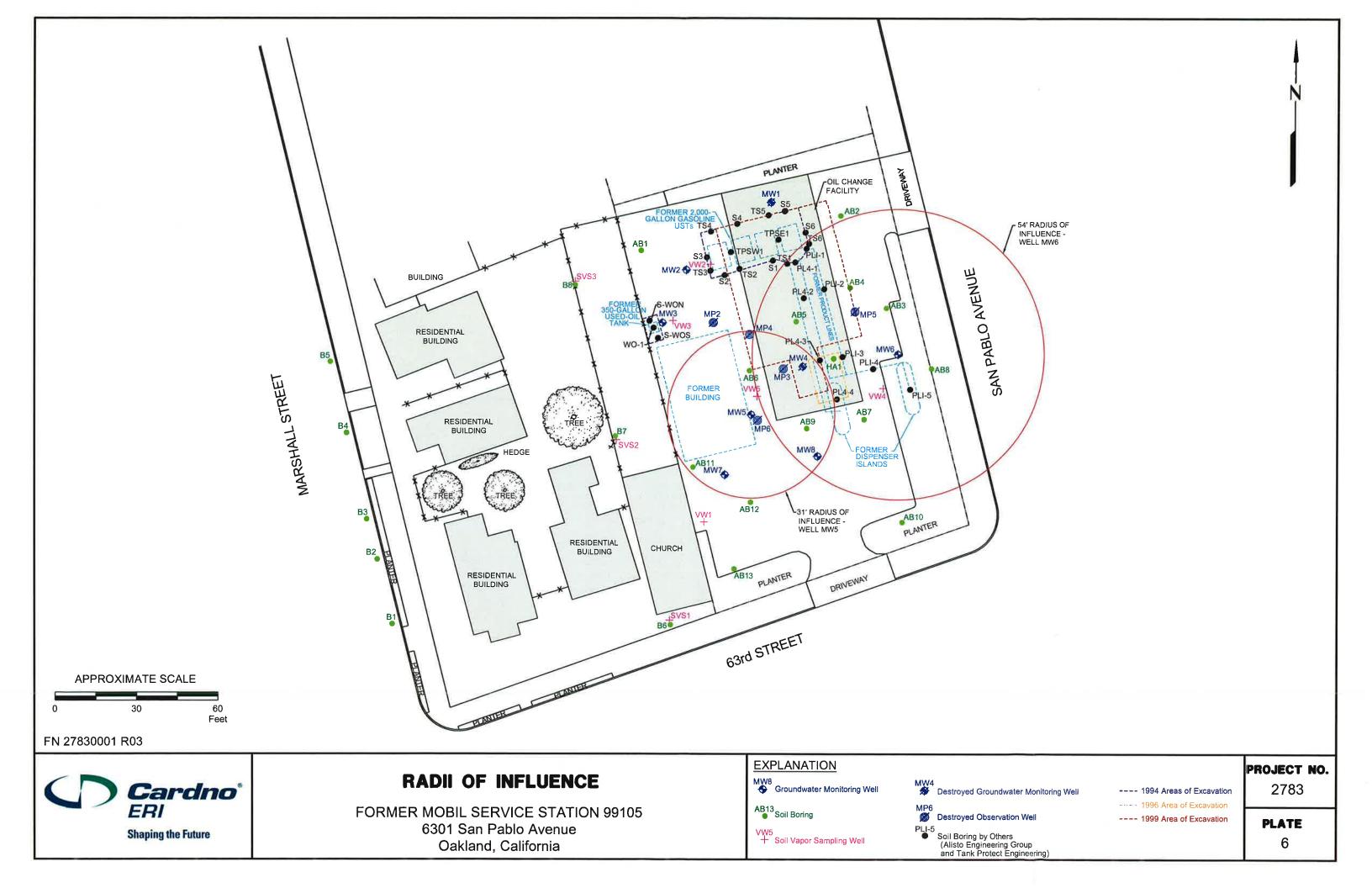
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PLATE 3

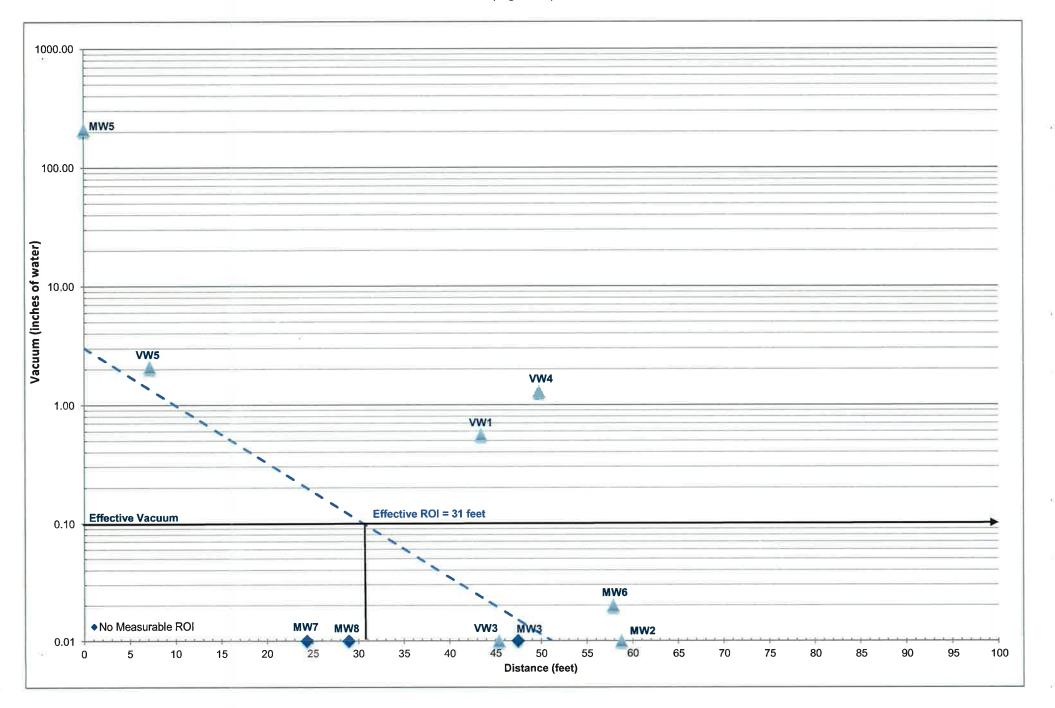


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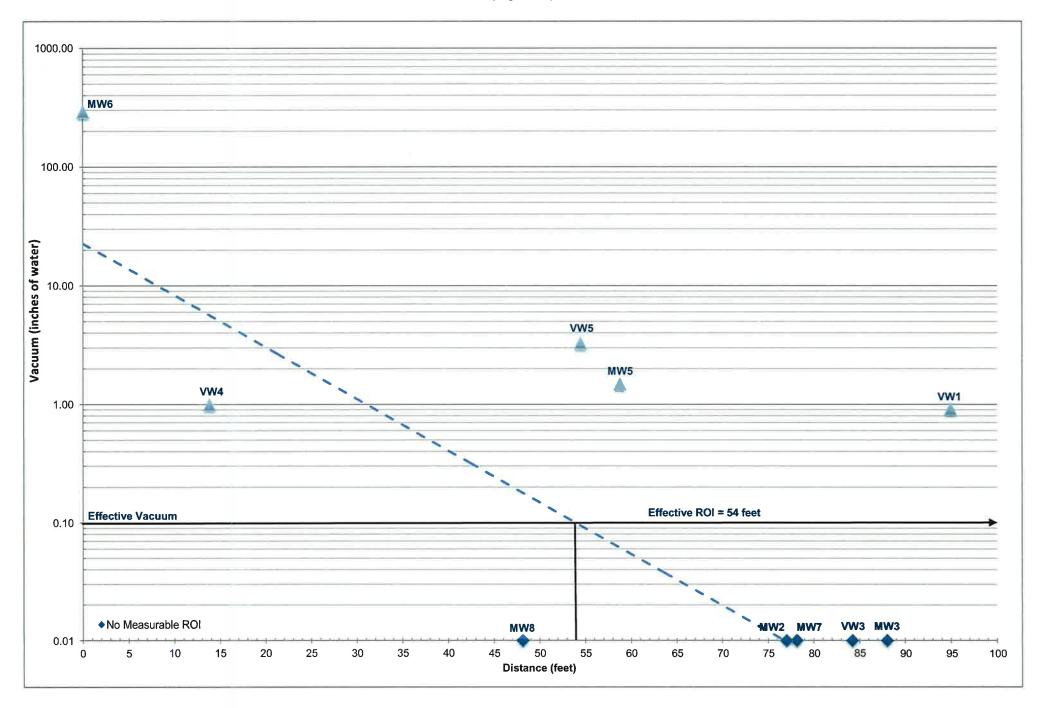




#### GRAPH 1 VACUUM RADIUS OF INFLUENCE - WELL MW5 Former Mobil Service Station 99105 6301 San Pablo Avenue Oakland, California (Page 1 of 1)



#### GRAPH 2 VACUUM RADIUS OF INFLUENCE - WELL MW6 Former Mobil Service Station 99105 6301 San Pablo Avenue Oakland, California (Page 1 of 1)



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

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Well	Sampling		TOC Elev.	DTW	GW Elev.	NAPL	TPHd	TPHg	MTBE 8020/8021	MTBE 8240/8260	B	T (ug/l)	E	X
ID	Date		(feet)	(feet)	(feet)	(feet)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Environmenta Table F-1a	I Screening Lev	reis, G		s Current o	r Potential Dri		100	100	5	5	1	40	30	20
Table F-Ta		_												
MW1	03/14/96		32.79	4.50	28.29	No	450	610		(read the	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		5 <b>949</b>	ND	ND	ND	ND
MW1	11/08/96		32.79	10.24	22.55	No	ND	ND	ND	39 <del>8.00</del>	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	0.00-0.00	ND	ND	ND	ND
MW1	07/29/97	а	32.79	10.18	22.61	No	60e	ND	36		0.84	0.95	ND	1.6
MW1	10/09/97	а	32.79	10.46	22.33	No	56e	ND	ND		ND	ND	ND	ND
MW1	01/23/98	а	32.79	3.95	28.84	No	33	ND	ND	1000	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	1.000	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	Second	ND	ND		ND	ND	ND	ND
MW1	Apr-99	0	Destroyed dur	ing construc	tion activities.									
MW2	03/14/96		32.80	4.51	28.29	۳No	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	the court	2.7	ND	2.5	ND
MW2	07/29/97	а	32.80	10.53	22.27	No	150d	320	ND		28	1.2	10	ND
MW2	10/09/97	а	32.80	10.87	21.93	No	160b	460	2.6		43	2.8	2.0	2.6
MW2	01/23/98	а	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	<u></u> )	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	<del></del> )	0.6	ND	ND	ND
MW2	07/27/99		32.80	6.20	26.60	No		ND	ND	<del></del> 2	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	<u>1998</u>	<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	<del></del>	<50	<0.30	1000 C	1.2	0.22	<0.20	<0.60
MW2	01/18/02		41.99	5.46	36.53	No	<del></del>	<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	11.12	<50.0	<0.5	9 <b>1</b> 20	<0.5	4.1	0.6	4.0
MW2	01/20/03		41.99	5.39	36.60	No	Hard Street	<50.0	0.6		<0.50	<0.50	<0.50	<0.50

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

Well	Sampling	TOC Elev.	DTW	GW Elev.	NAPL	TPHd	TPHg	MTBE 8020/8021	MTBE 8240/8260	в	T	E	x
ID	Date	(feet)	(feet)	(feet)	(feet)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
	I Screening Level	s, Groundwate	r is Current o					_	_		1.5		
able F-1a						100	100	5	5	1	40	30	20
MW2	04/28/03	41.99	5.87	36.12	No		<50.0	<0.50		<0.50	<0.50	<0.50	<0.50
MW2	07/15/03	41.99	10.31	31.68	No		<50	<0.5	-	<0.5	<0.5	<0.5	<0.5
MW2	10/08/03	41.99	11.20	30.79	No		<50	<0.5		<0.5	<0.5	<0.5	<0.5
MW2	01/15/04	41.99	5.36	36.63	No		63.3	1.0		0.70	<0.5	<0.5	<0.5
MW2	Well not same	oled from 2004 t											
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 resurve										
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	2000					1000	
MW2	07/09/12	42.24	10.07	32.17	No	<50	<50		<0.50	<0.50	<0.50	<0.50	<0.50
MW2	01/25/13	42.24	5.62	36.62	No	<50	<50		<0.50	<0.50	<0.50	<0.50	<0.50
MW2	08/23/13	42.24	10.76	31.48	No	<50	<50		<0.50	<0.50	<0.50	<0.50	<0.50
MW2	01/10/14	42.24	11.42	30.82	No	<50	<50		<0.50	<0.50	<0.50	<0.50	<0.50
MW2	07/14/14	42.24	10.52	31.72	No	<49	<50		<0.50	<0.50	<0.50	<0.50	0.52
MW2	08/18/14	42.24	11.06	31.18	No		1.00			1222		1.444-4	1.000
111112	00/10/11		1	00									
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	3 <b>9-04</b>		710	110	440	1,700
MW3	08/13/96	32.80	11.18	21.62	No	2,300c	5,000	() <del></del>		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	( <u>1111</u>	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	32.80	12.08	27.19	No		3,800	<50	<5	63	2.9	100	65
MW3	01/15/01	39.27	12.08	28.98	No		4,300	<5.0		76	9.5	47	76
MW3	04/10/01	39.27	10.29	20.90	No	,	2,700	<20		55	4.4	100	37
MW3	07/24/01	39.27	11.57	29.10	No		3,100	<1.0		110	6.9	110	81
MW3	11/27/01	39.27	10.93	28.34	No	3.775 (1997	2,400	<0.30		47	8.9	25	35
	01/18/02		9.47	20.34 32.24	No		1,130	<0.30 <b>13.6</b>		47 15.3	2.30	42.0	24.6
MW3	04/10/02	41.71 41.71	9.47 10.14	32.24 31.57	No		916	11.2	1000	35.1	3.00	<b>42.0</b> 22.5	13.8
MW3					NO			15.4		60.5	3.00 2.90	22.5 <b>39.8</b>	50.9
MW3	07/12/02	41.71	11.34	30.37	INO	( postal	2,330	15.4		00.5	2.90	39.0	50.9

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

Well	Sampling	TOC Elev.	DTW	GW Elev.	NAPL	TPHd	TPHg	MTBE 8020/8021	MTBE 8240/8260	В	т	E	x
ID	Date	(feet)	(feet)	(feet)	(feet)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Environmental	Screening Leve	ls, Groundwater	is Current o	r Potential Dri	nking Water	Source (Decer	mber 2013)						
Table F-1a					-	100	100	5	5	1	40	30	20
MW3	10/14/02	41.71	12.10	29.61	No	1000	2,550	<0.5	1222	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		oled from 2004 to											
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		Well resurve										
MW3	09/14/11	42.18	11.37	30.81	No	270g	1,200		<0.50	18	0.95	1.7	1.3
MW3	01/18/12	42.18	12.11	30.07	No		910g		<0.50	0.89	<0.50	<0.50	0.88
MW3	01/27/12	42.18	10.18	32.00	No	1,000g							
MW3	07/09/12	42.18	11.15	31.03	No	420g	350g		<0.50	7.9	<0.50	<0.50	<0.50
MW3	01/25/13	42.18	9.41	32.77	No	120g	390g		<0.50	2.8	<0.50	<0.50	<0.50
MW3	08/23/13	42.18	11.67	30.51	No	310g	640		<0.50	1.1	<0.50	<0.50	<0.50
MW3	01/10/14	42.18	12.13	30.05	No	160g	720g		<0.50	<0.50	<0.50	<0.50	<0.50
MW3	07/14/14	42.18	11.55	30.63	No	320g	1,100g		<0.50	1.8	<0.50	<0.50	0.53
MW3	08/18/14	42.18	11.83	30.35	No				1000	-	<u>2002</u> 19		
	00,10,11												
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	3 <del></del>			3			1000	
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	02200	950	ND	610	130
MW4	07/29/97	31.50	9.85	21.74	0.12		Line (		1000	1-1-1		1000	
MW4	10/09/97	31.50	10.35	21.38	0.30	-	22203		0222			-	
MW4	01/23/98	31.50	4.68	27.51	0.92	1.000			-				
MW4	04/22/98	31.50	6.39	25.22	0.14		<del></del> )						-5772-2
MW4	07/21/98	31.50	7.10	24.55	0.20		<del></del> .)		1000	1			-31E/
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 du	ring construc	tion 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	S-5-5-5	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	2.22	5,000	8.9	<2	64	11	340	52
MW5	01/18/02	41.59	6.52	35.07	No	1.12-111	6,330	21.8		99.1	2.30	103	19.6

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

D         Date         (feet)	Well	Sampling	TOC Elev.	DTW	GW Elev.	NAPL	TPHd	TPHg	MTBE 8020/8021	MTBE 8240/8260	B	T	E	X
Table F-1a           100         100         5         5         1         40           MWV5         04/10/02         41.59         7.20         34.39         No          2,140         <2.50          275         8.00           MWV5         07/12/02         41.59         8.83         32.76         No          3,940         20         <0.50         350         <0.50           MWV5         07/12/03         41.59         10.74         30.85         No          7,660         59         <0.50         421         10.0           MWV5         07/12/03         41.59         6.68         34.91         No          6,080         52.9         <2.5         406         19.8           MWV5         07/15/03         41.59         10.66         31.03         No          4,630         37.4         <0.5         181         6.0           MWV5         01/15/04         41.59         6.56         35.03         No          4,630         37.4         <0.5         181         6.0           MWV5         01/15/10         41.86         7.3         34.53									(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Instruct         Instruct		Screening Level							F	5		40	30	20
MWS       07/12/02       41.59       8.83       32.76       No        3,940       20       <0.50	Table F-1a						100	100	5	5		40		20
MW5       10/14/02       41.59       10.74       30.85       No        4,040       <2.5	MW5	04/10/02	41.59	7.20	34.39	No		2,140	<2.50		275		183	24.5
MW5       01/20/03       41.59       6.45       35.14       No        7,660       59       <0.50	MW5	07/12/02	41.59	8.83	32.76	No		3,940	20	<0.50	350	<0.50	268	14
MW5         04/28/03         41.59         6.68         34.91         No          7,510         47         <0.50         403         5.5           MW5         07/15/03         41.59         8.68         32.91         No          6,080         52.9         <2.5	MW5	10/14/02	41.59	10.74	30.85	No		4,040			98.5	9.0	169	29.0
MW5       07/15/03       41.59       8.68       32.91       No        6,080       52.9       <2.5	MW5	01/20/03	41.59	6.45	35.14	No		7,660	59	<0.50	421		743	96.0
MW5       10/08/03       41.59       10.56       31.03       No        2,460       54.3       <0.5       160       12.8         MW5       01/15/04       41.59       6.56       35.03       No        4,630       37.4       <0.5	MW5	04/28/03	41.59	6.68	34.91	No		7,510	47	<0.50	403	5.5	524	50.5
MW5       01/15/04       41.59       6.56       35.03       No        4,630       37.4       <0.5       181       6.0         MW5       Well not sampled from 2004 to 2010.       41.59       9.917/10       41.59       9.917/10       41.59       5.00        <5.0	MW5	07/15/03	41.59	8.68	32.91	No	0.000	6,080		<2.5	406	19.8	412	34.7
MWS         Well not sampled from 2004 to 2010.           MWS         09/17/10         41.59         9.99         31.60         No <b>5,700 6,600</b> <5.0	MW5	10/08/03		10.56		No	1.000						173	31.7
MW5       09/17/10       41.59       9.99       31.60       No       5,700       6,600        <5.0	MW5				35.03	No		4,630	37.4	<0.5	181	6.0	312	38.5
MW5       12/15/10       41.86       Well resurveyed.         MW5       09/14/11       41.86       7.33       34.53       No       1,600g       7,200        <2.0	MW5	Well not samp	oled from 2004 to	o 2010.										
MW5       09/14/11       41.86       7.33       34.53       No       1,600g       7,200        <2.0	MW5	09/17/10	41.59	9.99	31.60	No	5,700	6,600	2003	<5.0	19	<5.0	16	1.4f
MW5       01/18/12       41.86       9.46       32.40       No        3,600g        <1.0	MW5	12/15/10	41.86	Well resurvey	ed.									
MW5       01/27/12       41.86       8.81       33.05       No       3,100g	MW5	09/14/11	41.86	7.33	34.53	No	1,600g	7,200	0			-	8.6	<2.0
MW5       07/09/12       41.86       8.91       32.95       Sheen       29,000g       9,300g        <2.5       21       <2.5         MW5       01/25/13       41.86       6.01       35.85       Sheen       22,000g       4,900g        <2.0	MW5	01/18/12	41.86	9.46	32.40	No		3,600g	39 <del>303</del>	<1.0	14	<1.0	7.6	<1.0
MW5       01/25/13       41.86       6.01       35.85       Sheen       22,000g       4,900g        <2.0	MW5	01/27/12	41.86			No	3,100g						1000	
MW5       08/23/13       41.86       9.12       32.74       No       34,000g       17,000        <2.0	MW5	07/09/12	41.86			Sheen			1000				6.9	<2.5
MW5       01/10/14       41.86       10.30       31.56       No       36,000g       62,000        <2.0	MW5												4.5	<2.0
MW5       07/14/14       41.86       8.70       33.16       No       88,000g       90,000g        <5.0       100       <5.0         MW5       08/18/14       41.86       9.40       32.46       No	MW5	08/23/13	41.86	9.12	32.74	No	34,000g		1	<2.0			6.3	<2.0
MW5       08/18/14       41.86       9.40       32.46       No	MW5	01/10/14	41.86	10.30	31.56	No	36,000g	62,000	5222				3.5	<2.0
MW5       08/22/14       41.86       9.60       32.26       No       5,800g       5,100        <5.0       520       <5.0         MW6       08/18/14       42.00       Well surveyed.        0.60       <0.50	MW5	07/14/14					88,000g	90,000g	1.000	<5.0	100	<5.0	12	<5.0
MW6       08/18/14       42.00       Well surveyed.         MW6       08/18/14       42.00       13.12       28.88       No       350g       410g        0.60       <0.50	MW5	08/18/14	41.86											
MW6       08/18/14       42.00       13.12       28.88       No       350g       410g        0.60       <0.50       <0.50         MW6       08/22/14       42.00       11.20       30.80       No       1,000g       1,500g        <0.50	MW5	08/22/14	41.86	9.60	32.26	No	5,800g	5,100	:***	<5.0	520	<5.0	320	81
MW6       08/22/14       42.00       11.20       30.80       No       1,000g       1,500g        <0.50       <0.50       <0.50         MW7       08/18/14       41.34       Well surveyed.         <0.50	MW6													
MW7       08/18/14       41.34       Well surveyed.         MW7       08/18/14       41.34       13.81       27.53       No       <50	MW6	08/18/14					-						<0.50	<0.50
MW7         08/18/14         41.34         13.81         27.53         No         <50          <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50         <0.50<	MW6	08/22/14	42.00	11.20	30.80	No	1,000g	1,500g		<0.50	<0.50	<0.50	<0.50	<0.50
MW7 08/22/14 41.34 Dry	MW7	08/18/14		Well surveyed										
	MW7	08/18/14	41.34	13.81	27.53	No	<51	<50		<0.50	<0.50	<0.50	<0.50	<0.50
MW8 08/18/14 41.30 Well surveyed.	MW7	08/22/14	41.34	Dry		1 <b>555</b> 5		<del></del>		1		5775	3000	
	MW8	08/18/14	41.30	Well surveyed	l.									
MW8 08/18/14 41.30 12.18 29.12 No <b>440g 1,600 &lt;</b> 0.50 <b>39</b> <0.50	MW8	08/18/14	41.30	12.18	29.12	No	440g	1,600		<0.50		<0.50	19	44
MW8 08/22/14 41.30 13.10 28.20 No <b>350g 950g</b> <0.50 <b>5.7</b> <0.50	MW8	08/22/14	41.30	13.10	28.20	No	350g	950g		<0.50	5.7	<0.50	4.2	6.4

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

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								MTBE	MTBE				
Well	Sampling	TOC Elev.	DTW	GW Elev.	NAPL	TPHd	TPHg	8020/8021	8240/8260	В	т	E	х
ID	Date	(feet)	(feet)	(feet)	(feet)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Environmental S	Screening Level	s, Groundwater i	is Current o	or Potential Dri	nking Water								
Table F-1a			***			100	100	5	5	1	40	30	20
Grab Groundwa	ter Samples												
Former Gasoline	Tank Cavity												
TW1	01/04/96		6.00		No	700	ND			ND	ND	ND	ND
Used-Oil Tank Ca	avity												
WW1	01/04/96		3.00		No		ND			ND	ND	ND	ND
AB1	03/05/98		4.5		No		1,600	ND	12	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	5 <u>2326</u> 1	6,800	230		680	100	1,500	2,300
AB4	03/05/98		4.0	1000	No		8,500	ND	-	240	ND	260	720
AB6	03/05/98	<b>111</b>	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	9,001	660	50	630	940
AB13	03/05/98		8.0		No		210	ND	2000	11	0.8	10	15
HA1	01/25/00	100		:2112		-	<500	<5.0	: <del></del>	<0.3	<0.3	<0.3	<0.6
B1	11/18/10	5-44F)	Dry						3750	1999	<del></del> :	1000	
B2	11/19/10		Dry								<del>1117</del> 76		
B3	11/19/10		8.45			<50	<50		<0.50	<0.50	<0.50	0.053f	0.21f
B4	11/19/10		Dry						2 <u>2201</u>		1222	1.222	21/2
B5	11/18/10	222574	8.95			<50	<50		<0.50	<0.50	<0.50	0.047f	0.21f
W-15-B6	06/19/12		15	2002		<50	<50		<0.50	<0.50	<0.50	<0.50	<0.50
W-15-B7	06/19/12	1222	15			<50	<50		<0.50	<0.50	<0.50	<0.50	<0.50
W-9.5-B8	06/19/12	10.00	9.5			230g	<50		<0.50	<0.50	<0.50	<0.50	<0.50

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

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Notes:	Adapted fro	m 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.
а	=	Well sampled using no-purge method.
b	=	Diesel and unidentified hydrocarbons <c15.< td=""></c15.<>
с	=	Diesel and unidentified hydrocarbons <c15>C25.</c15>
d	=	Diesel and unidentified hydrocarbons >C20.
е	=	Unidentified hydrocarbons >C18.
f	=	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit.
g	=	Chromatographic pattern does not match that of the specified standard.

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

(Page 1 of 3)

Well	Sampling		DIPE	ETBE	TAME	TBA	1,2-DCA	EDB	Ethanol
ID	Date		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
	reening Levels,	Groundwate	er is Current or Potent	tial Drinking Water Sou	arce (December 2013				
ble F-1a				<b>2000</b> (),	****	12	0.50	0.05	
MW1	03/14/96	- 01/27/99	Not analyzed for these	e analytes					
MW1	Apr-99		Destroyed during cons	struction activities.					
MW2	03/14/96	- 01/15/04	Not analyzed for thes	e 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						<del>777</del> 2		<del></del> C
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	<del>,</del> //
MW2	08/23/13		<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	
MW2	01/10/14		<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<u></u> )
MW2	07/14/14		< 0.50	<0.50	<0.50	<5.0	<0.50	<0.50	
MW2	08/18/14						####\$\;		
MW2	08/22/14						( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (		
1010 02	00/22/14								
MW3	03/14/96	- 01/15/04	Not analyzed for these	e 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				6269	2025	<u></u>	111711	2162.9
MW3	07/09/12		<0.50	<0.50	<0.50	9.1	1.1	<0.50	
MW3	01/25/13		<0.50	<0.50	<0.50	9.6	1.1	<0.50	
MW3	08/23/13		<0.50	<0.50	<0.50	7.2	0.90	<0.50	
	01/10/14		<0.50	<0.50	<0.50	12	1.1	<0.50	
MW3 MW3	07/14/14		<0.50	<0.50	<0.50	11	1.1	<0.50	
MW3	08/18/14								
MW3	08/22/14		1						
MW4	03/14/96	- 01/27/99	Not analyzed for these	e analytes					
MW4	Apr-99		Destroyed during con						
MW5	10/25/00	- 01/15/04	Not analyzed for these	e 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	
MW5	08/23/13		<2.0	<2.0	<2.0	45 42	<2.0	<2.0	
MW5	01/10/14		<2.0	<2.0	<2.0	36	<2.0	<2.0	

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

Well	Sampling	DIPE	ETBE	TAME	TBA	1,2-DCA	EDB	Ethanol
ID	Date	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
nvironmental Sci	reening Levels, Groundwa	ater is Current or Potent	tial Drinking Water So	ource (December 2013	3)			
able F-1a					12	0.50	0.05	<del>200</del> 0
MW5	07/14/14	<5.0	<5.0	<5.0	<50	<5.0	<5.0	***
MW5	08/18/14					<del>555</del> 8	877 - C	
MW5	08/22/14	<5.0	<5.0	<5.0	<50	<5.0	<5.0	
MW6	08/18/14	<0.50	<0.50	<0.50	14	1.1	<0.50	
MW6	08/22/14	<0.50	<0.50	<0.50	12	<0.50	<0.50	C
MW7	08/18/14	<0.50	<0.50	<0.50	21	3.1	<0.50	
MW7	08/22/14	Dry						
MW8	08/18/14	<0.50	<0.50	<0.50	20	0.78	<0.50	
MW8	08/22/14	<0.50	<0.50	<0.50	31	<0.50	<0.50	
rab Groundwate	r Samples							
ot analyzed for the	ese analytes prior to 2010.							
B1	11/18/10	( <del></del> )		3 <del>000</del> 2			(mark)	
B3	11/19/10					8.7		
B4	11/19/10	5.5	1917	1757)		- <del>17-2</del> 4		
B5	11/18/10				717	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			2000

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

Notes:	Adapted from ETIC's Report of Groundwater Monitoring, Third Quarter 2010.
TOC Elev.	= Top of casing elevation.
DTW	= Depth to water.
GW Elev.	= Groundwater elevation.
NAPL	<ul> <li>Non-aqueous phase liquid.</li> </ul>
TPHd	<ul> <li>Total petroleum hydrocarbons as diesel analyzed using EPA Method 8015B.</li> </ul>
TPHg	<ul> <li>Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015B.</li> </ul>
MTBE 8020/8021	<ul> <li>Methyl tertiary butyl ether analyzed using EPA Method 8020 or 8021B.</li> </ul>
MTBE 8240/8260	<ul> <li>Methyl tertiary butyl ether analyzed using EPA Method 8260B or 8240.</li> </ul>
BTEX	<ul> <li>Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8260B.</li> </ul>
DIPE	<ul> <li>Di-isopropyl ether analyzed using EPA Method 8260B.</li> </ul>
ETBE	<ul> <li>Ethyl tertiary butyl ether analyzed using EPA Method 8260B.</li> </ul>
TAME	<ul> <li>Tertiary amyl methyl ether analyzed using EPA Method 8260B.</li> </ul>
TBA	<ul> <li>Tertiary butyl alcohol analyzed using EPA Method 8260B.</li> </ul>
1,2-DCA	= 1,2-dichloroethane analyzed using EPA Method 8260B.
EDB	<ul> <li>1,2-dibromoethane analyzed using EPA Method 8260B.</li> </ul>
Ethanol	<ul> <li>Ethanol analyzed using EPA Method 8260B.</li> </ul>
ND	<ul> <li>Not detected at or above the laboratory reporting limit.</li> </ul>
μg/L	= Micrograms per liter.
<	<ul> <li>Less than the stated laboratory reporting limit.</li> </ul>
	= Not analyzed/Not applicable.
а	<ul> <li>Well sampled using no-purge method.</li> </ul>
b	<ul> <li>Diesel and unidentified hydrocarbons <c15.< li=""> </c15.<></li></ul>
с	<ul> <li>Diesel and unidentified hydrocarbons <c15>C25.</c15></li> </ul>
d	<ul> <li>Diesel and unidentified hydrocarbons &gt;C20.</li> </ul>
е	<ul> <li>Unidentified hydrocarbons &gt;C18.</li> </ul>
f	= Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit.
g	<ul> <li>Chromatographic pattern does not match that of the specified standard.</li> </ul>

# TABLE 2WELL CONSTRUCTION DETAILSFormer Mobil Service Station 991056301 San Pablo AvenueOakland, California(Page 1 of 1)

(#)

Well ID	Well Installation Date	Well Destruction Date	TOC Elevation (feet)	Well Casing Material	Total Depth (feet)	Well Depth (feet)	Borehole Diameter (inches)	Casing Diameter (inches)	Screened Interval (feet)	Slot Size (inches)	Filter Pack Interval (feet)	Filter Pack Material
MW1	03/01/96	Apr-99	32.79	PVC	21.5	21.5	10	4	5-20	0.010	4.5-21.5	#12 Sand
MW2	03/01/96	2.000	42.24	PVC	21.5	21.5	10	4	5-20	0.010	4.5-21.5	#12 Sand
MW3	03/01/96	( 4554	42.18	PVC	21.5	21.5	10	4	5-20	0.010	4.5-21.5	#12 Sand
MW4	03/01/96	Apr-99	31.50	PVC	26.5	25	10	4	5-25	0.010	4.5-21.5	#12 Sand
MW5	09/06/00	1 4419	41.86	PVC	21.5	21.5	10	4	5-20	0.010	4-21.5	#2/12 San
MW6	08/11/14		42.00	PVC	18	15	12	4	5-15	0.020	4-15	#2/12 San
MW7	08/11/14		41.34	PVC	16	15	10	2	5-15	0.020	4-15	#2/12 San
MW8	08/15/14		41.30	PVC	16	15	12	4	5-15	0.020	4-15	#2/12 Sar
VW1	11/01/10		:	Stainless Steel	6	6	4	0.25	5.25-5.75	0.0057	5-6	#2/12 Sar
VW2	11/02/10	222	3 <del>444</del>	Stainless Steel	6	6	4	0.25	5.25-5.75	0.0057	5-6	#2/12 Sar
VW3	11/01/10		1000	Stainless Steel	6	6	4	0.25	5.25-5.75	0.0057	5-6	#2/12 Sai
VW4	11/02/10			Stainless Steel	6	6	4	0.25	5.25-5.75	0.0057	5-6	#2/12 Sa
VW5	11/02/10			Stainless Steel	6	6	4	0.25	5.25-5.75	0.0057	5-6	#2/12 Sa
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	2000	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	S <del>ton</del>	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 San
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 San

Notes: TOC

Top of casing.

PVC = Polyvinyl chloride.

--- = Not applicable/Not available.

### TABLE 3 CUMULATIVE SOIL ANALYTICAL DATA Former Mobil Service Station 99105 6301 San Pablo Avenue 6301 San Pablo Avenue Oakland, California (Page 1 of 4) (Page 1 of 4)

Sample	Sample	Depth	TPHd	TPHg	MTBE 8021	MTBE 8260B	В	Т	E	х	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB	Naphthalene	Lead	TOG
ID	Date	(feet bgs)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
	vironmental Scr														0.0045	0.00000		00	
	et bgs) Soil (Tab		100	100	0.023	0.023	0.044	2.9	3.3	2.3	0.075				0.0045	0.00033	1.2	80	
Deep (≥10 feet t	ogs) Soil (Table (	C-1)	110	500	0.023	0.023	0.044	2.9	3.3	2.3	0.075				0.0045	0.00033	1.2	80	
Monitoring, Re	mediation, and	Soil Vapor We	II Samples																
MW1	03/01/96	5 - 5.5	3.4	<1.0	÷÷ (*)		<0.0050	<0.0050	<0.0050	<0.0050	-	-						<2.5	
MW1	03/01/96	10 - 10.5	<1.0	<1.0			<0.0050	<0.0050	<0.0050	<0.0050								<2.5	
MW1	03/01/96	15 - 15.5	4.2	<1.0			<0.0050	<0.0050	<0.0050	<0.0050	-		1	-				<2.5	
MW2	03/01/96	5 - 5.5	2.4	<1.0			<0.0050	<0.0050	<0.0050	<0.0050				-				<2.5	
MW2	03/01/96	10 - 10.5	57	220			1.2	1.4	2.7	14					675		1.00 T	<2.5	
MW2	03/01/96	15 - 15.5	<1.0	<1.0			<0.0050	<0.0050	0.0063	0.035				-			~	<2.5	
MW3	03/01/96	5.5 - 6	1.1	<1.0	-		<0.0050	< 0.0050	< 0.0050	<0.0050	-							<2.5	9
MW3	03/01/96	10.5 - 11	72	53			0.032	0.43	0.65	0.93								<2.5	290
MW3	03/01/96	15.5 - 16	<1.0	<1.0			<0.0050	<0.0050	<0.0050	<0.0050	***							<2.5	10
MW4	03/01/96	5.5 - 6	34	280			1.2	1	4.1	19	-							<2.5	
MW4	03/01/96	10.5 - 11	7.7	6		***	0.11	< 0.0050	0.11	0.093		·						<2.5	
MW4	03/01/96	15.5 - 16	2.1	6			0.076	0.023	0.083	0.07								<2.5	
S-5-MW6	08/11/14	5	83b,c	< 0.53		<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.049	<0.0099	<0.0099	<0.0099	<0.0049	<0.0049	< 0.049	-	
S-10-MW6	08/11/14	10	47b,c	4.4c		< 0.0052	<0.0052	<0.0052	< 0.0052	< 0.0052	<0.052	< 0.010	< 0.010	<0.010	< 0.0052	<0.0052	< 0.052		
S-15-MW6	08/11/14	15	<4.9b	2.2c		<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.048	<0.0095	<0.0095	<0.0095	<0.0048	<0.0048		ier.	~
S-5-MW7	08/11/14	5	<5.0b	<0.48	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	<0.050		
S-10-MW7	08/11/14	10	<5.0b	<0.49		< 0.0049	< 0.0049	< 0.0049	< 0.0049	< 0.0049	<0.049	<0.0098	<0.0098	<0.0098	<0.0049	<0.0049	< 0.049		
S-15-MW7	08/11/14	15	<5.0b	<0.49		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	-		
S-5-MW8	08/15/14	5	<5.0b	<0.50	-	<0.0048	0.0051	< 0.0048	<0.0048	<0.0048	<0.048	<0.0096	<0.0096	<0.0096	<0.0048	<0.0048	<0.048		
S-8-MW8	08/15/14	8	41b,c	22		<0.50	<0.50	<0.50	3.4	2.1	<5.0	<0.99	<0.99	<0.99	<0.50	<0.50	<5.0		
S-10-MW8	08/15/14	10	<5.0b	3.3		< 0.0051	0.044	< 0.0051	0.17	0.15	< 0.051	<0.010	<0.010	< 0.010	<0.0051	<0.0051	0.15		
S-15-MW8	08/15/14	15	<5.0b	<0.48	-	<0.0052	0.032	<0.0052	<0.0052	<0.0052	<0.052	<0.010	<0.010	<0.010	<0.0052	<0.0052	<0.052		
VW1	11/01/10	5.5-6	<5.0b	<0.50		<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050			
VW2	11/02/10	5.5-6	<5.0b	<0.50	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	-	-	-
VW3	11/01/10	5.5-6	<5.0b	<0.50		<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050			
VW4	11/02/10	5.5-6	<5.0b	3.7c		<0.0050	<0.0050	<0.0050	0.0050	0.0050a	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	-		
VW5	11/02/10	5.5-6	<5.0b	<0.50		<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	-	-	
S-5-SVS1	06/18/12	5	<5.0b	<0.50		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010			-		
S-5-SVS2	06/18/12	5	<5.0b	<0.50	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	-				
S-5-SVS3	06/18/12	5	<5.0b	<0.50		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010		<0.010					
0-0-0700	00/10/12	5	-0.00	-0.00		-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.000	-0.010	-0.010	-0.010					

### TABLE 3 CUMULATIVE SOIL ANALYTICAL DATA Former Mobil Service Station 99105 6301 San Pablo Avenue 0akland, California Oakland, California (Page 2 of 4)

Sample	Sample	Depth (foot boo)	TPHd (mg/kg)	TPHg (mg/kg)	MTBE 8021	MTBE 8260B	B (ma/ka)	T (ma/ka)	E (ma/ka)	X	TBA (mg/kg)	DIPE	ETBE	TAME	1,2-DCA	EDB (mg/kg)	Naphthalene	Lead	TOG (mg/kg)
ID Residential En	Date vironmental Scr	(feet bgs)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
	et bgs) Soil (Tabl		100	100	0.023	0.023	0.044	2.9	3.3	2.3	0.075				0.0045	0.00033	1.2	80	()
	bgs) Soil (Table (		110	500	0.023	0.023	0.044	2.9	3.3	2.3	0.075				0.0045	0.00033	1.2	80	
										-									
AB-1	03/05/98	5 - 6		ND	ND		ND	ND	ND	ND									
AB-2	03/05/98	4 - 5		ND	ND		ND	ND	ND	ND									-
AB-3	03/05/98	5.5		ND	ND		ND	ND	ND	ND	-								
AB-4	03/05/98	5 - 6		18	ND	-7	ND	ND	ND	ND				-			-		-
AB-5	03/05/98	3 - 4	-	170	ND	-	ND	ND	0.65	ND	-			त्म					
AB-6	03/05/98	5		230	ND	144	ND	ND	ND	ND								-	
AB-7	03/05/98	4-5	-	19	ND		ND	ND	0.032	ND	-						-	-	
AB-8	03/05/98	5		ND	ND	-	ND	ND	ND	ND							-		
AB-9	03/05/98	4		16	ND		0.006	ND	0.028	ND							-		
AB-10	03/05/98	4		ND	ND		ND	ND	ND	ND							-		
AB-11	03/05/98	5 - 6		3.9	ND		ND	ND	ND	ND									
AB-12	03/16/98	5 - 6		ND	ND	-	ND	ND	ND	ND			<u> </u>		-				
AB-13	03/16/98	5 - 6	-	ND	ND	-	ND	ND	ND	ND						-			
MP-1	11/16/98	7.5		10	ND		ND	0.007	0.013	ND				-					
MP-2	11/10/00	7		270	ND		ND	0.03	0.29	2.1									
MP-2 MP-2	11/16/98 11/16/98	10.5		<b>270</b> 140	0.15		0.08	ND	0.29	ND							-		
MP-3	11/16/98	7.5		230	0.28	-	ND	0.1	1.6	ND									
MP-4	11/16/98	5		120	0.19		ND	ND	0.35	ND									
MP-4	11/16/98	10		18	ND		ND	0.013	0.07	0.086									
MP-5	11/16/98	6.5		6.4	ND		ND	ND	0.015	0.022									
MP-5	11/16/98	10.5		220	0.52		ND	ND	1.4	3									
MP-6	11/16/98	7		ND	ND		ND	ND	ND	ND									
MP-6	11/16/98	10		240	0.92	ND	ND	ND	1.6	4.2									
HA-1	01/25/00	5		<0.50	<0.025	-	<0.0050	<0.0050	<0.0050	<0.010	-			-		4			-
B1	11/17/10	5-5.5	<5.0b	<0.50		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050			

#### TABLE 3 CUMULATIVE SOIL ANALYTICAL DATA Former Mobil Service Station 99105 6301 San Pablo Avenue Oakland, California (Page 3 of 4)

Sample	Sample	Depth	TPHd	TPHg	MTBE 8021	MTBE 8260B	В	т	E	Х	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB	Naphthalene	Lead	TOG
ID	Date	(feet bgs)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg
	vironmental Sci							and the second se											
	et bgs) Soil (Tab		100	100	0.023	0.023	0.044	2.9	3.3	2.3	0.075				0.0045	0.00033	1.2	80	
eep (≥10 feet b	ogs) Soil (Table	C-1)	110	500	0.023	0.023	0.044	2.9	3.3	2.3	0.075				0.0045	0.00033	1.2	80	
B1	11/18/10	9.5-10	<5.0b	<0.50		< 0.0050	< 0.0050	<0.0050	<0.0050	< 0.0050	< 0.050	< 0.010	<0.010	< 0.010	<0.0050	<0.0050	_		
B1	11/18/10	14.5-15	<5.0b	<0.50		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050	< 0.010	< 0.010	< 0.010	<0.0050	<0.0050			
B1	11/18/10	19.5-20	<5.0b	< 0.50		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050	< 0.010	< 0.010	< 0.010	<0.0050	<0.0050			
B1	11/18/10	24.5-25	<5.0b	<0.50		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050			
		1000																	
B2	11/17/10	5-5.5	<5.0b	<0.50		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050		< 0.010	< 0.010	<0.0050	<0.0050			
B2	11/18/10	8.5-9	<5.0b	< 0.50		< 0.0050	<0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050	< 0.010	< 0.010	< 0.010	<0.0050	<0.0050			
B2	11/19/10	14.5-15	<5.0b	< 0.50		< 0.0050	< 0.0050	< 0.0050	< 0.0050	<0.0050	< 0.050	< 0.010	< 0.010	<0.010	<0.0050	<0.0050			
B2	11/19/10	19.5-20	<5.0b	<0.50		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050			
B3	11/17/10	5-5.5	<5.0b	<0.50		< 0.0050	< 0.0050	<0.0050	< 0.0050	<0.0050	< 0.050	<0.010	< 0.010	< 0.010	<0.0050	<0.0050			
B3	11/18/10	9.5-10	<5.0b	<0.50		< 0.0050	<0.0050	< 0.0050	<0.0050	< 0.0050	< 0.050	< 0.010	<0.010	< 0.010	<0.0050	<0.0050			
B3	11/19/10	12-12.5	<5.0b	<0.50		< 0.0050	<0.0050	< 0.0050	<0.0050	< 0.0050	< 0.050	< 0.010	<0.010	< 0.010	<0.0050	< 0.0050			
B3	11/19/10	14.5-15	<5.0b	<0.50		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050	< 0.010	<0.010	< 0.010	<0.0050	<0.0050			
B3	11/19/10	17-17.5	<5.0b	<0.50		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050	< 0.010	<0.010	< 0.010	<0.0050	<0.0050			
B3	11/19/10	19.5-20	<5.0b	<0.50		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050			
B4	11/17/10	5-5.5	<5.0b	<0.50		< 0.0050	< 0.0050	<0.0050	< 0.0050	<0.0050	< 0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050			
B4	11/18/10	9.5-10	<5.0b	<0.50		< 0.0050	<0.0050	<0.0050	< 0.0050	<0.0050	< 0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050			
B4	11/19/10	14.5-15	<5.0b	<0.50		< 0.0050	< 0.0050	<0.0050	< 0.0050	< 0.0050	< 0.050	<0.010	<0.010	< 0.010	<0.0050	<0.0050			
B4	11/19/10	19.5-20	<5.0b	<0.50		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050			
B5	11/17/10	5-5.5	<5.0b	< 0.50		< 0.0050	<0.0050	< 0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050			
B5	11/18/10	9.5-10	<5.0b	< 0.50		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050	< 0.010	< 0.010	< 0.010	<0.0050	<0.0050			
B5	11/19/10	14.5-15	<5.0b	<0.50		< 0.0050	< 0.0050	<0.0050	<0.0050	< 0.0050	< 0.050	<0.010	< 0.010	< 0.010	<0.0050	<0.0050			
B5	11/19/10	19.5-20	<5.0b	<0.50	÷	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050			
ank Excavation																			
S-1	08/05/94	11		6.5			0.18	0.082	0.37	1.2									
S-2	08/05/94	11		3.2			0.11	<0.050	0.16	0.21									
S-3	08/05/94	11		540			<1.5	4.1	24	72									
S-4	08/05/94	11		73	-		<0.067	0.21	1.5	6.8									
S-5	08/05/94	11		0.84	-		<0.050	< 0.050	< 0.050	0.031									
S-6	08/05/94	11		40			< 0.014	0.059	0.25	0.6								10.5	
TS-1	01/04/96	4	21	3.8		/***	< 0.005	0.0085	<0.005	< 0.005								<2.5	
TS-2	01/04/96	4	20	<1.0			< 0.005	< 0.005	< 0.005	0.0053								<2.5	
TS-3	01/04/96	4	44	9.5			0.11	0.28	0.019	0.021								160	
TS-4	01/04/96		1.8	1.7			< 0.005	0.014	0.0081	0.0086								<2.5	
TS-5	01/04/96	5	2.0	<1.0			< 0.005	< 0.005	< 0.005	< 0.005								<2.5	
TS-6	01/04/96	4	2.0	<1.0			<0.005	0.0095	<0.005	0.015	-			-				86	-
TPSW-1	02/14/96		160	640			< 0.0050	0.32	6.5	36								5.3	
TPSE-1	02/14/96		160	93			<0.0050	<0.0050	0.43	2.7								5.8	
sed-Oil UST E	xcavation Sam	ples																	
WO-1	08/05/94	6	1.2	21			< 0.015	0.11	0.34	1.5								4.3	94
S-WON	01/04/96	3	2.9	<1.0			< 0.005	<0.005	< 0.005	< 0.005								30	8.5
1.5 CAN 2 A.C.								121222											10
S-WOS	01/04/96	3	1.6	<1.0	-		<0.005	<0.005	<0.005	0.095									28

### TABLE 3 CUMULATIVE SOIL ANALYTICAL DATA Former Mobil Service Station 99105 6301 San Pablo Avenue Oakland, California (Page 4 of 4)

Sample	Sample	Depth	TPHd	TPHg	MTBE 8021	MTBE 8260B	B	T	E	X	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB	Naphthalene	Lead	TOG
ID	Date	(feet bgs)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/k
		creening Levels,								0.0	0.075				0.0045	0.00000	4.0	00	
Shallow (<10 feet			100	100	0.023	0.023	0.044	2.9	3.3	2.3	0.075				0.0045	0.00033	1.2	80	
Deep (≥10 feet bg	s) 5011 (Table	e (-1)	110	500	0.023	0.023	0.044	2.9	3.3	2.3	0.075				0.0045	0.00033	1.2	80	
Product Line San	nples																		
PL1-1	02/14/96	3.0	14	<1.0			<0.0050	<0.0050	<0.005	<0.0050								11	
PL1-2	02/14/96	2.5	<1.0	<1.0			<0.0050	<0.0050	<0.0050	<0.0050								5.0	
PL1-3	02/15/96	2.5	37	240			0.24	0.59	1.1	1.3								6.5	
PL1-5	02/15/96	2	4.9	63			0.30	0.42	0.31	0.41								8.2	
PL4-1	02/14/96	3.0	7.7	1.4			0.056	0.078	0.0073	0.0420					1000			9.9	
PL4-2	02/15/96	2.5	<1.0	<1.0			<0.0050	< 0.0050	<0.0050	<0.0050								5.5	
PL4-3	02/15/96	5	3.0	4.3			0.0086	0.0075	0.040	0.058	-							6.3	
PL4-4	02/15/96	5.0	3.2	<1.0		-	<0.0050	<0.0050	<0.0050	<0.0050								4.6	
Soil Stockpile Sa	mples																		
WO-(1-2) d	01/04/96		38	<1.0			< 0.005	< 0.005	< 0.005	< 0.005								20	240
SPPL4-(1-4)	03/01/96		11	9			0.013	0.03	0.13	0.054								<2.5	
Comp-1	01/25/00			<0.50	< 0.025		< 0.0050	< 0.0050	<0.0050	< 0.010								8.04	
S-SP1-1	06/19/12		<5.0	<0.50		< 0.0050	< 0.0050	<0.0050	<0.0050	<0.0050	< 0.050	< 0.010	< 0.010	< 0.010	< 0.0050	< 0.0050		16.1	
S-SP1-2	06/19/12		<5.0	<0.50		< 0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.050	< 0.010	<0.010	< 0.010	< 0.0050	<0.0050		24.4	
S-SP1-3	06/19/12		5.7	< 0.50		< 0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	< 0.050	< 0.010	< 0.010	< 0.010	< 0.0050	< 0.0050		12.7	
S-SP1-4	06/19/12		<5.0	<0.50		< 0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.050	< 0.010	< 0.010	< 0.010	<0.0050	< 0.0050		21.5	
SP1	08/11/14		<4.9b	0.91c		<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.049	<0.0098	<0.0098	<0.0098	<0.0049	<0.0049	<0.049	9.74	
Notes:																			
TPHd	=	Total petroleum	hydrocarbor	ns as diese	analyzed usin	g EPA Method 8	8015B.												
TPHg	=	Total petroleum	hydrocarbor	ns as gasol	ine analyzed u	sing EPA Metho	d 8015B.												
MTBE 8021	=	Methyl tertiary bu	utyl ether ana	alyzed usin	g EPA Method	8020 or 8021B.													
MTBE 8260B	=	Methyl tertiary bu	utyl ether ana	alyzed usin	g EPA Method	8260B.													
BTEX	=	Benzene, toluene	e, ethylbenze	ene, and to	tal xylenes and	lyzed using EPA	Method 82	260B.											
TBA	=	Tertiary butyl alco	ohol analyze	d using EF	PA Method 826	OB.													
DIPE	=	Di-isopropyl ethe	er analyzed u	ising EPA I	Method 8260B.														
ETBE	=	Ethyl tertiary buty	yl ether analy	zed using	EPA Method 8	260B.													
TAME	=	Tertiary amyl me	thyl ether an	alyzed usin	ng EPA Method	8260B.													
1,2-DCA	=	1,2-dichloroethar	ne analyzed	using EPA	Method 8260E	3.													
EDB	=	1,2-dibromoetha	ne analyzed	using EPA	Method 82608	3.													
TOG	=	Total oil and grea	ase.																
Green	=	Soil has been ex	cavated.																
ND	=	Not detected at c	or above the	laboratory	reporting limit.														
feet bgs	=	Feet below grour	nd surface.																
mg/kg	=	Milligrams per kil	logram.																
<	=	Less than the sta	ated laborato	ry reporting	g limit.														
	=	Not analyzed/No	t sampled/N	ot applicab	le.														
а	=	Analyte was dete	ected at a co	ncentration	below the rep	orting limit and a	bove the la	boratory m	ethod deter	ction limit. I	Reported	value is es	stimated.						
b	=	The sample extra	act was subj	ected to Si	lica Gel treatm	ent prior to analy	sis.												
				4	and the sheet of the														
С	=	The chromatogra	aphic pattern	does not r	natch that of th	e specified stan	dard.												

### TABLE 4 DUAL-PHASE EXTRACTION TESTS - EXTRACTION WELL DATA Former Mobil Service Station 99105 6301 San Pablo Avenue Oakland, California (Page 1 of 2)

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		LRP	Elapsed	Blower Vacuum	Well Vacuum	Vapor Flow	Vapor Flow	Oxidizer Temp	Oxidizer Temp	Vapor Temp	Vapor Pressure	PID Influent	PID Effluent	Totalizer Reading
Date	Time	Hours	Time	(in Hg)	(in Hg)	(fpm)	(scfm)	(deg C)	(deg F)	(deg F)	(in H <sub>2</sub> O)	(ppm)	(ppm)	(gallons)
Extraction	Well MW	5												
08/18/14	15:30	34,232	0.0	18.0	15.0	1,120	24.4	458	856	75	100	860	2.3	26,100
08/18/14	16:00	34,232	0.5	18.0	15.0	1,720	37.5	424	795	75		895	2.1	26,100
08/18/14	16:30	34,233	1.0	18.0	16.0	1,586	34.9	414	777	75	3.5	795	4.0	26,100
08/18/14	17:30	34,234	1.5	18.5	16.0	1,460	32.1	419	786	75	3.0	870	4.5	26,100
Extraction														
08/18/14	17:35	34,234	0,0	25.5	21.0	580	12.6	364	687	75	0.0	1,116	4.0	26,100
08/18/14	18:05	34,234	0.5	25.5	21.0	630	13.9	380	716	70	1.5	840	2.9	26,100
08/18/14	18:35	34,235	1.0	26.0	22.0	465	10.2	376	709	72	0.5	963	3.1	26,100
08/18/14	19:05	34,235	1.5	26.0	22.0	410	8.9	378	712	75	0.1	860	3.0	26,100
08/18/14	19:35	34,236	2.0	26.0	22.0	535	11.7	381	718	75	0.1	865	3.7	26,100
Extraction														
08/18/14	20:30	34,237	0.0	19.0	16.5	1,500	33.2	435	815	70	2.6	961	2.3	26,100
08/18/14	21:30	34,238	1.0	20.5	17.5	1,300	28.7	432	810	70	2.1	1,079	3.3	26,100
08/18/14	22:30	34,239	2.0	22.5	21.5	1,100	24.2	433	811	70	0.8	1,301	2.3	26,100
08/18/14	23:30	34,240	3.0	23.5	19.5	1,125	24.8	448	838	70	1.25	1,350	2.7	26,100
08/19/14	0:30	34,241	4.0	23.0	19.0	1,150	25.4	444	831	70	1.2	1,286	2.2	26,100
08/19/14	1:30	34,242	5.0	23.0	18.5	1,150	25.4	436	817	70	1.2	1,305	2.1	26,100
08/19/14	2:30	34,243	6.0	24.0	20.0	1,000	22.1	483	901	70	1.2	1,505	1.3	26,100
08/19/14	3:30	34,244	7.0	24.0	20.0	950	21.0	489	912	70	1.2	1,569	2.0	26,100
08/19/14	4:30	34,245	8.0	24.0	20.0	935	20.6	487	909	70	1.2	1,655	1.7	26,100
08/19/14	5:30	34,246	9.0	24.0	20.0	950	21.0	480	896	70	1.2	1,523	1.3	26,100
08/19/14	6:30	34,247	10.0	24.5	20.0	1,050	23.2	472	882	70	1.5	1,535	3.4	26,100
08/19/14	7:30	34,248	11.0	24.0	20.0	1,050	23.2	468	874	70	1.2	1,530	3.1	26,100
08/19/14	8:30	34,249	12.0	24.0	20.0	975	21.5	460	860	70	1.2	1,482	3.3	26,140
08/19/14	9:30	34,250	13.0	24.0	20.0	1,070	23.4	453	847	75	1.2	1,505	3.7	26,140
08/19/14	10:30	34,251	14.0	24.0	20.5	1,010	22.1	448	838	75	1.1	1,474	3.9	26,140
08/19/14	11:30	34,252	15.0	23.5	20.5	1,045	22.6	441	826	80	1.1	1,441	4.2	26,140
08/19/14	12:30	34,253	16.0	23.5	21.0	1,025	22.2	433	811	80	1.1	1,354	4.3	26,140
08/19/14	13:30	34,254	17.0	23.5	22.0	1,010	21.9	430	806	80	1.1	1,373	4.5	26,140
08/19/14	14:30	34,255	18.0	23.0	21.5	1,090	23.6	447	837	80	1.0	1,440	3.0	26,140
08/19/14	15:30	34,256	19.0	23.0	21.5	1,090	23.6	445	833	80	1.0	1,395	1.4	26,140
08/19/14	16:30	34,257	20.0	23.0	21.5	1,070	23.2	453	847	80	1.0	1,482	1.8	26,140
08/19/14	17:30	34,258	21.0	23.0	21.5	1,095	23.8	457	855	78	1.0	1,512	1.1	26,140
08/19/14	18:30	34,259	22.0	22.5	20.5	1,160	25.1	450	842	80	1.0	1,490	2.0	26,140
08/19/14	19:30	34,260	23.0	23.5	20.5	1,155	25.0	464	867	81	1.0	1,520	3.7	26,140
08/19/14	20:30	34,261	24.0	23.5	20.5	1,120	24.2	466	871	80	1.0	1,561	2.9	26,140
08/19/14	21:30	34,262	25.0	23.5	20.5	1,065	23.1	471	880	80	1.0	1,660	2.5	26,140
08/19/14	22:30	34,263	26.0	23.5	19.5	990	21.8	470	878	70	1.0	1,561	2.5	26,140
08/19/14	23:30	34,264	27.0	23.5	19.5	945	20.8	469	876	70	1.0	1,531	2.7	26,140
08/20/14	0:30	34,265	28.0	23.5	19.5	930	20.5	467	873	70	1.0	1,501	2.7	26,140
08/20/14	1:30	34,266	29.0	23.5	19.5	950	21.0	466	871	70	1.0	1,542	2.6	26,140
08/20/14	2:30	34,267	30.0	23.5	20.0	950	21.0	467	873	70	1.0	1,572	2.9	26,140
08/20/14	3:30	34,268	31.0	23.5	20,0	1,000	22.1	467	873	70	1.0	1,542	2.8	26,140
08/20/14	4:30	34,269	32.0	23.5	19.5	975	21.5	468	874	70	1.0	1,716	2.5	26,140
08/20/14	5:30	34,270	33.0	23.5	19.5	975	21.5	467	873	70	1.0	1,591	2.6	26,140
08/20/14	6:30	34,271	34.0	23.5	20.0	990	21.8	468	874	70	1.1	1,595	2.4	26,140
08/20/14	7:30	34,272	35.0	23.5	20.0	1,035	22.8	470	878	70	1.1	1,625	2.4	26,140
08/20/14	8:30	34,273	36.0	23.5	20.0	1,085	23.9	472	882	70	1.2	1,682	2.3	26,140
08/20/14	9:30	34,274	37.0	23.5	20.0	1,030	22.7	473	883	70	1.3	1,670	2.4	26,140
08/20/14	10:30	34,275	38.0	23.5	20.5	1,050	23.2	478	892	70	1.0	1,644	2.0	26,140
08/20/14	11:30	34,276	39.0	23.5	20.5	1,095	24,2	479	894	70	1.2	1,674	2.0	26,140
08/20/14	12:30	34,277	40.0	23.5	21.0	1,025	22.4	482	900	75	1.7	1614	1.0	26,140
08/20/14	13:30	34,277	41.0	23.5	21.0	1,020	22.4	483	900 901	75	1.6	1,708	0.8	26,140
08/20/14	14:30	34,279	42.0	23.5	21.0	1,055	23.1	485	905	75	1.4	1,701	1.0	26,140
08/20/14	14.30	34,279 34,280	42.0	23.5	21.0	1,080	23.6	487	909	75	1.4	1,670	1.0	26,140
	10.00	J4,200	40.0	20.0	21.0	1,000	20.0	-07	000	10	1	1,070		20,140

#### TABLE 4 **DUAL-PHASE EXTRACTION TESTS - EXTRACTION WELL DATA** Former Mobil Service Station 99105 6301 San Pablo Avenue

Oakland, California (Page 2 of 2)

Blower Well Vapor Vapor Oxidizer Oxidizer Vapor Vapor PID PID Totalizer LRP Elapsed Vacuum Vacuum Flow Flow Temp Temp Temp Pressure Influent Effluent Reading Date Time Hours Time (in Hg) (in Hg) (fpm) (scfm) (deg C) (deg F) (deg F) (in H<sub>2</sub>O) (ppm) (ppm) (gallons) 08/20/14 17:30 34,281 44.0 23.0 22.0 1,055 23.1 497 927 75 1.4 1,712 1.5 26,190 18:30 45.0 22.0 22.7 75 08/20/14 34,282 23.0 1,040 493 919 1.4 1,704 1.0 26,190 08/20/14 19:30 34,283 46.0 23.0 21.0 1,025 22.4 484 903 75 1.3 1,742 1.5 26,190 08/20/14 20:30 34,284 47.0 23.0 20.0 1,055 23.1 485 905 75 1.6 1,701 1.3 26,190 08/20/14 21:30 34,286 49.0 23.0 20.0 1,015 22 4 484 903 70 1.2 1,670 1.8 26,200 08/20/14 22:30 34,286 49.0 23.5 19.5 1,025 22.6 484 903 70 1.2 1,825 1.4 26,200 08/20/14 23:30 34,287 50.0 23.5 19.5 1,025 22.6 486 907 70 1.2 1,806 1.4 26,200 08/21/14 0:30 34,288 51.0 23.5 19.5 1,000 22.1 489 912 68 1.2 1,753 1.3 26,200 08/21/14 1:30 34,289 52.0 23.5 19.5 1,025 22.7 491 916 68 1.2 1,753 1.2 26,200 08/21/14 2:30 34,290 53.0 23.5 19.5 1,025 22.7 495 923 68 1.2 2,231 1.2 26,200 08/21/14 3:30 34,291 54.0 23.5 19.5 1,100 24.4 498 928 68 1.2 1,968 1.1 26,200 08/21/14 4:30 34,292 55.0 23.5 19.5 1,050 23.3 500 932 68 1.2 1,983 1.1 26,200 08/21/14 5:30 34,293 56.0 23.5 19.5 1,100 24.4 504 939 68 1.2 1,870 1.1 26,200 08/21/14 6:30 34,294 57.0 23.0 19.5 1,060 23:5 491 916 68 1.9 1,889 1.0 26,200 08/21/14 7:30 34,295 58.0 23.0 19.5 1,140 25.3 501 934 68 2.0 1,949 1.1 26,200 08/21/14 8:30 34,297 60.0 23.0 20.0 1,185 26.3 505 941 70 3.2 1,930 0.5 26,200 08/21/14 9:30 34,297 60.0 23.0 20.0 1,155 25.6 505 941 72 3.9 1,844 0.6 26,200 08/21/14 10:30 34,298 61.0 22.5 20.5 1,160 25.6 506 943 75 5.6 1,836 0.5 26,200 08/21/14 11:30 34,299 62.0 22.5 20.5 1,155 25.5 509 948 75 5.8 1,848 0.7 26,200 08/21/14 12:30 34,300 63.0 22.5 21.0 1,130 24.9 514 957 77 5.6 1,863 0.6 26,200 08/21/14 13:30 34,301 64.0 22.0 20.5 1,160 25.5 517 963 77 5.7 1.870 0.9 26,200 08/21/14 14:30 \*\*\* ---08/21/14 15:30 34,302 65.0 22.5 20.5 1,190 26.0 468 874 75 1.2 1,897 1.1 26,230 08/21/14 16:30 34,303 66.0 22.5 20.5 1,185 25.8 529 984 77 1.2 1,704 1.0 26,230 08/21/14 17:30 34,304 67.0 22.0 18.0 1,370 30.0 447 837 75 2.0 1,400 0.8 26,230 08/21/14 18:30 34,305 68.0 22.0 21.5 1,060 23.2 449 840 75 1.4 1,814 0.7 26,230 08/21/14 19:30 34,306 69.0 22.5 20.0 1,095 23.9 472 882 75 1.2 1,980 0.6 26,230 20:30 70.0 22.5 20.0 1,150 25.4 475 887 70 1.5 1,795 0.8 08/21/14 34,307 26,230 21:30 34,308 71.0 22.5 20.0 1,110 24.5 480 896 70 1.4 1.2 08/21/14 2,020 26,230 22:30 34,309 72.0 22.5 19.0 1,155 25.8 484 903 70 6.3 2,009 0.9 08/21/14 26,230 08/21/14 23:30 34,310 73.0 22.5 19.0 1.183 26.4 486 907 70 6.0 1,987 1.1 26,230 08/22/14 0:30 34,311 74.0 22.5 19.0 1.137 25.4 486 907 70 6.5 2,034 1.1 26,230 08/22/14 1:30 75.0 23.0 19.0 1.135 25.5 487 909 68 6.4 0.7 26.230 34,312 1,964 08/22/14 2:30 76.0 23.0 19.0 1.145 25.7 489 912 67.5 6.8 1.0 34,313 1,968 26,230 08/22/14 3:30 77.0 22.5 19.0 1,177 26.3 490 914 70 6.5 34,314 1,991 1.1 26,230 4:30 78.0 22.5 19.0 1,225 27.4 492 918 70 6.5 0.8 08/22/14 34,315 1,915 26,230 08/22/14 5:30 34,316 79.0 22.5 19.0 1,180 26.4 494 921 70 6.5 1,938 1.1 26,240 6:30 80.0 22.5 19.0 1,155 25.8 495 923 70 5.6 2.2 08/22/14 34,317 1,915 26,240 7:30 81.0 22.5 19.0 24.8 496 925 70 5.3 0.5 08/22/14 34,318 1.115 1,949 26,240 8:30 82.0 22.5 19.5 1,140 25.4 498 928 70 5.8 0.7 08/22/14 34,319 1,897 26,240 9:30 83.0 22.5 19.5 1,150 25.8 501 934 72 9.4 0.5 08/22/14 34,320 1,870 26,240 08/22/14 10:30 34,321 84.0 22.5 20.0 1,135 25.3 513 955 75 9.7 1,930 0.3 26,240 08/22/14 11:30 85.0 22.5 20.5 1,150 25.6 513 955 77 9.6 1.897 0.5 34,322 26,240 08/22/14 12:00 34,323 86.0 22.5 21.0 1,135 24.7 516 961 80 2.8 1,885 0.5 26,260

> **Total Gallons Extracted** 160

Average Groundwater Flow Rate (gpm) 0.03

Notes: Time = Time on a twenty-four hour clock. Temp = Temperature PID = Photo-ionization detector. in Hg = Inches of mercury vacuum. fpm = Feet per minute. = scfm Standard cubic feet per minute. = deg C Degrees Celsius. deg F = Degrees Fahrenheit. = in H₂O Inches of water column. ppm = Parts per million. gpm = Gallons per minute. = Reading not taken.

# TABLE 5 DUAL-PHASE EXTRACTION TEST - OBSERVATION WELL DATA Former Mobil Service Station 99105 6301 San Pablo Avenue Oakland, California (Page 1 of 2)

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		MW	2	MM	/3	MW	'5	MW	6	MW	7	MW	/8	VW1	VW2	VW3	VW4	VW5
Sampling		Vacuum	DTW	Vacuum	DTW	Vacuum	DTW	Vacuum	DTW	Vacuum	DTW	Vacuum	DTW	Vacuum	Vacuum	Vacuum	Vacuum	Vacuum
Date	Time	(in H <sub>2</sub> 0)	(feet)	(in H <sub>2</sub> 0)	(feet)	(in H <sub>2</sub> 0)	(feet)	(in H <sub>2</sub> 0)	(feet)	(in H <sub>2</sub> 0)	(feet)	(in H <sub>2</sub> 0)	(feet)	(in H <sub>2</sub> 0)				
												2						
Pre-Testing	ļ																	
08/18/14	8:15		11.06		11.83	<u></u>	9.40		13.12		13.81		12.18		242			202
Extraction V	Well MW5																	
08/18/14	15:00	0.00	12.22	0.00		0.00	2222	0.00		0.00	3200	0.00	1000	0.00		0.00	0.00	0.00
08/18/14	15:30	0.00	11.02	0.00	11.85			0.00	14.40	0.00	14.25	0.00	14.00	0.25	0.02	0.01	0.90	1.00
08/18/14	16:00	0.00	11.02	0.00	11.84	<u>(* 144</u> 7)	2000	0.00	14.40	0.00	14.23	0.00	13.99	0.35	0.00	0.00	1.00	1.50
08/18/14	16:30	0.00	5.000	0.00		-		0.01		0.00		0.00		0.43	0.00	0.00	1.25	1.70
08/18/14	17:00	0.00	***	0.00				0.00		0.00		0.00		0.50	0.00	0.00	1.20	2.00
08/18/14	17:30	0.00	11.01	0.00	11.84	-		0.000	14.35	0.00	14.23	0.00	13.96	0.56	0.00	0.00	1.30	2.10
Extraction \	Well MW6																	
08/18/14	17:35	0.00	11.01	0.00	11.84	0.00	8.45	3. <del>313</del>		0.00	14.23	0.00	13.96	0.65	0.00	0.00	1.00	2.50
08/18/14	18:05	0.00		0.00		0.00	<b>2017</b> .5	1000	STEE	0.00	375	0.00		0.75	0.00	0.00	1.00	2.75
08/18/14	18:35	0.00		0.00		1.20	<del></del> ).(		0.5555	0.00		0.00		0.88	0.00	0.00	1.00	3.00
08/18/14	19:05	0.00	1999	0.00		1.50	1946/a		1000	0.00	रणहे.	0.00		0.92	0.00	0.00	1.00	3.30
08/18/14	19:35	0.00	11.00	0.00	11.81	1.50	9.05		13.88	0.00	14.21	0.00	13.90	0.92	0.00	0.00	1.00	3.30
Extraction \	Wells MW5	and MW6																
08/18/14	20:30	0.00		0.05						0.05		0.00		0.05	0.00	0.00	1.90	4.30
08/18/14	22:30	0.00		0.05	200					0.05		0.00		0.40	0.00	0.00	1.80	4.00
08/19/14	0:30	0.00	11.02	0.07	11.83					0.00	14.21	0.00	13.82	0.25	0.00	0.00	2.00	5.00
08/19/14	2:30	0.00		0.00					2000	0.03		0.00		0.25	0.00	0.00	2.10	6.40
08/19/14	4:30	0.00	11.03	0.00	11.83					0.00	14.20	0.00	13.78	0.75	0.00	0.00	2.10	6.50
08/19/14	6:30	0.00	( <b>***</b>	0.00			<del></del>			0.10		0.00		1.20	0.00	0.00	2.10	6.10
08/19/14	8:30	0.00	11.05	0.00	11.84		-			0.00	14.18	0.05	13.88	0.20	0.00	0.00	2.20	6.10
08/19/14	10:30	0.00		0.00			****			0.00		0.05		0.40	0.00	0.00	2.20	6.00
08/19/14	12:30	0.00	11.05	0.00	11.87		1999 (C			0.00	14.17	0.00	13.84	0.40	0.00	0.00	2.20	5.80
08/19/14	14:30	0.00		0.00					S <del>1000</del>	0.00		0.00		0.40	0.00	0.00	2.20	5.00
08/19/14	16:30	0.00	11.05	0.00	11.87	1000			5.000	0.00	14.17	0.00	13.63	0.12	0.00	0.00	2.20	4.40
08/19/14	18:30	0.00		0.00			<del></del> 2		1. <del>SA</del>	0.04	Second	0.00		0.14	0.00	0.00	2.40	4.30
08/19/14	20:30	0.00	11.05	0.00	11.86				1.246	0.00	14.17	0.00	13.59	0.38	0.00	0.00	2.40	4.40
08/19/14	22:30	0.00	1075	0.01						0.05		0.00		0.54	0.00	0.00	2.50	4.40
08/20/14	0:30	0.00	11.08	0.00	11.87					0.00	14.15	0.00	13.55	0.58	0.00	0.00	2.50	4.30
08/20/14	2:30	0.00		0.00						0.00		0.03		0.55	0.00	0.00	2.50	4.00
08/20/14	4:30	0.00	11.08	0.00	11.87					0.04	14.15	0.03	13.50	0.60	0.00	0.00	2.60	3.90
08/20/14	6:30	0.00		0.00						0.04		0.03		0.69	0.00	0.00	2.60	3.90
08/20/14	8:30	0.00	11.12	0.00	11.91			<u>1997</u> )		0.02	14.14	0.02	13.64	0.88	0.00	0.00	2.60	4.00
08/20/14	10:30	0.00		0.00		***		<del>220</del> 0		0.02	-	0.02		0.04	0.00	0.00	2.60	4.20
08/20/14	12:30	0.00	11.15	0.00	11.92			<del></del>		0.02	14.13	0.03	13.60	0.15	0.00	0.00	2.70	4.10
08/20/14	14:30	0.00		0.00						0.02		0.03		0.15	0.00	0.00	2.70	3.90
08/20/14	16:30	0.00	11.15	0.00	1 <b>1.9</b> 4			<del></del> )		0.02	14.13	0.00	13.41	0.10	0.00	0.00	2.60	3.40
08/20/14	18:30	0.00		0.02	3000					0.02	0.000	0.00	-	0.05	0.00	0.00	2.40	3.40
08/20/14	20:30	0.00	11.15	0.00	11.92					0.00	14.12	0.00	13.38	0.15	0.00	0.00	2.50	3.30

## TABLE 5 DUAL-PHASE EXTRACTION TEST - OBSERVATION WELL DATA Former Mobil Service Station 99105 6301 San Pablo Avenue Oakland, California (Page 2 of 2)

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		MW:	2	MW	3	MW	5	MW	6	MW	7	MW	8	VW1	VW2	VW3	VW4	VW5
Sampling		Vacuum	DTW	Vacuum	DTW	Vacuum	DTW	Vacuum	DTW	Vacuum	DTW	Vacuum	DTW	Vacuum	Vacuum	Vacuum	Vacuum	Vacuum
Date	Time	(in H <sub>2</sub> 0)	(feet)	(in H <sub>2</sub> 0)	(feet)	(in H <sub>2</sub> 0)	(feet)	(in H <sub>2</sub> 0)	(feet)	(in H <sub>2</sub> 0)	(feet)	(in H <sub>2</sub> 0)	(feet)	(in H <sub>2</sub> 0)				
08/20/14	22:30	0.00		0.00						0.05		0.00		0.26	0.00	0.00	2.60	3.30
08/21/14	0:30	0.00	11.16	0.00	11.92			1100		0.05	14.12	0.00	13.33	0.29	0.00	0.00	2.60	3.10
08/21/14	2:30	0.00	-	0.00		1440 C	<del></del> )		-	0.12		0.00		0.33	0.00	0.00	2.60	3.10
08/21/14	4:30	0.00	11.16	0.00	11.92				-	0.20	14.11	0.00	13.31	0.28	0.00	0.00	2.60	2.90
08/21/14	6:30	0.00	-	0.01	-					0.15	***	0.00		0.39	0.00	0.00	2.60	3.00
08/21/14	8:30	0.00	11.17	0.00	11.93		***	***		0.20	14.11	0.00	13.44	0.04	0.00	0.00	2.70	3.00
08/21/14	10:30	0.00		0.00						0.05		0.00		0.14	0.00	0.00	2.80	3.20
08/21/14	12:30	0.00	11.17	0.02	11.96		-			0.05	14.09	0.00	13.41	0.10	0.00	0.00	2.80	3.00
08/21/14	14:30	0.00							-	1000								
08/21/14	16:30	0.00	11.18	0.00	11.97		tereter (		X <del>550</del>	0.00	14.08	0.00	13.21	0.00	0.00	0.00	2.20	2.40
08/21/14	18:30	0.00		0.00					3.000	0.00		0.00		0.00	0.00	0.00	2.20	2.40
08/21/14	20:30	0.00	11.17	0.00	11.95		<del></del> 2			0.00	14.08	0.00	13.20	0.00	0.00	0.00	2.30	2.40
08/21/14	22:30	0.00		0.02						0.15	1555	0.00		0.00	0.00	0.00	2.40	2.40
08/22/14	0:30	0.00	11.18	0.02	11.94			222	ारण	0.00	14.08	0.00	13.18	0.26	0.00	0.02	2.40	2.60
08/22/14	2:30	0.00		0.00			<del></del> .			0.00		0.00		0.25	0.00	0.04	2.40	2.30
08/22/14	4:30	0.00	11.18	0.02	11.95					0.00	14.08	0.00	13.15	0.22	0.00	0.02	2.40	2.20
08/22/14	6:30	0.00		0.02			<u>2000</u> (		<u></u>	0.00		0.00		0.25	0.00	0.02	2.40	2.20
08/22/14	8:30	0.00	11.19	0.01	11.95	12.22				0.00	14.07	0.00	13.28	0.12	0.00	0.02	2.40	2.20
08/22/14	10:30	0.00		0.04		0.25	2227			0.10	1000	0.00	1410	0.05	0.00	0.04	2.50	2.20
08/22/14	12:00	0.00	11.17	0.04	11.95		9.60		11.20	0.00	Dry	0.00	13.10	0.00	0.00	0.02	2.60	2.00

Notes:

Time = Time presented using a 24-hour clock.

DTW = Depth to water.

mg/L = Milligrams per liter.

--- = Reading not taken.

## TABLE 6 DUAL-PHASE EXTRACTION TESTS - SOIL VAPOR ANALYTICAL RESULTS Former Mobil Service Station 99105 6301 San Pablo Avenue Oakland, California (Page 1 of 1)

14

Sample	Sampling	Sampling	TPHg	MTBE	В	Т	E	Х	TBA	DIPE	ETBE	TAME	EDB	1,2-DCA
ID	Date	Time	(mg/m³)											
Extraction Well MV	V5													
V-INF-MW5-1	08/18/14	15:30	5,000	<0.29	1.5	<0.75	0.21	<0.087	<0.61	<0.33	<0.33	<0.33	<0.15	<0.081
V-INF-MW5-2	08/18/14	17:30	3,000	<0.29	2.3	<0.75	0.33	<0.087	<0.61	<0.33	<0.33	<0.33	<0.15	<0.081
Extraction Well MV	V6													
V-INF-MW6-1	08/18/14	17:35	3,000	<0.29	0.20	<0.75	0.97	3.2	<0.61	<0.33	<0.33	<0.33	<0.15	<0.081
V-INF-MW6-2	08/18/14	19:35	2,000	<0.29	<0.064	<0.75	0.36	1.2	<0.61	<0.33	< 0.33	<0.33	<0.15	<0.081
Extraction Wells M	W5 and MW	6												
V-INF-COMP-1	08/18/14	20:35	250	<0.072	2.0	<0.19	0.26	0.31	<0.15	<0.084	<0.084	<0.084	<0.038	<0.020
V-INF-COMP-1	08/19/14	4:30	5,200	<0.18	7.1	<0.47	3.0	0.24	<0.38	<0.21	<0.21	<0.21	<0.096	<0.051
V-INF-COMP-2	08/19/14	12:30	4,400	<0.18	6.2	<0.47	3.4	0.48	<0.38	<0.21	<0.21	<0.21	<0.096	<0.051
V-INF-COMP-3	08/19/14	20:35	5,200	<0.72	8.3	<1.9	5.1	<0.22	<1.5	<0.84	<0.84	<0.84	<0.38	<0.20
V-INF-COMP-4	08/20/14	4:30	4,800	<0.72	8.0	<1.9	4.8	<0.22	<1.5	<0.84	<0.84	<0.84	<0.38	<0.20
V-INF-COMP-5	08/20/14	12:30	4,800	<0.29a	5.6a	<0.75a	3.5a	0.38a	<0.61a	<0.33a	<0.33a	<0.33a	<0.15a	<0.081a
V-INF-COMP-6	08/20/14	20:35	4,900	<0.12a	4.2a	<0.30a	3.2a	0.39a	<0.24a	<0.13a	<0.13a	<0.13a	<0.061a	<0.032a
V-INF-COMP-7	08/21/14	4:30	5,200	<0.29a	6.0a	<0.75a	4.4a	0.53a	<0.61a	<0.33a	<0.33a	<0.33a	<0.15a	<0.081a
V-INF-COMP-8	08/21/14	12:30	5,300	<0.12a	3.4a	<0.30a	2.5a	0.37a	<0.24a	<0.13a	<0.13a	<0.13a	<0.061a	<0.032a
V-INF-COMP-9	08/21/14	20:30	5,000	<0.29a	5.2a	<0.75a	3.4a	0.47a	<0.61a	<0.33a	<0.33a	<0.33a	<0.15a	<0.081a
V-INF-COMP-10	08/22/14	4:30	4,600	<0.29a	3.2a	<0.75a	2.0a	<0.087	<0.61a	<0.33a	<0.33a	<0.33a	<0.15a	<0.081a
V-INF-COMP-11	08/22/14	12:00	5,200	<0.12a	2.7a	<0.30a	2.9a	0.55a	<0.24a	<0.13a	<0.13a	<0.13a	<0.061a	<0.032a
V-EFF-1	08/18/14	20:30	22	<0.0072	0.0052	<0.019	<0.0022	<0.0022	<0.015	<0.0084	<0.0084	<0.0084	<0.0038	<0.0020

Notes:		
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method TO-3M.
MTBE	=	Methyl tertiary butyl ether analyzed using EPA Method TO-15M.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method TO-15M.
1,2-DCA	=	1,2-dibromoethane analyzed using EPA Method TO-15M.
EDB	=	1,2-dichloroethane analyzed using EPA Method TO-15M.
TBA	=	Tertiary butyl alcohol analyzed using EPA Method TO-15M.
,DIPE	=	Di-isopropyl ether analyzed using EPA Method TO-15M.
ETBE	=	Ethyl tertiary butyl ether analyzed using EPA Method TO-15M.
TAME	=	Tertiary amyl methyl ether analyzed using EPA Method TO-15M.
mg/m³	=	Milligrams per cubic meter.
<	=	Less than the stated laboratory reporting limit.
а	=	Analyzed outside of recommended holding time.

# TABLE 7 DUAL-PHASE EXTRACTION TESTS - GROUNDWATER ANALYTICAL RESULTS Former Mobil Service Station 99105 6301 San Pablo Avenue Oakland, California (Page 1 of 1)

Extraction	Sample	Sampling	Sampling	TPHd	TPHg	MTBE	В	T	E	X	ТВА	DIPE	ETBE	TAME	EDB	1,2-DCA
Well	ID	Date	Time	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW5	W-11-MW5	07/14/14	9:15	88,000a	90,000a	<5.0	100	<5.0	12	<5.0	<50	<5.0	<5.0	<5.0	<5.0	<5.0
MW5	W-9.60-MW5	08/22/14	14:35	5,800a	5,100	<5.0	520	<5.0	320	81	<50	<5.0	<5.0	<5.0	<5.0	<5.0
MW6	W-14-MW6	08/18/14	12:30	350a	410a	0.60	<0.50	<0.50	<0.50	<0.50	14	<0.50	<0.50	<0.50	<0.50	1.1
MW6	W-11.20-MW6	08/22/14	14:55	1,000a	1,500a	<0.50	<0.50	<0.50	<0.50	<0.50	12	<0.50	<0.50	<0.50	<0.50	<0.50
MW7	W-14-MW7	08/18/14	12:15	<51	<50	<0.50	<0.50	<0.50	<0.50	<0.50	21	<0.50	<0.50	<0.50	<0.50	3.1
MW7		08/22/14		Dry										-0.50		
MW8	W-13-MW8	08/18/14	13:00	440a	1,600	<0.50	39	<0.50	19	4.4	20	<0.50	-0 50	-0.50	-0.50	0.70
										44	20	<0.50	<0.50	<0.50	<0.50	0.78
MW8	W-13.10-MW8	08/22/14	15:25	350a	950a	<0.50	5.7	<0.50	4.2	6.4	31	<0.50	<0.50	<0.50	<0.50	<0.50

Notes:		
TPHd	=	Total petroleum hydrocarbons as diesel analyzed using EPA Method 8015B.
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015B.
MTBE	=	Methyl tertiary butyl ether analyzed using EPA Method 8260B.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8260B.
TBA	=	Tertiary butyl alcohol 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.
EDB	=	1,2-dibromoethane analyzed using EPA Method 8260B.
1,2-DCA	=	1,2-dichloroethane analyzed using EPA Method 8260B.
µg/L	=	Micrograms per liter.
<	=	Less than the stated laboratory reporting limit.
	=	Not sampled.
а	=	Chromatographic pattern does not match that of the specified standard.

## TABLE 8 DUAL-PHASE EXTRACTION TESTS - VAPOR-PHASE HYDROCARBON REMOVAL Former Mobil Service Station 99105 6301 San Pablo Avenue Oakland, California (Page 1 of 1)

				F F	ield Mea	suremen	ts	Laborato	ory Analytica	al Results	TPHg	Removal	MTBE	Removal	Benzen	e Removal
Sample	Sampling	Sampling	Hours of	Temp	Press	Flow	PID	TPHg	MTBE	Benzene	Period	Cumulative	Period	Cumulative	Period	Cumulative
ID	Date	Time	Operation	(deg F)	("H <sup>2</sup> O)	(scfm)	(ppmv)	(mg/m³)	(mg/m³)	(mg/m³)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)
Extraction Well MV	V5															
V-INF-MW5-1	08/18/14	15:30	0	75		24.4	860	5,000	<0.29	1.5	0.000	0.000	<0.000	<0.000	0.000	0.000
V-INF-MW5-2	08/18/14	17:30	2	75	3.0	32.1	870	3,000	<0.29	2.3	0.845	0.845	<0.000	<0.000	0.000	0.000
Extraction Well MV	V6															
V-INF-MW6-1	08/18/14	17:35	0	75	0.0	12.6	1,116	3,000	<0.29	0.20	0.000	0.000	<0.000	<0.000	0.000	0.000
V-INF-MW6-2	08/18/14	19:35	2	75	0.1	11.7	865	2,000	<0.29	<0.064	0.227	0.227	<0.000	<0.000	0.000	0.000
Extraction Wells M	W5 and MW	6														
V-INF-COMP-1	08/18/14	20:30	0	70	2.6	33.2	961	250	<0.072	2.0	0.000	0.000	<0.000	<0.000	0.000	0.000
V-INF-COMP-1	08/19/14	4:30	8	70	1.2	20.6	1,655	5,200	<0.18	7.1	2.195	2.195	<0.000	<0.000	0.004	0.004
V-INF-COMP-2	08/19/14	12:30	16	80	1.1	22.2	1,354	4,400	<0.18	6.2	3.075	5.270	<0.000	<0.000	0.004	0.008
V-INF-COMP-3	08/19/14	20:30	24	80	1.0	24.2	1,561	5,200	<0.72	8.3	3.335	8.605	<0.000	<0.001	0.005	0.013
V-INF-COMP-4	08/20/14	4:30	32	70	1.0	21.5	1,716	4,800	<0.72	8.0	3.422	12.026	<0.000	<0.001	0.006	0.019
V-INF-COMP-5	08/20/14	12:30	40	75	1.7	22.4	1,614	4,800	<0.29a	5.6a	3.155	15.181	<0.000	<0.001	0.004	0.023
V-INF-COMP-6	08/20/14	20:30	47	75	1.6	23.1	1,701	4,900	<0.12a	4.2a	2.890	18.071	<0.000	<0.001	0.003	0.026
V-INF-COMP-7	08/21/14	4:30	55	68	1.2	23.3	1,983	5,200	<0.29a	6.0a	3.501	21.572	<0.000	<0.002	0.004	0.029
V-INF-COMP-8	08/21/14	12:30	63	77	5.6	24.9	1,863	5,300	<0.12a	3.4a	3.780	25.352	<0.000	<0.002	0.003	0.033
V-INF-COMP-9	08/21/14	20:30	70	70	1.5	25.4	1,795	5,000	<0.29a	5.2a	3.389	28.741	<0.000	<0.002	0.003	0.036
V-INF-COMP-10	08/22/14	4:30	78	70	6.5	27.4	1,915	4,600	<0.29a	3.2a	3.790	32.531	<0.000	<0.002	0.003	0.039
V-INF-COMP-11	08/22/14	12:00	86	80	2,8	24.7	1,885	5,200	<0.12a	2.7a	3.816	36.347	<0.000	<0.002	0.002	0.041
									Total	Removed:		37.419		<0.002		0.042

Notes:	Pomovol	rates are calculated using SOP-25: "Hydrocarbons Removed from A Vadose Well."
notes.	Removal	rates are calculated using SOF-25. Hydrocarbons Removed from A valose well.
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method TO-3M.
MTBE	=	Methyl tertiary butyl ether analyzed using EPA Method TO-15M.
Benzene	=	Benzene analyzed using EPA Method TO-15M.
deg F	=	Degrees Fahrenheit.
psi	=	Pounds per square inch.
in H2O	=	Inches of water column.
scfm	=	Standard cubic feet per minute.
mg/m <sup>3</sup>	=	Milligrams per cubic meter.
ppmv	=	Parts per million by volume.
<	=	Less than the stated laboratory reporting limit.
а	=	Analyzed outside of recommended holding time.

## TABLE 9 DUAL-PHASE EXTRACTION TESTS - DISSOLVED-PHASE HYDROCARBON REMOVAL Former Mobil Service Station 99105 6301 San Pablo Avenue Oakland, California (Page 1 of 1)

			Hours of	Totalizer	Gallons	Average	Laboratory Analytical Results			TPHd Removal TPHg Removal			MTBE F	Removal	Benzene Removal			
Sample	Sampling	Sampling	Operation	Reading	Pumped	Flow Rate	TPHd	TPHg	MTBE	Benzene	Per Period	Cumulative	Per Period	Cumulative	Per Period	Cumulative	Per Period	Cumulative
IÐ	Date	Time	(hours)	(gallons)	(gallons)	(gpm)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)
W-11-MW5	07/14/14	9:15	0	26,100	0		88,000a	90,000a	<5.0	100	0.000	0.000	0.000	0.000	<0.000	<0.000	0.000	0.000
W-9.60-MW5	08/22/14	14:35	90	26,260	160	0.03	5,800a	5,100	<5.0	520	0.063	0.063	0.063	0.063	<0.000	<0.000	0.000	0.000
W-14-MW6	08/18/14	12:30	0	26,100	0		350a	410a	0.60	<0.50	0.000	0.000	0.000	0.000	<0.000	<0.000	<0.000	<0.000
W-11.20-MW6	08/22/14	14:55	90	26,260	160	0.03	1,000a	1,500a	<0.50	<0.50	0.001	0.001	0.001	0.001	<0.000	<0.000	<0.000	<0.000
									Total	Removed:		0.064		0.065		<0.000		<0.000

Notes:		
TPHd	=	Total petroleum hydrocarbons as diesel analyzed using EPA Method 8015B.
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015B.
MTBE	=	Methyl tertiary butyl ether analyzed using EPA Method 8260B.
Benzene	=	Benzene analyzed using EPA Method 8260B.
gpm	=	Gallons per minute.
µg/L	=	Micrograms per liter.
<	=	Less than the stated laboratory reporting limit.
	=	Not measured.
а	=	Chromatographic pattern does not match that of the specified standard.

## **APPENDIX A**

## CORRESPONDENCE

### ALAMEDA COUNTY HEALTH CARE SERVICES



ALEX BRISCOE, Agency Director

AGENCY

ENVIRONMENTAL HEALTH SERVICES ENVIRONMENTAL PROTECTION 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577 (510) 567-6700 FAX (510) 337-9335

September 24, 2013

Jennifer SedlachekOn Dan and Nathan LamExxonMobil200 El Dorado Terrace4096 Piedmont, Ave., #194San Francisco, CA 94112Oakland, CA 94611 (Sent via e-mail to: jennifer.c.sedlachek@exxonmobil.com)

Subject: Fuel Leak Case No. RO0000445 and Geotracker Global ID T0600101855, Mobil#99-105 / Cars Rent A Car, 6301 San Pablo Avenue, Oakland, CA 94608

Dear Ms. Sedlachek and Messrs. Lam:

Thank you for the recently submitted report entitled, *Corrective Action Plan Addendum* (CAP Addendum) dated May 14, 2013 prepared by Cardno ERI for the subject site. Alameda County Environmental Health (ACEH) staff has reviewed the case file including the above-mentioned reports for the above-referenced site.

The above-mentioned report addresses ACEH's technical comments on the Site Conceptual Model Update, Low-Threat Closure Evaluation, and Feasibility Study/Corrective Action Plan (CAP) dated October 25, 2012. The CAP and CAP Addendum propose conducting dual-phase extraction (DPE) from source areas where newly observed free product is present (MW-5) and maximum concentration of soil vapor were observed. ACEH generally concurs with the proposed corrective action, however requests that you address the following technical comments and send us a Groundwater and Soil Vapor Performance Monitoring Work Plan that addresses the technical comments below.

#### **TECHNICAL COMMENTS**

 <u>DPE Performance Monitoring</u> – The CAP and CAP Addendum recommend DPE extraction from existing well MW-5 and proposed well MW-6. ACEH notes that using the monitoring wells as groundwater extraction wells does not provide for an adequate groundwater monitoring network to evaluate the effectiveness of the remedial action. Obtaining a sample from a well that is being used in remediation will not be representative of static conditions.

In an email correspondence dated September 5, 2013, Cardno ERI states that soil borings installed and sampled in 2012 are representative of groundwater conditions with respect to the lateral distribution of dissolved-phase hydrocarbons and that a groundwater performance monitoring well network is not necessary. Our review of the rose diagram indicates that groundwater flow direction has varied from northwest to south during historic groundwater monitoring events. Although these borings previously identified the downgradient extent of the groundwater contaminant plume, they were advanced prior to the recent detection of sheen and increasing total petroleum hydrocarbon as diesel (TPHd) concentrations that are indicative of free product in monitoring well MW-5. This same rationale may apply to the vicinity of proposed monitoring well MW-6 in the vicinity of vapor well VW4 that had

significantly elevated levels of petroleum hydrocarbons in soil gas. Therefore, installation of performance monitoring wells downgradient of the extraction wells in the source area is necessary.

In addition, since soil vapor is the main concern at the site, ACEH recommends that performance monitoring include post remedial monitoring for vapor more than once as proposed. ACEH recommends that the vapor wells be sampled for verification monitoring for one year after DPE events are completed. At a minimum, soil vapor monitoring should include wells VW-1, VW-4 and VW-5.

Please present a strategy and schedule for performance monitoring of both groundwater and soil vapor in the area of remediation. Please include development and sampling of new monitoring and extraction wells to collect baseline conditions prior to start-up of the DPE system.

Please update the remedial costs as appropriate to incorporate the elements discussed above.

- 2. <u>Well Installation and Soil Sampling</u> The Low-Threat Closure Policy uses soil concentrations from the 0 to 5 and 5 to 10 foot interval to assess direct contact and outdoor air, since TPHd has been detected in groundwater at the site and previously no naphthalene data has been collected in soil or groundwater, please collect naphthalene data from the proposed well boring(s) and add naphthalene to the groundwater analysis in wells with historical detections of TPHd on a one time basis. Use silica gel cleanup for TPHd analysis in groundwater.
- 3. **Groundwater Monitoring** Please continue semi-annual groundwater monitoring in accordance with the approved groundwater monitoring plan until the CAP is approved for the site and submit groundwater monitoring report (GWM\_R) in accordance with the schedule below.

#### TECHNICAL REPORT REQUEST

Please submit technical reports to ACEH (Attention: Barbara Jakub), according to the following schedule:

- September 30, 2013 Groundwater Monitoring Report (2<sup>nd</sup> Semi-Annual) (File to be named: GWM\_R\_yyyy-mm-dd)
- November 15, 2013 Groundwater and Soil Vapor Performance Monitoring Work Plan (File to be named CAP\_R\_ADEND\_yyyy-mm-dd)
- March 1, 2014 Groundwater Monitoring Report (1st Semi-Annual) (File to be named: GWM\_R\_yyyy-mm-dd)

Ms. Sedlachek and Messrs. Lam RO0000445 September 24, 2013, Page 3

Should you have any questions or concerns regarding this correspondence or your case, please contact Dilan Roe at (510) 567-6767 or send her an electronic mail message at <u>dilan.roe@acgov.org</u> as I will be transferring out of the Local Oversight Program on September 27, 2013.

Sincerely,

Budara Jakut

Digitally signed by Barbara J. Jakub DN: cn=Barbara J. Jakub, o, ou, email=barbara.jakub@acgov.org, c=US Date: 2013.09.24 15:59:53 -07'00'

Barbara J. Jakub, P.G. 🥙 Hazardous Materials Specialist

> Enclosure: Responsible Party(ies) Legal Requirements/Obligations ACEH Electronic Report Upload (ftp) Instructions

cc: Rebekah Westrup, Cardno ERI, 601 North McDowell Blvd., Petaluma, CA 94954-2312 (Sent via e-mail to: rwestrup@ERI-US.com)
Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032 (Sent via E-mail to: lgriffin@oaklandnet.com)
Dilan Roe, ACEH (Sent via E-mail to: dilan.roe@acgov.org)
Barbara Jakub, ACEH (Sent via E-mail to: barbara.jakub@acgov.org)
GeoTracker, File

<u>Detterman, Karel, Env. Health</u>
<u>"Grea Gurss"; "david.daniels@cardno.com"</u>
<u>Roe, Dilan, Env. Health; "Sedlachek, Jennifer C"</u>
RE: Fuel Leak Case RO0000445 and GeoTracker Global ID T0600102089, Mobil #99-105/Cars Rent a Car, 6301
San Pablo Avenue, Oakland, CA
Wednesday, July 09, 2014 4:37:41 PM

Hello everyone:

Thank you for participating in our conference call today to discuss clarifications to the December 12, 2013 Second Addendum to the Corrective Action Plan (Second Addendum). Based on our discussion, the proposed scope of work is approved for implementation. Submittal of a revised work plan or a work plan addendum is not required unless an alternate scope of work outside that described in the work plan or these technical comments is proposed. We request that you perform the proposed work and send us the report described below. Please provide 72-hour advance written notification to this office (e-mail preferred to:karel.detterman@acgov.org) prior to the start of field activities.

#### TECHNICAL REPORT REQUEST

Please upload technical reports to the ACEH ftp site (Attention: Karel Detterman), and to the State Water Resources Control Board's Geotracker website, in accordance with the following specified file naming convention and schedule:

 September 10, 2014 – Soil and Groundwater Investigation Report File to be named: RO445\_SWI\_R\_yyyy-mm-dd

This report is being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

Thank you for your cooperation. Should you have any questions or concerns regarding this correspondence or your case, please send me an e-mail message at <u>karel.detterman@acgov.org</u> or call me at (510) 567-6708.

Karel Detterman, PG Hazardous Materials Specialist Alameda County Environmental Health 1131 Harbor Bay Parkway Alameda, CA 94502 Direct: 510.567.6708 Fax: 510.337.9335 Email: karel.detterman@acgov.org

PDF copies of case files can be downloaded at:

http://www.acgov.org/aceh/lop/ust.htm

**APPENDIX B** 

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PROTOCOLS



#### Cardno ERI Soil Boring and Well Installation Field Protocol

#### **Preliminary Activities**

Prior to the onset of field activities at the site, Cardno ERI obtains the appropriate permit(s) from the governing agency(s). Advance notification is made as required by the agency(s) prior to the start of work. Cardno ERI marks the borehole locations and contacts the local one call utility locating service at least 48 hours prior to the start of work to mark buried utilities. Borehole locations may also be checked for buried utilities by a private geophysical surveyor. Prior to drilling, the borehole location is cleared in accordance with the client's procedures. Fieldwork is conducted under the advisement of a registered professional geologist and in accordance with an updated site-specific safety plan prepared for the project, which is available at the job site during field activities.

#### **Drilling and Soil Sampling Procedures**

Cardno ERI contracts a licensed driller to advance the boring and collect soil samples. The specific drilling method (e.g., hollow-stem auger, direct push method, or sonic drilling), sampling method [e.g., core barrel or Californiamodified split spoon sampler (CMSSS)] and sampling depths are documented on the boring log and may be specified in a work plan. Soil samples are typically collected at the capillary fringe and at 5-foot intervals to the total depth of the boring. To determine the depth of the capillary fringe prior to drilling, the static groundwater level is measured with a water level indicator in the closest monitoring well to the boring location, if available.

The borehole is advanced to just above the desired sampling depth. For CMSSSs, the sampler is placed inside the auger and driven to a depth of 18 inches past the bit of the auger. The sampler is driven into the soil with a standard 140-pound hammer repeatedly dropped from a height of 30 inches onto the sampler. The number of blows required to drive the sampler each 6-inch increment is recorded on the boring log. For core samplers (e.g., direct push), the core is driven 18 inches using the rig apparatus.

Soil samples are preserved in the metal or plastic sleeve used with the CMSSS or core sampler, in glass jars or other manner required by the local regulatory agency (e.g., Environmental Protection Agency Method 5035). Sleeves are removed from the sample barrel, and the lowermost sample sleeve is immediately sealed with Teflon<sup>™</sup> tape, capped, labeled, placed in a cooler chilled to 4° Celsius and transported to a state-certified laboratory. The samples are transferred under chain-of-custody (COC) protocol.

#### **Field Screening Procedures**

Cardno ERI places the soil from the middle of the sampling interval into a plastic re-sealable bag. The bag is placed away from direct sunlight for a period of time which allows volatilization of chemical constituents, after which the tip of a photo-ionization detector (PID) or similar device is inserted through the plastic bag to measure organic vapor concentrations in the headspace. The PID measurement is recorded on the boring log. At a minimum, the PID or other device is calibrated on a daily basis in accordance with manufacturer's specifications using a hexane or isobutylene standard. The calibration gas and concentration are recorded on a calibration log. Instruments such as the PID are useful for evaluating relative concentrations of volatilized hydrocarbons, but they do not measure the concentration of petroleum hydrocarbons in the soil matrix with the same precision as laboratory analysis. Cardno ERI trained personnel describe the soil in the bag according to the Unified Soil Classification System and record the description on the boring log, which is included in the final report.

#### **Air Monitoring Procedures**

Cardno ERI performs a field evaluation for volatile hydrocarbon concentrations in the breathing zone using a calibrated photo-ionization detector or lower explosive level meter.

Cardno ERI Soil Boring and Well Installation Field Protocol

#### Groundwater Sampling

A groundwater sample, if desired, is collected from the boring by using Hydropunch<sup>TM</sup> sampling technology or installing a well in the borehole. In the case of using Hydropunch<sup>TM</sup> technology, after collecting the capillary fringe soil sample, the boring is advanced to the top of the soil/groundwater interface and a sampling probe is pushed to approximately 2 feet below the top of the static water level. The probe is opened by partially withdrawing it and thereby exposing the screen. A new or decontaminated bailer is used to collect a water sample from the probe. The water sample is then emptied into laboratory-supplied containers constructed of the correct material and with the correct volume and preservative to comply with the proposed laboratory test. The container is slowly filled with the retrieved water sample until no headspace remains and then promptly sealed with a Teflon-lined cap, checked for the presence of bubbles, labeled, entered onto a COC record and placed in chilled storage at 4° Celsius. Laboratory-supplied trip blanks accompany the water samples as a quality assurance/quality control procedure. Equipment blanks may be collected as required. The samples are kept in chilled storage and transported under COC protocol to a client-approved, state-certified laboratory for analysis.

#### **Backfilling of Soil Boring**

If a well is not installed, the boring is backfilled from total depth to approximately 5 feet below ground surface (bgs) with either neat cement or bentonite grout using a tremie pipe and either the boring is backfilled from 5 feet bgs to approximately 1 foot bgs with hydrated bentonite chips or backfill is continued to just below grade with neat cement grout. The borehole is completed to surface grade with material that best matches existing surface conditions and meets local agency requirements. Site-specific backfilling details are shown on the respective boring log.

#### Well Construction

A well (if constructed) is completed using materials documented on the boring log or specified in a work plan. The well is constructed with slotted casing across the desired groundwater sampling depth(s) and completed with blank casing to within 6 inches of surface grade. No further construction is conducted on temporary wells. For permanent wells, the annular space of the well is backfilled with Monterey sand from the total depth to approximately 2 feet above the top of the screened casing. A hydrated granular bentonite seal is placed on top of the sand filter pack. Grout may be placed on top of the bentonite seal to the desired depth using a tremie pipe. The well may be completed to surface grade with a 1-foot thick concrete pad. A traffic-rated well vault and locking cap for the well casing may be installed to protect against surface-water infiltration and unauthorized entry. Site-specific well construction details including type of well, well depth, casing diameter, slot size, length of screen interval and sand size are documented on the boring log or specified in the work plan.

#### Well Development and Sampling

If a permanent groundwater monitoring well is installed, the grout is allowed to cure a minimum of 48 hours before development. Cardno ERI personnel or a contracted driller use a submersible pump or surge block to develop the newly installed well. Prior to development, the pump is decontaminated by allowing it to run and re-circulate while immersed in a non-phosphate solution followed by successive immersions in potable water and de-ionized water baths. The well is developed until sufficient well casing volumes are removed so that turbidity is within allowable limits and pH, conductivity and temperature levels stabilize in the purge water. The volume of groundwater extracted is recorded on a log.

Following development, groundwater within the well is allowed to recharge until at least 80% of the drawdown is recovered. A new or decontaminated bailer is slowly lowered past the air/water interface in the well, and a water sample is collected and checked for the presence of non-aqueous phase liquid, sheen or emulsions. The water sample is then emptied into laboratory-supplied containers as discussed above.

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Cardno ERI Soil Boring and Well Installation Field Protocol

#### Surveying

If required, wells are surveyed by a licensed land surveyor relative to an established benchmark of known elevation above mean sea level to an accuracy of +/- 0.01 foot. The casing is notched or marked on one side to identify a consistent surveying and measuring point.

#### **Decontamination Procedures**

Cardno ERI or the contracted driller decontaminates soil and water sampling equipment between each sampling event with a non-phosphate solution, followed by a minimum of two tap water rinses. De-ionized water may be used for the final rinse. Downhole drilling equipment is steam-cleaned prior to drilling the borehole and at completion of the borehole.

#### Waste Treatment and Soil Disposal

Soil cuttings generated from the drilling or sampling are stored on site in labeled, Department of Transportationapproved, 55-gallon drums or other appropriate storage container. The soil is removed from the site and transported under manifest to a client- and regulatory-approved facility for recycling or disposal. Decontamination fluids and purge water from well development and sampling activities, if conducted, are stored on site in labeled, regulatory-approved storage containers. Fluids are subsequently transported under manifest to a client- and regulatory-approved facility for disposal or treated with a permitted mobile or fixed-base carbon treatment system.

#### **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:

Ir.	=	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.



#### Cardno ERI Dual-Phase Extraction Test Field Protocol

Dual-phase extraction (DPE) consists of extracting vapor and liquid through the same conduit. If vapor phase, dissolved phase and separate phase contaminants are all present, the procedure is often referred to as multi-phase extraction. Testing procedures are the same for both.

#### **Objective**

The objective of a DPE test is often two-fold: 1) to determine the radius of influence (ROI) and obtain engineering data for evaluation of future remediation options at the site, and 2) to accomplish mass removal of hydrocarbons by removing both soil vapor and groundwater from one or more wells.

Cardno ERI utilizes a DPE mobile treatment system that has the capability of removing hydrocarbon-affected groundwater and soil vapor simultaneously. Vacuum may be provided by various types of blowers - a liquid ring pump (high vacuum for tight formations – 10 to 25 inches of mercury) or positive displacement or regenerative blowers (modest vacuum for sandy formations – 3 to 12 inches of mercury). Hydrocarbon vapor is treated on site with a thermal/catalytic oxidizer, which has been approved for operation by the local air pollution control agency. As an alternative, for sites with low soil vapor concentrations, Cardno ERI uses activated carbon to treat the extracted soil vapor.

#### Phase I – DPE Test to Obtain Engineering Data

For the extraction well, one groundwater well is selected near the center of the area to be tested. Usually this is a zone containing high levels of hydrocarbons. A wellhead assembly is installed as shown on Plate DPE-1 (attached). Vacuum is measured in three places: 1) at V<sub>o</sub> to monitor the performance of the blower and to estimate flow from the pump curve, 2) at V<sub>1</sub> to determine the vacuum being applied to the formation, and 3) at V<sub>2</sub> to determine the line loss in the stinger and to be sure a standing head of water has not developed in the vacuum stinger tube. Vapor flow rates are measured and vapor samples are collected for analysis after vapor passes through the phase separator and blower.

Observation wells are selected at various distances from the extraction well. It may be necessary to drill additional observation wells if the existing wells are too far away from the extraction well to observe an induced vacuum and/or a water level decrease. If groundwater is present, the wells are equipped with a wellhead seal and a stinger tube as shown on Plate DPE-2 (Wells #3 and #4) (attached). The induced vacuum is periodically measured at V<sub>3</sub> and V<sub>4</sub> during the test using magnehelic gauges or other calibrated meters to determine the effective ROI for vapor extraction, and the values are recorded. The log of the induced vacuum is plotted against the distance from the extraction well to the observation well. The effective ROI is taken as the distance where the induced vacuum would be 0.5 inches of water.

The change in liquid level is measured in the stinger tube using a water level meter to an accuracy of 0.01 foot, and recorded to determine the hydraulic gradient and establish an ROI for groundwater capture. Various hydraulic models are used to determine a capture zone with respect to groundwater flow direction and gradient.

<u>Note:</u> Observation wells #1 and #2 on Plate DPE-2 are included for information to show the effect of removing only vapor from an extraction well. There would be an induced rise of the water level in the well due to vacuum, but the level in the stinger tube would not change because it is still under atmospheric pressure, indicating no hydraulic gradient and thus no net flow of groundwater toward the extraction well.

The test is run until the induced vacuum and depth to water in the observation wells stabilize – usually 4 to 8 hours. Stabilization is said to be reached when readings do not change more than 10% for three consecutive hourly

Cardno ERI Dual-Phase Extraction Test Field Protocol - v.1

observations. The test for engineering data may be repeated on other extraction wells if there is an indication that the site stratigraphy may not be uniform.

Prior to starting Phase I of the DPE test, Cardno ERI performs the following tasks:

- 1. Collect groundwater samples from the extraction well(s).
- Install a stinger tube in the extraction well, extending to approximately 1-2 feet above the total depth of each well. An aboveground hose, covered by a temporary ramp in traffic areas, is used to connect the wellhead assembly from the extraction well to the treatment system.
- 3. Install dip tubes in each observation well containing groundwater approximately 3 to 4 feet into groundwater.
- 4. Measure distances from each observation well to the extraction well.
- 5. Connect the extraction well to the phase separator on the unit.
- 6. Calibrate and install magnehelic gauges on all test wells to measure vacuum (in inches of water) and a flow meter [in cubic feet per minute (cfm)] at the extraction well.
- 7. Install a sample port after the phase separator and blower to sample the influent vapor stream.
- 8. Install a flow meter on the pressure side of the blower.

During Phase I of the DPE test, Cardno ERI performs the following tasks:

- 1. Check and change magnehelic gauges as needed to obtain readings in each gauge's scale range.
- 2. Record the following values:
  - Soil vapor influent concentrations at the unit on the pressure side of the blower
  - Vacuum readings at the extraction well
  - Vacuum readings at each observation well
  - Flow readings at the unit on the pressure side of the blower
  - Volume of groundwater extracted
  - Hour meter reading on the extraction unit
  - Water levels in each observation well containing groundwater

The soil vapor concentrations are measured using a photo-ionization detector or a lower explosive limit meter. The meter is calibrated on a daily basis using a hexane or isobutylene standard. The calibration gas and concentration, and the well and system influent measurements are recorded.

For very concentrated vapor streams, dilution air will be added and measured with a rotameter or pitot tube.

- 3. Pump water periodically from the phase separator into a holding tank.
- 4. Collect samples in a Tedlar<sup>®</sup> bag from the influent vapor stream for analysis by a client-approved, state-certified laboratory under proper storage, shipment and chain-of-custody (COC) protocol. Samples are always stored out of direct sunlight. No ice is placed in the cooler, and the COC is placed inside the cooler. At a minimum, samples are typically collected at the beginning and end of Phase I.

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Cardno ERI Dual-Phase Extraction Test Field Protocol - v.1

#### Phase II - DPE for Mass Removal

For mass removal, one or more groundwater wells are selected near the center of the area containing the highest hydrocarbons. Wellhead fittings as shown on Plate DPE-1 are placed on each extraction well. If more than one well is used for extraction, the total vacuum will be reduced. Care is exercised to ensure that a reasonable ROI is maintained.

Total vapor flow is measured on the pressure side of the blower and the measured flow rate is checked against the blower curve. Vapor samples are collected periodically in a Tedlar<sup>®</sup> bag for analysis on the pressure side of the blower, usually at the beginning, middle and end of an extended test.

Water is collected in tank(s) for later off-site disposal or treated on site with carbon adsorption through a properly permitted unit. The water produced is measured with a totalizer or by recording the level in the tank(s).

The mass of constituents removed with the soil vapor is calculated and tabulated using vapor flow rates and constituent concentrations; the mass of constituents removed with groundwater is calculated and tabulated using water volume and constituent concentrations.

Prior to starting Phase II of the DPE test, Cardno ERI performs the same tasks involving the extraction well(s) and the unit as prior to Phase I with the following modifications:

- Connect the extraction well(s) to a manifold to provide individual well control as necessary during this portion of the test.
- 2. Install a sample port at each extraction well to sample soil vapor at each wellhead.

During Phase II of the DPE test, Cardno ERI performs the following tasks:

- 1. Record the same values for the extraction well(s) and the unit with the following modification:
  - Record soil vapor concentrations at each extraction well, if feasible
- 2. Pump water periodically from the phase separator into a holding tank.
- 3. Collect influent vapor stream samples for laboratory analysis as described in Phase I.
- 4. Collect groundwater samples periodically and at the end of Phase II for analysis of constituents of concern or those required by the permit. Submit groundwater samples collected during Phases I and II to a clientapproved, state-certified laboratory under proper storage, shipment and COC protocol.

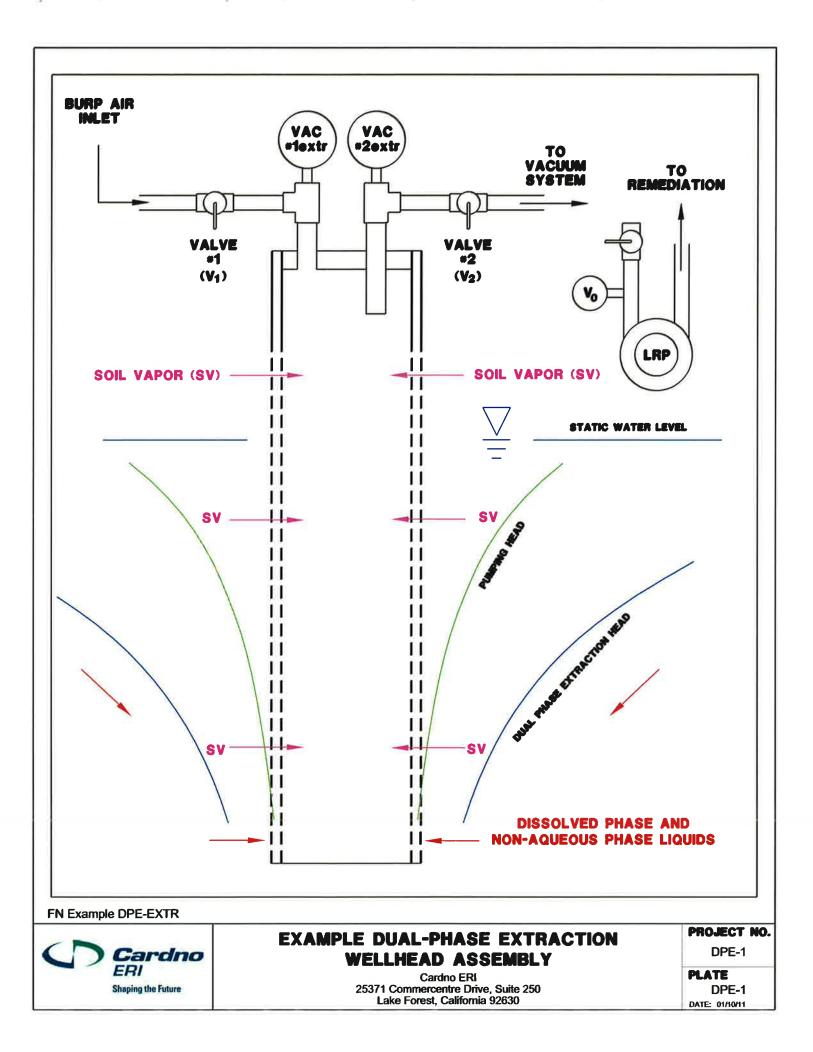
#### **Groundwater Disposal**

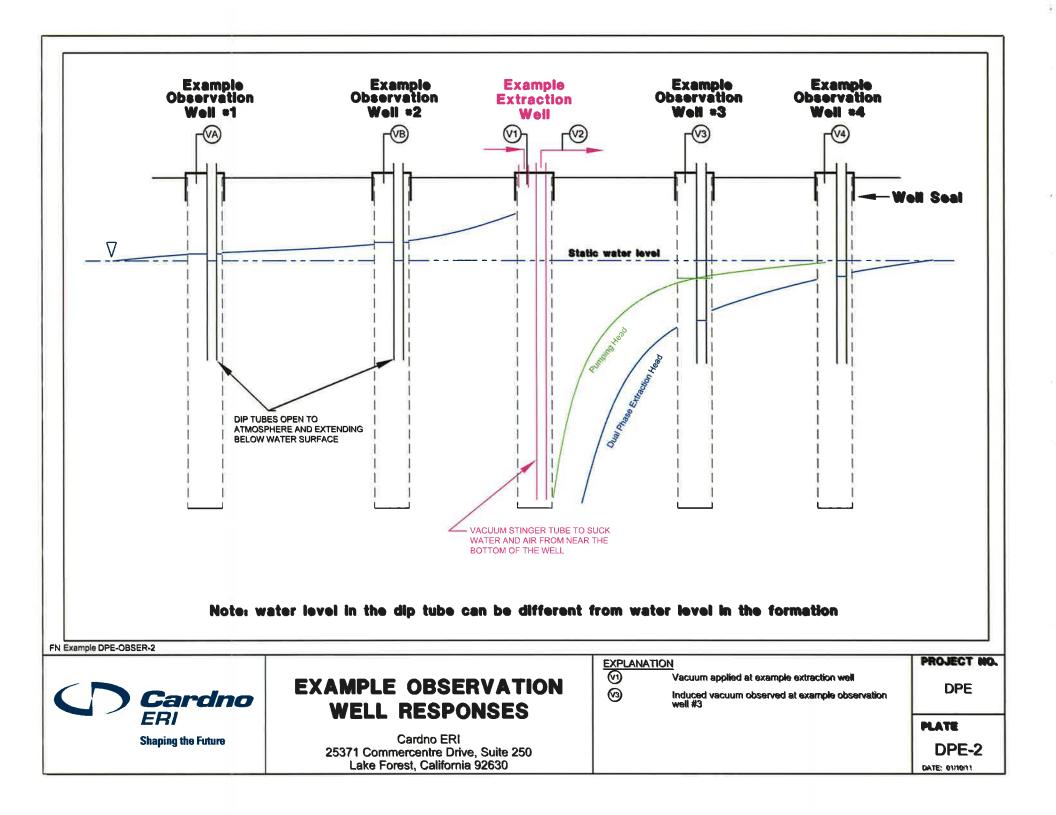
Extracted groundwater is treated at a client- and regulatory-approved facility, treated with a permitted mobile carbon treatment system, or transported off site in a truck or trailer-mounted tank and disposed of in accordance with regulatory requirements.

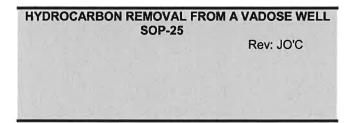
At the end of the DPE test and following receipt of the analytical results, Cardno ERI prepares a report summarizing the field and laboratory procedures, presenting the laboratory and feasibility testing results, providing mass removal calculations, and discussing conclusions and recommendations.

Attachments: Plate DPE-1 – Example Dual-Phase Extraction Wellhead Assembly Plate DPE-2 – Example Observation Well Responses

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#### POUNDS OF HYDROCARBON IN A VAPOR STREAM

#### INPUT DATA:

- 1) Vapor flow rate acfm (usually by Pitot tube)
- 2) Vapor pressure at the flow measuring device (in inches of H<sub>2</sub>O) (use {-} for vacuum)
- 3) Vapor temperature at the flow-measuring device.
- 4) Hydrocarbon content of vapor (usually in mg/M<sup>3</sup>) for ppmv you need molecular weight.
- 5) Length of time (usually hours) over which flow rate occurred)

From periodic measurements, a calculation of total pounds of hydrocarbons removed from a well or from a system is calculated. The input data listed above are measured at a point in time. To calculate quantities removed, some assumptions must be made about what was happening between measurements. The following assumptions will be used for the sake of consistency:

#### ASSUMPTIONS:

1) Vapor flow for the period equals the average of the initial and final reading for the period.

2) Pressure and temperature for the entire period will be the final reading.

3) Hydrocarbon concentration for the period equals the average of the initial and final reading.

4) The hours of operation can be taken from an hour meter, an electric meter or will be assumed to be equal to the time between measurements.

5) If the unit is found down - try to determine how many hours it did operate and use the data taken for the previous period to make the calculations. Restart the unit and then take data to start the next period.

#### SAMPLE DATA AND CALCULATIONS

Date	Time	Temp deg F	Press in H₂O	HC conc mg/M3	Vapor flow acfm	Calc. lb. rem.
1/6/95	11:00	70	-46	2000	120	
1/7/95	13:00	55	-50	1350	90	
1/8/95	10:00	80	-13	750	100	7.4

Calculate the pounds of hydrocarbon removed from the system during the basis period from 13:00 (1:00 pm) on the 7th to 10 am on the 8th. Pressure and temperature of the measurements (at the flow meter) must be corrected to the P and T used to report the HC concentration (which are P = 1 atm and T = 70 deg F). 1 atm = 14.7psia, 760 mm Hg, or 407 in H<sub>2</sub>O. T<sub>abs</sub> = 460 + T deg F

Hours of operation = 21, T = 80, P = -13, HC = (1350+750)/2 = 1050 mg/M<sup>3</sup>, Flow = 95

(460+70) (407-13) 28.3 1050 1 21 ---- x ----- = 7.4 lb (460+80) 407 1000 1000 454 M<sup>3</sup> min lb hr cu ft g lb  $\mathsf{T}_{\mathsf{Corr}}$ x P<sub>Corr</sub> x ---- x ---х----- х -- x X -M<sup>3</sup> cu ft basis hr min g basis 21 x 60 x 95 x 0.98  $x 0.97 \times 0.0283 \times 1.050 \times 1/454 = 7.4 \text{ lb.}$ 

cumulative lbs. (the running total) = the sum of all the previous periods. Note: If results are given in ppm, an assumption about the molecular weight of the hydrocarbon must be made to convert ppm into  $mg/M^3$ . ppmv x molecular wt. /24.1 =  $mg/M^3$ . (Use 102 for gasoline)



#### Cardno ERI Soil Vapor Sampling Well Installation and Sampling Field Protocol

#### **Preliminary Activities**

Prior to the onset of field activities at the site, Cardno ERI obtains the appropriate permit(s) from the governing agency(s). Advance notification is made as required by the agency(s) prior to the start of work. Cardno ERI marks the borehole locations and contacts the local one call utility locating service at least 48 hours prior to the start of work to mark buried utilities. Borehole locations may also be checked for buried utilities by a private geophysical surveyor. Prior to drilling, the borehole location is cleared in accordance with the client's procedures. Fieldwork is conducted under the advisement of a registered professional geologist and in accordance with an updated site-specific safety plan prepared for the project, which is available at the job site during field activities.

#### Well Construction

The borehole is advanced to the desired depth using either a direct-push rig, hand auger, or air vacuum rig. Lithologic conditions are recorded on a boring log during borehole advancement, and select soil matrix sampling may be conducted based on soil characteristics.

Each soil vapor sampling (SVS) well is constructed using inert screen material attached to  ${}^{1}$ /<sub>8</sub>- to  ${}^{1}$ /<sub>8</sub>- to to introduction outer diameter inert tubing. A gas-tight vacuum fitting or valve is attached to the top of each length of tubing using a female compression fitting. Each screen is set within a minimum of a 12-inch thick appropriately sized sand pack, with a minimum of 3 inches of sand pack above the top of the screen. A minimum of 4 inches of dry granular bentonite is set above each screen and associated sand pack. In SVS wells with multiple and separate casings and screens, the annular space between the top of the dry granular bentonite above the deep screen and the bottom of the sand pack associated with the shallow screen is sealed with a minimum of 18 inches of hydrated bentonite. The remainder of the annular space of the well is sealed with hydrated bentonite to 1 foot below ground surface. Wellheads are finished with traffic-rated well boxes set in concrete flush with the surrounding grade. No glues, chemical cements, or solvents are used in well construction.

A boring log is completed with the construction details for each well, including the materials of construction, depth of the borehole, screen length, and annular seal thickness.

#### Soil Vapor Sampling

Samples are collected using a soil vapor purging and sampling manifold consisting of a flow regulator, vacuum gauges, vacuum pump, shroud, and laboratory-prepared, gas-tight, opaque containers such as Summa<sup>™</sup> canisters. Samples may also be collected using a syringe and analyzed by a mobile laboratory. Prior to use, Summa<sup>™</sup> canisters are checked to ensure they are under the laboratory induced vacuum between 31 and 25 inches of mercury (in. Hg). New inert tubing is used to purge and sample each well. Prior to purging and sampling each SVS well, the sampling manifold is connected to the gas-tight vacuum fitting or valve at the wellhead, and the downstream tubing and fittings are vacuum tested at approximately 24 to 28 in. Hg. Purging and sampling are conducted only on SVS wells when the tubing and fittings hold the applied vacuum for 5 minutes per vacuum gauge reading.

When required, Cardno ERI conducts a purge volume versus constituent concentration test on at least one SVS well prior to purging and sampling activities. The purge volume test well is selected based on the location of the anticipated source of chemical constituents at the site and on the location of anticipated maximum soil vapor concentrations based on lithologic conditions. If the SVS well has been in place for more than 1 week, it is assumed that soil vapor in the sand pack has equilibrated with the surrounding soil, and only the screen and tubing volumes are included in the purge volume calculation. If the SVS well has been in place for less than 1 week, the volume of the sand pack around the screen is included in the purge volume calculation. A photo-ionization detector (PID) or on-site mobile laboratory is used to evaluate concentrations of chemical constituents in the vapor stream after 1, 3, and 10 volumes of vapor have been purged from the SVS well. Purging is conducted at a rate of 100 to 200 milliliters per minute (ml/min). The purge volume exhibiting the highest concentration is the volume of vapor purged

Cardno ERI Soil Vapor Sampling Well Installation Field Protocol

from each SVS well prior to sampling. If the three separate purge volumes produce equal concentrations a default of 3 purge volumes is extracted prior to sampling.

Prior to sampling, a helium leak test is performed at each SVS well, including a summa canister and its fittings, to check for leaks in the SVS annulus. To assess the potential for leaks in the SVS well annulus, a shroud is placed over the SVS well and summa canister and the shroud is filled with a measured amount of helium. Helium screening is performed in the field by drawing soil gas into a Tedlar bag via a lung-box and screening the contents of the Tedlar bag with a helium meter. The concentration of helium in the sample divided by the concentration of helium in the shroud provides a measure of the proportion of the sample attributable to leakage. A leak that comprises less than 5% of the sample is insignificant. Helium screening is also performed using laboratory analysis of the contents of the summa canister collected under the shroud. Sampling is conducted at approximately the same rate of purging, at 100 to 200 ml/min. Soil vapor samples are submitted under chain-of-custody protocol for the specified laboratory analyses.

At a minimum, weather conditions (temperature, barometric pressure and precipitation), the sampling flow rate, the purge volume, the helium leak detection percentage results, the sample canister identification number, the method of sample collection, and the vacuum of the sampling canister at the start and end of sample collection (if applicable) are recorded on a log for each SVS well purged and sampled.

#### **Decontamination Procedures**

If soil samples are collected, Cardno ERI or the contracted driller decontaminates the soil sampling equipment between each sampling interval using a non-phosphate solution, followed by a minimum of two tap water rinses. De-ionized water may be used for the final rinse. Downhole drilling equipment is steam-cleaned or triple-rinsed prior to advancing each borehole.

#### Waste Treatment and Disposal

Soil cuttings generated from the well installation are stored on site in labeled, Department of Transportationapproved, 55-gallon drums or other appropriate storage container. The soil is removed from the site and transported under manifest to a client- and regulatory-approved facility for recycling or disposal. Decontamination water is stored on site in labeled, regulatory-approved storage containers, and is subsequently transported under manifest to a client- and regulatory-approved facility for treated with a permitted mobile or fixed-base carbon treatment system. **APPENDIX C** 

PERMITS

#### Alameda County Public Works Agency - Water Resources Well Permit



399 Elmhurst Street Hayward, CA 94544-1395 Telephone: (510)670-6633 Fax:(510)782-1939

------ Alameda County-------

Application Approved on: 07/28/2014 By jamesy

Permit Numbers: W2014-0702 to W2014-0704 Permits Valid from 08/11/2014 to 08/11/2014

Application Id:	1406235284018	City of Project Site: Oakland		
Site Location: Project Start Date: Assigned Inspector:	6301 San Pablo Avenue, Oakland, CA 08/11/2014 Contact Steve Miller at (510) 670-5517 or steve	Completion Date:08/11/2014 m@acpwa.org		
Applicant:	Cardno ERI - Greg Gurss 601 N McDowell Blvd, Petaluma, CA  94954	<b>Phone:</b> 707-766-2000		
Property Owner:	Connie Lam	<b>Phone:</b> 510-654-5550		
Client:	200 El Dorado Terr, San Francisco, CA 94112 ExxonMobil Oil Corp 4096 Piedmont Ave #194, Oakland, CA 94611	<b>Phone:</b> 510-547-8196		

	Total Due:	\$1191.00
Receipt Number: WR2014-0303 Payer Name : Cardno ERI		\$1191.00 PAID IN FULL

#### Works Requesting Permits:

Well Construction-Monitoring-Monitoring - 3 Wells Driller: Gregg - Lic #: 485165 - Method: hstem

#### Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2014- 0702	07/28/2014	11/09/2014	MW6	10.00 in.	4.00 in.	5.00 ft	15.00 ft
W2014- 0703	07/28/2014	11/09/2014	MW7	8.00 in.	2.00 in.	5.00 ft	15.00 ft
W2014- 0704	07/28/2014	11/09/2014	MW8	10.00 in.	4.00 in.	5.00 ft	15.00 ft

#### **Specific Work Permit Conditions**

1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

2. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

3. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

Work Total: \$1191.00

#### Alameda County Public Works Agency - Water Resources Well Permit

4. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Include permit number and site map.

5. Applicant shall contact assigned inspector listed on the top of the permit at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

6. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.

7. Minimum surface seal thickness is two inches of cement grout placed by tremie.

8. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.

9. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.

### **APPENDIX D**

## **BORING LOGS**

Project No. Site: Logged By: Reviewed B Signature		EA Shapin : Forn : 630 : Nad	n <b>g the Fu</b> ner Mobil S	<b>ture</b> Service o Ave, nte	(Page 1 of 1) Station 99105 Oakland, California	8/11/14 Gregg Drilling Hollow Stem Auger Direct-Push 12" 4" 37.845880 -122.2848764 18' bgs Not Encountered					
Depth (ft) Blow Count	OVM/PID (ppmv)	Sample	Column	ASTM	Sample Condition Sample Condition Sampled Interval Described Sample Preserved Sample DESCRIPTION Water Levels 14.00' bgs on 8/14/14 Not Encountered Boring: MW						
	0.0 5.8 1.7 0.8 7 21.5 24 11.2 0.0			SW CL W-S SW SC CL	6" Concrete. Cleared to 5' bgs using hand tools. SAND with Gravel: dark brown, dry, fine-to coarse-grai subrounded, subangular gravel up to 0.5" diameter (0, CLAY: light gray, damp, medium plasticity, fine-grained (90,0,10,0) Sandy CLAY: dark green, dry, low plasticity, fine-to me- sand, minor gravel (50,0,45,5) SAND with Clay and Gravel: green, dry, fine-to coarse- graded, subangular gravel up to 1" diameter (10,0,65, SAND with Gravel: brown, dry, fine-to coarse-grained, subangular gravel up to 1." diameter (0,0,70,30) Clayey SAND: dark green and brown, dry, fine-to coarse graded, gravel up to 1." diameter (0,0,70,30) CLAY: mottled yellow brown and gray, damp, low to me fine-grained sand (80,10,10,0)	Neat Cement Grout Blank Sch. 40 PVC Hydrated Bentonite Chips -#2/12 Sand - 0.020" Sch. 40 PVC Screen					
- 20					TD = 18 feet bgs No free groundwater encountered.						

09-02-2014 IUSpeterinas01/data-pet/EXXONMOBIL/ExxonMobil Projects/022783C (99105) Oakland/2783 Autocad/BORING LOGS/2783 MW6 bor

Project No. Site: Logged By: Reviewed By Signature	5	FR Shapin : Forn : 6301 : Nad	ng the Fur	ture Service o Ave	e Station 99105 , Oakland, California	i MW7 (Page 1 of 1)	Date Drilled Drilling Co. Drilling Method Sampling Method Borehole Diameter Casing Diameter Location (N-S) Location (E-W) Total Depth GW encountered	8/11/14 Gregg Drilling Hollow Stem Auger Direct-Push 10" 2" 37.8457611 -122.2850966 16' bgs Not Encountered					
Depth (ft) Blow Count	OVM/PID (ppmv)	Sample	Column	ASTM	Sample Condition No Recovery Sampled Interval Described Sample Preserved Sample DESCF	No Recovery     ▼ 13.10' bgs on 8/14/14       Sampled Interval     ▼ Not Encountered       Described Sample     ▼							
	0.0 0.0 0.0 0.0 10 0.0 0.0 0.0 10	**		SW CL CL CL	5" Concrete. Cleared to 8' bgs using SAND with Gravel: dark brown, dry, subrounded, subangular gravel up to Sandy CLAY: dark brown, moist, low sand (65,0,35,0) CLAY: yellow brown with iron oxide if fine-grained sand (90,0,10,0) slight green mottling at 6.5' bgs Sandy CLAY: light gray-brown, dam sand, iron oxide staining, minor subi (85,0,10,5) Mottled green and gray-brown @ 11 CLAY with Sand: mottled yellow bro medium plasticity, fine-grained sand TD = 16 feet bgs No free groundwater encountered.	fine-to coarse-grai o 0.5" diameter (0 v plasticity, fine-to r staining, moist, low p, low plasticity, fin ounded gravel up .5' bgs	plasticity, e-grained to 0.5" diameter	► Neat Cement Grout Blank Sch. 40 PVC Hydrated Bentonite Chips -#2/12 Sand 0.020" Sch. 40 PVC Screen					

.

09-02-2014 IUspeterinas01/data-pet/EXXONMOBIL/ExxonMobil Projects/022783C (99105) Oakland/2783 Autocad/BORING LOGS/2783 MW7, bor

Project No. Site: Logged By: Reviewed By:	s	<b>hapir</b> : Forn : 6301 : Nady	<b>ng the Fu</b> ner Mobil S	<b>ture</b> Service o Ave nte	(Page 1 of 1) Station 99105 Oakland, California	(Page 1 of 1) ation 99105 kland, California Drilling Method Borehole Diameter Location (N-S) Location (E-W)					
Depth (ft) Blow Count	OVM/PID (ppmv)	Sample	Column	ASTM	Sample Condition       Water Levels         Mo Recovery       ▼ 12.18' bgs or         Sampled Interval       ▼ 9' bgs         Described Sample       ▼ 9' bgs         Preserved Sample       DESCRIPTION	: 9' bgs Boring: MW8					
	0.8 0.8 3.4 52 100 389 590 +5000 251 531 472 130 3.0 22			SW CL CL CL CL CL	<ul> <li>4" Concrete. Cleared to 5' bgs using hand tools. SAND with Gravel: dark brown, moist, fine-to coarse-gi subangular, angular gravel up to 3" diameter (0,0,60,4)</li> <li>CLAY: light gray, damp, medium plasticity, fine-grained (90,0,10,0)</li> <li>SILT: dark yellow-brown, moist, medium plasticity, minufragments (10,90,0,0)</li> <li>Sandy CLAY: light brown, moist, low plasticity, fine-to c sand, minor subangular gravel up to 1" diameter (60,0)</li> <li>Sandy CLAY: dark green, moist, low plasticity, fine-to n sand, gravel up to 0.5" diameter (60,0,30,10)</li> <li>SILT: mottled green and yellow-brown, moist, medium rock fragments (white) (10,90,0,0)</li> <li>Sandy CLAY: dark green, wet, low plasticity, fine-to me sand, gravel up to 0.5" diameter (60,0,30,10)</li> <li>Sandy CLAY: dark green, saturated, low plasticity, fine-to me sand, gravel up to 0.5" diameter (60,0,30,10)</li> <li>Sandy CLAY: dark green, saturated, low plasticity, fine-to me sand, gravel up to 0.5" diameter (60,0,30,10)</li> <li>Sandy CLAY: dark green, saturated, low plasticity, fine-to me sand, gravel up to 0.5" diameter (60,0,30,10)</li> <li>TD = 16 feet bgs</li> <li>Free groundwater encountered at 9 feet bgs.</li> </ul>	0) I sand or rock oarse-grained ,35,5) nedium-grained dium-grained r (60,0,35,5)	■ Neat Ceme Grout Blank Sch. PVC Hydrated Bentonite Chips -#2/12 Sand PVC Screet				

## **APPENDIX E**

## **FIELD DATA SHEETS**

**Daily Field Report** Cardno<sup>°</sup> ERI ERI Job # 2783 Project ID #: 99105 Shaping the Future Subject: Well Development Date: 8-14-14 Equipment Used: Disp. bailer, DTW Tape Name(s): Darin Einhell Sheet: 1 of 1 Time Arrived On Site: **Time Departed Site:** Total Travel: 715 Site On 715 - 730 H+S Meetinc 730-740 740-750 755-1235 813-1237 Opened Welly DTIN on wells Furged Wells Purged Wells off site MW 7. MWG wells MW7 MW6 1245 Purge Water - 4,25 gal. Fotel Water - 4,25 gal. Slow recharge. MWG Well had

### Cardno ERI Groundwater M+S Depth To Water

Case Volume=  $H(r^2x0.163)$ 

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			
278	3	99105		8-14	-14	Davin	Einhell		
WELL	WELL	ODOR?	TOTAL	Pre-Purge	C.V.	80%	COMMENTS		
ID	DIAMETER inches	SHEEN?	DEPTH feet	DTW feet	Gal. feet	r/chrg. DTW feet			
MW7	2		14.80	13.10	0.27	13.44			
MWG	4		14.80	14.00	0.52	14.16			
					-				
5									
12									
			-	-					

WATER SAMPLING SITE STATUS											Date: 8-14-14						
Cardno	WATER SAMPLING SITE STATUS         Cardno ERI Job No.:       2783         Station No.:       9105												Inspected by: <u>3) with Eintel</u> Site Address: <u>6301 San Pablo Arc</u> , Oak 1 cm d				
Well D Welter and set of condition of conditioned and the set of t										well Cover Fence Catellon International Condition Sile Propagation Comments / Well Covers							
					N/R/ok	N/R/ok			N/R/ok	N/R/ok		s/w/e	g/v/o	N/R/ok			
MW7	oK	oK	οK	N	σκ	٥K	N	OK				NA	NA	σK	NO LOCK		
MW6	V	7	J	V	+	Y	k	J	Y	y	J	Y	V	7	NU LOCK		
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N = Not r				e-see co	mments	•	Y =				s = 5			_	affitti on walls.		
R = Repa			nts				N =	No.				Water.			grants (or evidence of).		
ok = No a	action ne	æded.									e = F	Empty.		o = Op	en (not secured).		

Client/Site: 99105 Location: 6301 San Sample Tech.: Darin DATE: 8-19-19 Weather: Cloudy WELL ID MW 7 TIME hr:min 213 819 832 858 926 928 1000 1002	Purge Finhe Gal U.27 0.25 0.25 0.25 0.25 0.25 0.25 0.25 0.25	Ane         Oak           II         II           deg C F         1 deg           2.0.1         2.0.3           2.0.1         2.0.3           2.0.3         2.0.5           2.0.5         2.0.4	COND 10% 554 571 624 624	Start 755 Start 825 Start 920 Start 920 Start 950 pH unit 0.1 7.25 7.20 7.34	Stop       £10         Stop       £30         Stop       £55         Stop       9.25         Stop       9.55
.ocation:       6 3 61 Scanses         Sample Tech.:       Darin         DATE:       8 - 14 - 14         Neather:       Cloudy         VELL ID       Mw 7         TIME       hr:min         813       814         832       858         926       928         1000       1000	Finhe PURGE VOLUME Gal 0.25 0.25 0.25 0.25 0.25 0.25 0.25 0.25 0.25	Temp deg C F 1 deg 2.0.1 2.0.3 2.0.1 2.0.3 2.0.1 7.0.3 2.0.5	COND 10% 554 5マ1 6ご4	start <u>5.50</u> Start <u>9.20</u> Start <u>9.20</u> Start <u>9.50</u> pH unit 0.1 <u>7.25</u> 7.20 <u>7.34</u>	Stop 555 Stop 9.25 Stop 9.25 Turbidity NTU Less Than 5 34.67 1.235
Sample Tech.: Darin DATE: 8-14-14 Veather: Cloudy VELLID MW 7 TIME hr:min 213 814 832 858 926 926 928 1000	Finhe PURGE VOLUME Gal 0.25 0.25 0.25 0.25 0.25 0.25 0.25 0.25 0.25	Temp deg C F 1 deg 2.0.1 2.0.3 2.0.1 2.0.3 2.0.1 7.0.3 2.0.5	COND 10% 554 5マ1 6ご4	Start 920 Start 950 pH unit 0.1 7.25 7.20 7.34	Stop 555 Stop 9.25 Stop 9.25 Turbidity NTU Less Than 5 34.67 1.235
DATE: 8-14-14 Neather: <u>Cloudy</u> NELLID <u>Mw 7</u> TIME hr:min <u>213</u> 814 832 858 926 926 928 1000	PURGE VOLUME Gal 0.27 0.25 0.25 0.25 0.25 0.25 0.25 0.25 0.25	Temp deg C F 1 deg 2.0.1 2.0.3 2.0.1 2.0.3 2.0.5	10% 554 571 624	Start 920 Start 950 pH unit 0.1 7.25 7.20 7.34	Stop 9.25 Stop 9.25 Turbidity NTU Less Than 5 34.67 1 2-3 5
Neather:         Cloudy           WELL ID         MW 7           TIME           hr:min           813           814           832           858           926           928           1000	VOLUME Gal 0.27 0.25 0.25 0.25 0.25 0.25 0.25 0.25	deg C F 1 deg 20.1 20.3 20.1 7.0.3 20.5	10% 554 571 624	Start 950 pH unit 0.1 7.25 7.20 7.34	Stop C(55 Turbidity NTU Less Than 5 34.67 12-35
MW         MW<	VOLUME Gal 0.27 0.25 0.25 0.25 0.25 0.25 0.25 0.25	deg C F 1 deg 20.1 20.3 20.1 7.0.3 20.5	10% 554 571 624	pH unit 0.1 7.25 7.20 7.34	Turbidity NTU Less Than 5 34.67 12-35
TIME       hr:min       813       814       832       858       926       928       1000	VOLUME Gal 0.27 0.25 0.25 0.25 0.25 0.25 0.25 0.25	deg C F 1 deg 20.1 20.3 20.1 7.0.3 20.5	10% 554 571 624	unit 0.1 7.25 7.20 7.34	NTU Less Than 5 34.67 1235
hr:min 213 814 832 858 926 928 1000	VOLUME Gal 0.27 0.25 0.25 0.25 0.25 0.25 0.25 0.25	deg C F 1 deg 20.1 20.3 20.1 7.0.3 20.5	10% 554 571 624	unit 0.1 7.25 7.20 7.34	NTU Less Than 5 34.67 1235
813 814 832 858 926 926 928 1000	0.27 0.25 0.25 0.25 0.25 0.25 0.25 0.25	1 deg 20.1 20.3 20.1 20.3 20.3 20.5	554 571 624	0.1 7.25 7.20 7.34	Less Than 5 34.67 1235
814 832 858 926 926 928 1000	0.25 0.25 0.25 0.25 0.25 0.25	20.1 20.3 20.1 20.3 20.5	554 571 624	7.25 7.20 7.34	34.67
832 858 926 928 1000	0.25 0.25 0.25 0.25 0.25	20.3 20.1 20.3 20.5	571	7.20	1235
858 926 928 1000	0.25 0.25 0.25 0.25	20.1 20.3 20.5	624	7.34	
926 928 1000	0.25	20.3	621		
928	0.25	20.5	a -1	7.22	11.41
1000	0.25		653	7.23	8.93
			701	7.27	21.71
		201	691	7.22	10.28
	0.00				
				_	
Total Purge Volume	75Gallons				-
	SING VOL FACTOR	WELL INFO	RMATION		
	diameter	TD:			
	(2"-dia:)	DTW <sub>i</sub> :	13.10		
	4"-dia:	h:			
	6"-dia:	csg vol: COMMEN			

Cardno ERI Job# 2783	Quarter	Year 2014		Surg	jing
Client/Site: 49105	2			Start 1018	Stop 1022
Location: 6301 50	. P. L.L.	A.v. O.	Kland	Start 1046	Stop 1048
Sample Tech .: Durin	ENL	rive, Or	istund	Start 1125	Stop 1127
DATE: 2 - 1/1 - 14	EINNE	, Lt		Start 1200	Stop 1 2 05
Weather: Sunny				Start 1 2 3 0	Stop 1235
WELL ID			1/- 1/- 1/ - 1/-/-	The second second second second	
MWG		10.55		and the state of the state of	Star Party and the star of the
TIME	PURGE VOLUME	Temp	COND	рН	Turbidity
hr:min	Gal	deg C F		unit	NTU
1024	0.52	1 deg	10%	0.1	Less Than 5
1026	0.50	19.6	708	7.25	690.6
1051	0.50	191	697	7.20	687.5
1130	0.50	19.3	683	7.18	651.5
1210	0.50	2011	742	7.15	597.4
1237	0,50	22.0	728	7.12	582.9
		-			
			15		
					_
Total Purge Volume	2.5 Gailons				
	CASING VOL. FACTOR	WELL INFO			
	diameter		14-80		
	2"-dia:	DTW <sub>i</sub> :			
	4"-dia:	<u>h:</u>	0.80	-	
	6"-dia:	COMMEN	0.52 TS	. 1 . 9	C. C.c.
Had slow I began		COMMEN		waited	before

			Da	ly Field	Report		
		Project ID #:	99105				ERI Job # 2783
	rdno	Subject:	Monitoring and Sa	mpling/DPE Test	(separate DFR)		Date: 08/18/2014
ERI		Equipment Us	ed: Sub. Pump, D	sp. Bailers, DTW	meter, DPE Trailer		Sheet: 1 of 1
Shaping t	the Future	Name(s):	Azat R. Magdanov				
		Time Arrived	On Site:	6:30	Time Departed Site:	18:30	
08/18/2014							
06:30	On site. H	I&S meeting,	Permit.				
	Parked D	PE trailer, se	cured equipme	nt.			
07:00-07:15	Opened w	vells.					
07:45-08:15	DTW						
08:30-09:30	Purged: M	W7, MW6, I	MW8.				
		MW7, MW6	, MW8.				
		n DPE test.				5	
18:30	Off Site						
	* Very slov	w recharge in	n wells. Was ab	le to sample se	et of VOAs and only 1	Amber from MW6 M	/W7.
	vory die	in roonargo ii	Thome. Thus up	io to oumpio oc	teor verke und entry r		
Purge water	- 6 gal.						
	- 19 gal.						
Total water	- 25 gal.						

### Cardno ERI Groundwater M+S Depth To Water

Case Volume=  $H(r^2x0.163)$ 

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	
27	83	991	05	08/18	12014	Azar K	Magdanov
Project 27 WELL ID M62 M63 M65 M66 M67 M67 M67 M67 M67 M67 M67	WELL DIAMETER inches 4 4 4 4 4 4		TOTAL DEPTH feet 18.59 18.18 19.94 19.94	08/18 Pre-Purge DTW feet 11.06 11.83 9.40 13.12	C.V. Gal. feet  0. <i>&amp;B</i>	Name <u>12at</u> K 80% r/chrg. DTW feet  13. 3 9 13. 9 4 12. 60    12. 60	
		1					

WAT	ER S	SAMP	PLING	SIT	E ST	ATU	S										Date: 06	118/2014
																-	Inspected by:	Azor R. Hagdons Ave. Emervilla, CA
Cardno	ERI Jo	ob No.:	27	83	Stat	ion No.:	<i>99</i> ,					Addre	ess: <u>6</u>	301	· S	<i>C</i> 4	10010	Ave. Emervilla, CA
. P		Head In	5.5.0	28,09	5. B	rete seal H	sab s	IT vault	JN/B/OL	Cover	Cell	Sate	inns .	ontents Build	ing tion		atance	
Wellin	Neg.	ele Rube	ast Nell	of of	Nell Cor	Nell Nell P	10 143	101 130	We	1	enc	\$¥	OL OLIN	of Build	5 3	10 P.06	<u> </u>	Comments / Well Covers
440						N/R/ok	Y/N	N/R/ok	N/R/ol	N/R	JUK	NK	s/w/e S+₩	g/v/o	N/R	_		
1742 14/2	NA	UK	OK N	N	OK	OK	<u></u>	i	101		<u> </u>	1	5+0	01-		^		
14/5	0K		1	1							_	T						
MWG	Í																	
MW7																		
MUS	V	V	V	V	V	V	V	¥.	V	₩	′	V	V	₩	V	(		
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N = Not re	epairable	e in time	available	e-see cor	mments.		Y =	Yes.				s = S	oil.		g	= Gr	affiti on walls.	
R = Repa							N =	No.				w = \	Nater.				grants (or evide	ence of).
ok = No a	iction ne	eded.										e = E	Empty.		0	= Op	en (not secure	d).

					GR	OUNDV	VATER S	AMPLING	FIELD	LOG					
Client Name	: <u>EX</u>	KON	<u>M0</u>	BIL,	Cardno E	ERI Job #	:	278.	3		Date	118/14	Page _/	of	
Location: _	9.	9105	-		Field Cle	aning Pe	rformed:				Case Vo	lume = (	(TD - DTW	V) x F where F =	
Field Crew:	Ato	of R.	Hag	chand	Analysis	eaning Performed:					0.163 for 2" inside-diameter well casing 0.652 for 4" inside-diamter well casing 1.457 for 6" inside-diamter well casing				
										1.407 1		siuc-ulain			
Well ID	Time	Case Volume	Purge Volume	Temp	Cond	рН	Post-Purge DTW	80% Recharge	BB	40mil	Amber	DO	ORP	Comments Well Box Condition	
MW7	1849	0.11		-			13.92	K						Dry P D. Zock	
			123				h	- 14	- ,	4 h	76	212	?/5	Duly 1 amber San pled- no e chough water	
MW6	1859	0.88	1				14.18	N						Uny a 1.5 gat.	
	0900		23	18.9	610	7.61	4	-14-	- /	4 W	66	7/2	30	Aly lamber (80% sull) sompled - not enough water. Dry & 4 gal.	
H41 8	09/3	1.36	2				12.63	N				_		Dry 10 4 oat.	
	09/5 09/7		246	21. 1 21. 5	681 649	8.24 7.59	h/ -	-13-	<u> </u>	V I	Ø	/3	00		
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#### Cardno ERI Groundwater M+S Depth To Water

Case Volume=  $H(r^2x0.163)$ 

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	
-27	83	99105		8/22/1	4	JOE D.	LEWIS
WELL	WELL	ODOR?	TOTAL	Posi-Purge		80%	COMMENTS
ID	DIAMETER inches	SHEEN?	DEPTH feet	DTW feet	volume Gal.	r/chrg. DTW feet	
	Inches		1997		Gal.	1991	
MW5				9.60			
mu6		1		11.20			
10406				11.20			
MW 7			14.55	14.16	0.45		ory
MWB				13.10			
1.000		<u> </u>					
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					GR	OUND	WATER S	AMPLING	FIELD	LOG						
Client Name	:				Cardno E	ERI Job i	k:				Date: _		Page	of		
_ocation: _					Field Cle	aning P	erformed:				Case Volume = (TD - DTW) x F where F =					
Field Crew:					Analysis	·					0.652 1	for 4" in	side-diamte	ater well casing ter well casing ter well casing		
Well 1D	Time	Case Volume	Purge Volume	Temp	Cond	рH	Post-Purge DTW	80% Recharge	BB	40mil	Amber	DO	ORP	Comments Well Box Condition		
MW5																
							W-9	60 -1	мш5(	@ 14:	35					
MWG																
							iw-	11.20-	MW6	145:	5		-			
MWT																
							-	L	Dry				-			
MWS																
							w-1	3.10-	Mus	@ [	525	5	ŀ			
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### APPENDIX F

### LABORATORY ANALYTICAL REPORTS

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# WORK ORDER NUMBER: 14-08-0939

### The difference is service

ResultLink >

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AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For Client: Cardno ERI Client Project Name: ExxonMobil 99105/022783C Attention: Greg Gurss 601 North McDowell Blvd. Petaluma, CA 94954-2312

Care to A. in Ang

Approved for release on 08/25/2014 by: Cecile deGuia Project Manager



Page 1 of 22

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

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NELAP ID: 03220CA | ACLASS DoD-ELAP ID: ADE-1864 (ISO/IEC 17025/2005) | CSDLAC ID: 10109 | SCAGMD ID: 93LA0830

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# Contents

Client Proj	ject Name:	ExxonMobil 99105/022783C	
Work Orde	er Number:	14-08-0939	
1	Work Ord	der Narrative	3
2	Sample S	Summary	4
3	<ul><li>3.1 EPA</li><li>3.2 EPA</li><li>3.3 EPA</li></ul>	<ul> <li>ample Data.</li> <li>8015B (M) TPH Diesel (Solid).</li> <li>8015B (M) TPH Gasoline (Solid).</li> <li>6010B ICP Metals (Solid).</li> <li>8260B Volatile Organics + Oxygenates (Solid).</li> </ul>	5 5 7 8
4	4.1 MS/N	MSD	10 10 14
5	Glossary	of Terms and Qualifiers	18
6	Chain-of-	-Custody/Sample Receipt Form 1	19

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Calscience

Work Order: 14-08-0939

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#### **Condition Upon Receipt:**

Samples were received under Chain-of-Custody (COC) on 08/13/14. They were assigned to Work Order 14-08-0939.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

#### Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

#### **Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

#### Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

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

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

#### Subcontractor Information:

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

#### Sample Summary

-			
 1 1 1		100	00
 1 N. a f	alsc		
-			

#### Client: Cardno ERI Work Order: 14-08-0939 Project Name: ExxonMobil 99105/022783C 601 North McDowell Blvd. PO Number: 022783C Petaluma, CA 94954-2312 Date/Time 08/13/14 10:15 Received: 5 Number of Containers:

Attn: G	reg Gurss
---------	-----------

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix	
S-Profile-1	14-08-0939-1	08/11/14 13:45	1	Solid	
S-Profile-2	14-08-0939-2	08/11/14 13:46	1	Solid	
S-Profile-3	14-08-0939-3	08/11/14 13:48	1	Solid	
S-Profile-4	14-08-0939-4	08/11/14 13:49	1	Solid	
SP1	14-08-0939-5	08/11/14 00:00	1	Solid	

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Cardno ERI			Date Re	ceived:			08/13/14
601 North McDowell Blvd.			Work Or	der:			14-08-0939
Petaluma, CA 94954-2312			Preparat	tion:			EPA 3550E
			Method:			E	PA 8015B (M
			Units:				mg/kg
Project: ExxonMobil 99105/022	783C					Pa	ge 1 of 1
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SP1	14-08-0939-5-A	08/11/14 00:00	Solid	GC 47	08/14/14	08/14/14 23:28	140814B03
Parameter		Result		<u>RL</u>	DF	Qua	lifiers
TPH as Diese!		ND		4.9	1.00	SG	
Surrogate		<u>Rec. (%)</u>		Control Limits	Qualifiers		
n-Octacosane		88		61-145			
Method Blank	099-15-422-1292	N/A	Solid	GC 47	08/14/14	08/14/14 16:49	140814B03
Parameter		Result		RL	DF	Qua	lifiers
TPH as Diesel		ND		5.0	1.00		
Surrogate		<u>Rec. (%)</u>		Control Limits	<u>Qualifiers</u>		
n-Octacosane		96		61-145			

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<b></b>							
Cardno ERI			Date Re	ceived:			08/13/14
601 North McDowell Blvd.			Work O	der:			14-08-0939
Petaluma, CA 94954-2312			Prepara	tion:			EPA 50300
			Method:			E	PA 8015B (M
			Units:				mg/kg
Project: ExxonMobil 99105/022	2783C					Pa	ige 1 of 1
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SP1	14-08-0939-5-A	08/11/14 00:00	Salid	GC 56	08/14/14	08/20/14 22:46	140820L053
Parameter		Result		RL	DF	Qua	lifiers
TPH as Gasoline		0,91		0.49	1.00	HD	
Surrogate		<u>Rec. (%)</u>		Control Limits	Qualifiers		
1,4-Bromofluorobenzene - FID		84		42-126			
Method Blank	099-14-571-1811	N/A	Solid	GC 56	08/20/14	08/20/14 10:35	140820L053
Parameter		Result		RL	DE	Qua	alifiers
TPH as Gasoline	#1	ND		0.50	1.00		
Surrogate		<u>Rec. (%)</u>		Control Limits	Qualifiers		
1,4-Bromofluorobenzene - FID		69		42-126			

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Cardno ERI			Date Red	eived:			08/13/14
601 North McDowell Blvd.			Work Ord	ler:			14-08-0939
Petaluma, CA 94954-2312			Preparati	on:			EPA 3050E
			Method:				EPA 6010E
			Units:				mg/kg
Project: ExxonMobil 99105/02	2783C					Pa	age 1 of 1
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SP1	14-08-0939-5-A	08/11/14 00:00	Solid	ICP 7300	08/14/14	08/15/14 20:26	140314L02A
Parameter		Result		<u>RL</u>	DF	Qua	alifiers
Lead		9.74		0.510	1.02		
Method Blank	097-01-002-18766	N/A	Solid	ICP 7300	08/14/14	08/19/14 12:51	140814L02A
Parameter		Result		RL	DF	Qua	alifiers
Lead		ND		0.0100	0.0200		

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Cardno ERI	Date Received:	08/13/14
601 North McDowell Blvd.	Work Order:	14-08-0939
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	mg/kg
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
SP1	14-08-0939-5-A	08/11/14 00:00	Solid	GC/MS RR	08/14/14	08/15/14 14:12	140815L026
Parameter		<u>Result</u>		<u>RL</u>	DF	Qua	lifiers
Benzene		ND		0.0049	1.00		
Toluene		ND		0.0049	1.00		
Ethylbenzene		ND		0.0049	1.00		
o-Xylene		ND		0.0049	1.00		
p/m-Xylene		ND		0.0049	1.00		
Xylenes (total)		ND		0.0049	1.00		
Methyl-t-Butyl Ether (MTBE)		ND		0.0049	1.00		
Tert-Butyl Alcohol (TBA)		ND		0.049	1.00		
Diisopropyl Ether (DIPE)		ND		0.0098	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND		0.0098	1.00		
Tert-Amyl-Methyl Ether (TAME)		ND		0.0098	1.00		
1,2-Dibromoethane		ND		0.0049	1.00		
1,2-Dichloroethane		ND		0.0049	1.00		
Naphthalene		ND		0.049	1.00		
Surrogate		<u>Rec. (%)</u>		Control Limits	Qualifiers		
1,4-Bromofluorobenzene		102		60-132			
Dibromofluoromethane		106		63-141			
1,2-Dichloroethane-d4		107		62-146			
Toluene-d8		107		80-120			

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Cardno ERI	Date Received:	08/13/14
601 North McDowell Blvd.	Work Order:	14-08-0939
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	mg/kg
Project: ExxonMobil 99105/022783C		Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-882-1656	N/A	Solid	GC/MS RR	08/15/14	08/15/14 13:16	140815L026
Parameter		Result		<u>RL</u>	DF	Qua	lifiers
Benzene		ND		0.0050	1.00		
Toluene		ND		0.0050	1.00		
Ethylbenzene		ND		0.0050	1.00		
o-Xylene		ND		0.0050	1.00		
p/m-Xylene		ND		0.0050	1.00		
Xylenes (total)		ND		0.0050	1.00		
Methyl-t-Butyl Ether (MTBE)		ND		0.0050	1.00		
Tert-Butyl Alcohol (TBA)		ND		0.050	1.00		
Diisopropyl Ether (DIPE)		ND		0.010	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND		0.010	1.00		
Tert-Amyl-Methyl Ether (TAME)		ND		0.010	1.00		
1,2-Dibromoethane		ND		0.0050	1.00		
1,2-Dichloroethane		ND		0.0050	1.00		
Naphthalene		ND		0.050	1.00		
Surrogate		<u>Rec. (%)</u>		Control Limits	<u>Qualifiers</u>		
1,4-Bromofluorobenzene		96		60-132			
Dibromofluoromethane		104		63-141			
1,2-Dichloroethane-d4		104		62-146			
Toluene-d8		101		80-120			

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### Quality Control - Spike/Spike Duplicate

Cardno ERI			Date	Received	1:			08/13/14
601 North McDowell Blvd			Work	Order:			1	4-08-0939
Petaluma, CA 94954-231	2		Prepa	aration:			E	PA 3550B
			Metho	bd:			EPA	8015B (M)
Project: ExxonMobil 9910	5/022783C						Page	1 of 4
Quality Control Sample ID	Туре	Matrix	: Ins	trument	Date Prepared	Date Analyz	ed MS/MSD Ba	atch Number
14-08-0923-2	Sample	Solid	GC	47	08/14/14	08/14/14 19:	02 140814503	
14-08-0923-2	Matrix Spike	Solid	GC	47	08/14/14	08/14/14 17:	39 140814503	
14-08-0923-2	Matrix Spike Dup	licate Solid	GC	47	08/14/14	08/14/14 17:	56 140814503	
Parameter	Sample Si Conc. Ad	<u>pike MS</u> dded <u>Conc.</u>	<u>MS</u> %Rec.	MSD Conc.	<u>MSD</u> %Rec.	<u>%Rec. CL</u> R	PD RPD CL	<u>Qualifiers</u>
TPH as Diesel	ND 40	00.0 423.0	106	432.4	108	64-130 2	0-15	

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#### **Quality Control - Spike/Spike Duplicate**

Cardno ERI				Date F	Received					08/13/14
601 North McDowell Blvd				Work	Order:				14	4-08-0939
Petaluma, CA 94954-231	2			Prepa	ration:				Ef	PA 5030C
				Metho	d:				EPA 8	8015B (M)
Project: ExxonMobil 9910	)5/022783C								Page 2	of 4
Quality Control Sample ID	Туре		Matrix	Inst	rument	Date Prepared	Date Ana	lyzed	MS/MSD Bat	ch Number
14-08-1424-1	Sample	1.1.1	Solid	GC	56	08/20/14	08/20/14	16:59	1408208020	
14-08-1424-1	Matrix Spike		Solid	GC	56	08/20/14	08/20/14	14:31	1408208020	Park and the
14-08-1424-1	Matrix Spike	Duplicate	Solid	GC	56	03/20/14	08/20/14	15:03	1408208020	5
Parameter	<u>Sample</u> <u>Conc.</u>	<u>Spike</u> Added	MS Conc.	<u>MS</u> <u>%Rec.</u>	MSD Conc.	<u>MSD</u> <u>%Rec.</u>	<u>%Rec. CL</u>	RPD	RPD CL	Qualifiers
TPH as Gasoline	ND	10.00	6.389	64	6.825	68	48-114	7	0-23	

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### Quality Control - Spike/Spike Duplicate

Cardno ERI				Date F	Received	2. 2.				08/13/14
601 North McDowell Blvd	l.			Work	Order:				1	4-08-0939
Petaluma, CA 94954-231	2			Prepa	ration:				Ε	PA 3050B
				Metho	d:				E	PA 6010B
Project: ExxonMobil 9910	)5/022783C								Page	3 of 4
Quality Control Sample ID	Туре		Matrix	Inst	rument	Date Prepared	Date Ana	lyzed	MS/MSD Ba	tch Number
14-08-0954-15	Sample	2 - 11 y s	Solid	ICP	7300	68/14/14	08/15/14	19:30	140814S02	a di Li
14-08-0954-15	Matrix Spike		Solid	ICP	7300	08/14/14	08/15/14	19:06	140814502	1.1 1.1 1.1
14-08-0954-15	Matrix Spike	Duplicate	Solid	ICP	7300	08/14/14	08/15/14	19:07	140814902	, 10 Yuga
Parameter	<u>Sample</u> Conc.	<u>Spike</u> Added	MS Conc.	<u>MS</u> %Rec.	MSD Conc.	<u>MSD</u> %Rec.	<u>%Rec. CL</u>	<u>RPD</u>	RPD CL	<u>Qualifiers</u>
Lead	1.461	25.00	28.09	107	29.01	110	75-125	3	0-20	

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### Quality Control - Spike/Spike Duplicate

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Cardno ERI				Date	Received:					08/13/14
601 North McDowell Blvd.				Work	Order:				14	-08-0939
Petaluma, CA 94954-2312	92			Prep	aration:				EF	PA 5030C
				Meth	od:				EF	PA 8260B
Project: ExxonMobil 99105/	022783C								Page 4	of 4
Quality Control Sample ID	Туре		Matrix	In	strument	Date Prepared	Date Ana	lyzed	MS/MSD Bat	ch Number
SP1	Sample		Solid	G	C/MS RR	08/14/14	08/15/14	14:12	140815S009	
SP1	Matrix Spike		Solid	G	C/MS RR	08/14/14	08/15/14	15:08	140815S009	
SP1	Matrix Spike	Duplicate	Solid	G	C/MS RR	08/14/14	08/15/14	15:36	140815S009	
Parameter	<u>Sample</u> <u>Conc.</u>	<u>Spike</u> Added	<u>MS</u> Conc.	<u>MS</u> %Rec.	MSD Conc.	<u>MSD</u> <u>%Rec.</u>	<u>%Rec. CL</u>	RPD	RPD CL	<u>Qualifiers</u>
Benzene	ND	0.05000	0.04680	94	0.05150	103	61-127	10	0-20	
Toluene	ND	0.05000	0.04767	95	0.05198	104	63-123	9	0-20	
Ethylbenzene	ND	0.05000	0.04525	90	0.04929	99	57-129	9	0-22	
o-Xylene	ND	0.05000	0.04672	93	0.05113	102	70-130	9	0-30	
p/m-Xylene	ND	0.1000	0.09188	92	0.1005	101	70-130	9	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	0.05000	0.04204	84	0.04776	96	57-123	13	0-21	
Tert-Butyl Alcohol (TBA)	ND	0.2500	0.2178	87	0.2372	95	30-168	9	0-34	
Diisopropyl Ether (DIPE)	ND	0.05000	0.04986	100	0.05526	111	57-129	10	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	0.05000	0.04187	84	0.04729	95	55-127	12	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	0.05000	0.03743	75	0.04274	85	58-124	13	0-20	
1,2-Dibromoethane	ND	0.05000	0.04303	86	0.04770	95	64-124	10	0-20	
1,2-Dichloroethane	ND	0.05000	0.04740	95	0.05298	106	80-120	11	0-20	

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#### **Quality Control - LCS**

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Cardno ERI			Date Receive	d:		08/13/14
601 North McDowell Blvd			Work Order:			14-08-0939
Petaluma, CA 94954-231	2		Preparation:			EPA 3550E
			Method:			EPA 8015B (M)
Project: ExxonMobil 9910	5/022783C					Page 1 of 4
Quality Control Sample ID	Туре	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-422-1292	LCS	Solid	GC 47	08/14/14	08/14/14 17:06	140814B03
Parameter		Spike Added	Conc. Recover	ed LCS %Re	ec. <u>%Rec</u> .	CL Qualifiers
TPH as Diesel		400.0	422.1	106	75-123	3

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70-124

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TPH as Gasoline

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#### **Quality Control - LCS**

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Parameter	- Sector	Spike Added	Conc. Recov	ered LCS %R	ec. %Rec	. CL Qualifiers
099-14-571-1811	LCS	Solid	GC 56	08/20/14	08/20/14 11:54	140820L053
Quality Control Sample ID	Туре	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
Project: ExxonMobil 9910	5/022783C					Page 2 of 4
			Method:			EPA 8015B (N
Petaluma, CA 94954-2312	2		Preparation	:		EPA 5030
601 North McDowell Blvd.			Work Order	•		14-08-093
Cardno ERI			Date Receiv	ved;		08/13/1

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#### **Quality Control - LCS**

Cardno ERI			Date Receive	d:		08/13/14
601 North McDowell Blvd			Work Order:			14-08-0939
Petaluma, CA 94954-231	2		Preparation:			EPA 30508
			Method:			EPA 6010E
Project: ExxonMobil 9910	5/022783C					Page 3 of 4
Quality Control Sample ID	Туре	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-002-18766	LCS	Solid	ICP 7300	08/14/14	08/15/14 18:49	140814L02A
Parameter		Spike Added	Conc. Recover	ed LCS %Re	ec. <u>%Rec</u>	CL Qualifiers
Lead		25.00	28.48	114	80-120	)

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#### **Quality Control - LCS**

Cardno ERI	Date Received:	08/13/14
601 North McDowell Blvd.	Work Order:	14-08-0939
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
Project: ExxonMobil 99105/022783C		Page 4 of 4

Quality Control Sample ID	Туре	Matrix	Instrumen	t Date Prepar	ed Date Analyze	ed LCS Batch N	umber
099-12-882-1656	LCS	Solid	GC/MS R	R 08/15/14	08/15/14 11:4	49 140815L026	
Parameter		Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	<u>Qualifiers</u>
Benzene		0.05000	0.04460	89	78-120	71-127	
Toluene		0.05000	0.04521	90	77-120	70-127	
Ethylbenzene		0.05000	0.04358	87	76-120	69-127	
o-Xylene		0.05000	0.04574	91	75-125	67-133	
p/m-Xylene		0.1000	0.08987	90	75-125	67-133	
Methyl-t-Butyl Ether (MTBE)		0.05000	0.04229	85	77-120	70-127	
Tert-Butyl Alcohol (TBA)		0.2500	0.2037	81	68-122	59-131	
Diisopropyl Ether (DIPE)		0.05000	0.04827	97	78-120	71-127	
Ethyl-t-Butyl Ether (ETBE)		0.05000	0.04263	85	78-120	71-127	
Tert-Amyl-Methyl Ether (TAME)		0.05000	0.03804	76	75-120	68-128	
1,2-Dibromoethane		0.05000	0,04208	84	80-120	73-127	
1,2-Dichloroethane		0.05000	0.04643	93	80-120	73-127	

Total number of LCS compounds: 12

Total number of ME compounds: 0 Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

LOG ME OL Validation result. Pass

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#### **Glossary of Terms and Qualifiers**

ork Order:	14-08-0939	Page 1 of 1
Qualifiers	Definition	
AZ	Surrogate compound recovery was out of control due to matrix interference. The associated method blank sur in control and, therefore, the sample data was reported without further clarification.	rogate spike compound w
В	Analyte was present in the associated method blank.	
BA	The MS/MSD RPD was out of control due to suspected matrix interference.	
BB	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample ex concentration by a factor of four or greater.	xceeding the spike
BU	Sample analyzed after holding time expired.	
BV	Sample received after holding time expired.	
DF	Reporting limits elevated due to matrix interferences.	
Е	Concentration exceeds the calibration range.	
ET	Sample was extracted past end of recommended max. holding time.	
GE	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matri	ix interference.
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 associated LCS was in control.	interference. The
IL	Relative percent difference out of control.	
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection lir estimated.	mit. Reported value is
JA	Analyte positively identified but quantitation is an estimate.	
LD	Analyte presence was not confirmed by second column or GC/MS analysis.	
LP	The LCS and/or LCSD recoveries for this analyte were above the upper control limit. The associated sample were the sample data was reported without further clarification.	vas non-detected. Theref
LQ	LCS recovery above method control limits.	
LR	LCS recovery below method control limits.	
ND	Parameter not detected at the indicated reporting limit.	
QO	Compound did not meet method-described identification guidelines, Identification was based on additional GC/	MS characteristics.
RU	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).	
SG	A silica gel cleanup procedure was performed.	
SN	See applicable analysis comment.	
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % mo reported on a wet weight basis.	sisture. All QC results are
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holdin (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being stated holding time unless received at the laboratory within 15 minutes of the collection time.	ng time of <= 15 minutes g received outside of the
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or estimated concentration. Component concentrations showing not detected (ND) are summed into the calculate concentrations.	r, if "J" flags are reported, ed total result as zero

Eurofin Calscience	7440 Linco	oin Way					्य इ	P	hone	e: 7	14-89	95-5	<b>i4</b> 94								1	F	N	lon	M	1	3	1		
Environmental	Garden Gi	rove, CA	9284	1				F	ax: 7	714·	-894-	750	1									Sec.	1	Com		V	N			
Laboratories, Inc.						×					-													(on) 14-	0	8	-0	9	39	)
Consultant Name:	Cardno ERI												A	ccou	int#:	: NA						0#		Dire	ct B		ardn	o El	RI	
Consultant Address:	601 N McDowell						22						ln	voic	e To:	: Dìr	act Bill	Car	dino	ERI										
Consultant City/State/Zip:	Petaluma, CA 9495	4				_						_	R	ерот	rt To:	Gn	ag Gur	55		_					_					
ExxonMobil Project Mgr:	Jennifer Sedlache	ĸ						_					Proje	ct N	ame	: 02	2783 (	2					_							
Consultant Project Mgr	Greg Gurss									_	Exx	onM	lobil	Site	#:	_		9	910	5				Najor Projec	t (Al	FE #	;			
Consultant Telephone Number:			I	ax N	No.: (	707	) 789	-041	14				Site	Add	ress	63	ot San	Pat	A old	9		_	_							
Sampler Name (Print): Sampler Signature:	Nadya Vice	ente									Si	te C	ity, S	itate,	, Zip	Oa	klenti,	CA	_						_					_
Sampler Signature:	Alter			_						_	C	)ver	sight	t Age	ency	Ak	meda	Cou	nty E	ivn	ronn	nent	al H	isaith Depart	nen	t				_
		T - T-			<del></del>		Pres	BALAS	ative	-			Met	rìx	_	15		_	_	7	<b>Inal</b>	yze	For					_		_
Sample ID	Date Sampled Time Sampled	No. of Containers Shipped Grab	Composite Field Fiterad	Methanol	Sodium Biaufate	NaOH	H <sub>2</sub> SO <sub>4</sub> Plastic	H2SO, Glass HMO.	Confi to a	Other	None	Groundwater	Wattewater Drinking Water	Studge	Sol	Other (specify): Distribut Wate		TPH9,TPH4 80158*	-	DIEX 82000	5260 see list	Naphinalene 5260	I OTAI PD 6010			RUSH TAT (Pre-Schedule	i-day TAT	Blandard 10-day TAT	Due Date of Report	
S-Profile (5) Profile			X	T	П	T	П		x			T		Π	x	Γ	X	T	x	x	x	хľ	x		Π		44	x		
S-Profile-1 () Profile	08/11/14 1345	1 sleeve	X		Π		Π	Т	1	Τ			Т	Π	1	Г	1		1	i	1	1	1					1		٦
S-Profile-2 2 Profik	08/11/14 1346	1 sleeve	X	Т	П	Τ	Π		TT	Τ			Т	Π	Π	Γ		T	Π	Π	Π	T	T		Π			Т		
S-Profile-3 () Profile	08/11/14 1348	1 sleeve	X		Π		Π					Τ	Т	Π	Π	Г	Π	Τ	Π	Π	Π	Π	Π		Π					
S-Profile-4 (3) Profile	08/11/4 1349	1 sleeve	X		Π	Τ	П		V				Т	Ī	VI	Γ	V		Y	V	V,	Л	И		Π			×		
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*Use silica-ç	MTBE, DIPE, TBA, 1 jel clean-up for TPH samples (1-4) into 1 Date	d composite sam Time				11		-	PLE	EASE			L PDI allabsi	Qeri-L		2	Temp Samp VOC: Delive	<b>peret</b> ple C s Fre	ure l ionta ionta	<b>Jpo</b> inei Hei	n Re rs In adsp	tect <sup>1</sup>	?	8		Y Y		2 2		
Relinquished by: 11	8/12/14 ,Date	1040 Time	Ton	JY d by			y .	E	<b>C</b> /	-	8/12	//	4		Y/J ime	Le	vel 2 vel 3 vel 4													
Ton O'malley to 650	8/12/14	1730	pu	Ly	4	<u>.</u>	turn to	6	Z4 ntents	8					215	Sit	s Spec							ore-schedule v	w Ca	alscia	nce			

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#### Cecile L de Guia

From: Sent: To: Subject: Nadya Vicente [nadya.vicente@cardno.com] Tuesday, August 12, 2014 6:03 PM Cecile L de Guia RE: ExxonMobil 99105



Hi Cecile, Please label sample ID SP1 Thank you

Nadya Vicente STAFF GEOLOGIST CARDNO ERI

Phone (+1) 707-766-2000 Fax (+1) 707-789-0414 Direct (+1) 707-766-2015 Mobile (+1) 707-280-7487 Address 601 North McDowell Blvd., Petaluma, CA 94954-2312 USA Email <u>nadya.vicente@cardno.com Web www.cardno.com www.cardnoeri.com</u>

From: Cecile L de Guia [<u>mailto:CecileLdeGuia@eurofinsUS.com</u>] Sent: Tuesday, August 12, 2014 5:06 PM To: Nadya Vicente Cc: Sandy Tat Subject: ExxonMobil 99105

Good Afternoon Nadya,

Please advise what should be the sample ID after we have composited the four samples? Please update the COC and email back to us. Thank you.

Best regards, Cecile de Guia Project Manager

Eurofins Calscience 7440 Lincoln Way Garden Grove, CA 92841-1427 (714) 895-5494 Email: <u>ceciledeguia@eurofinsUS.com</u> Website: www. eurofinsus.com

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	<b>&lt; WebShip</b> 800-322-5555 M	
ND FRONT THE TAIL THE TOTAL CONCORD 1993 COMMERCIAL CIRCLE #H	Tracking #: 525367282	NPS
MARTHED, CA 94520	ORC	A
140 LINCOLN WAY Barden grove, ca 92841	GARDEN GROVE	
00) n.cn	D92845A	
leformed: 12f110 SRI Holivery Instructions:		
ідалниге Гуре: IGMA: JRE REQUIRED	27329010	Print Date : 08/12/14 14:55 PM:
		Package 1 of 1
ABEL INSTRUCTIONS:	Edit Shipment	Finish
Use the "Send Label to Printer" button fold this page in half. Securely attach this label to your packa	shipments - each package must have a unique on this page to print the shipping label on a laser of ge, do hot cover the barcode. rage, if you do not have scheduled daily pickup se arest GSO dropbox locations using this link.	or inkjet printer.
ADDITIONAL OPTIONS:		

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Line is the first of damage to any package is limited to your actual damages or \$100 whichever is less, unless you pay for the endoter authorized value. If you declare a higher value and pay the additional charge, our liability will be the which declared value or the actual value of your loss or damage. In any event, we will not be liable for any damage, and, accidental, special or consequential, in excess of the declared value of a shipment whether or not we had the damage might be incurred including but not limited to loss of income or profit. We will not be liable for the damage might be incurred including but not limited to loss of income or profit. We will not be liable for the damage might be incurred including but not limited to loss of a shipment whether or not we had the damage might be incurred including but not limited to loss of income or profit. We will not be liable for the damage might be incurred including but not limited to loss of a shipment, we will not be liable for the damage might be incurred including but not limited to acts of God, perils of the air, weather conditions, act of the damage we cannot control, including but not limited to acts of God, perils of the air, weather conditions, act of the damage. War, strikes, or civil commotion. The highest declared value for our GSO Priority Letter or GSO Priority the damage. For other shipments the highest declared value is \$10,000 unless your package contains items of the damage. In which case the highest declared value we allow is \$500. Items of "extraordinary value" include, but or therefore, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.

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	Calscience W	ORK ORDER #	#: <b>14-</b> (	08-01	91316
	SAMPLE REC	EIPT FOR	RM c	ooler 🦯	_ of
CLIENT: Cardno	EPU		DATE:	08/13	/14
Temperature <u>2</u> . <u>7</u> □ Sample(s) outside tempe	meter ID: SC1 (Criteria: 0.0 °C °C - 0.3 °C (CF) = $\frac{2}{\sqrt{2}}$ erature criteria (PM/APM contac erature criteria but received on in	• <b>ゲ°C</b> ☑ ted by:)	Blank	🗆 Sampi	
Received at ambient ter	nperature, placed on ice fo	or transport by Co	urier.		~
Ambient Temperature:	Air 🛛 Filter			Checked b	y: <u>876</u>
CUSTODY SEALS INTAG	CT: □ No (Not Intact) □ No (Not Intact)	□ Not Present	□ N/A	Checked b Checked b	0 0
COC document(s) received	complete	nples	· /	No □ □	N/A
2 2 2	] Not relinquished. □ No date/ti n COC				
	onsistent with COC				
24	and good condition		• /		
	ient volume for analyses req		1		
Analyses received within ho	Iding time	********	¢		
Aqueous samples receiv	ed within 15-minute holding	lime			
D pH D Residual Chlorine	Dissolved Sulfides     Disso	lved Oxygen			Ø
Proper preservation noted o	on COC or sample container. ed for Volatiles analysis				7
Volatile analysis container(s	) free of headspace				Þ
CONTAINER TYPE:	nsation				, p
Solid: 04ozCGJ 08ozCG	GJ □16ozCGJ ØSleeve (	) □EnCores	s <sup>®</sup> □Terra	Cores <sup>®</sup> □_	
	□VOAna₂ □125AGB □125/				□1AGB <b>s</b>
□500AGB □500AGJ □5	00ÅGJs □250AGB □250	CGB □250CGBs	□1PB	□1PBna □	1500PB
□250PB □250PBn □125	PB □125PBznna □100PJ	□100PJna₂ □	0_	0	
Container: C: Clear A: Amber P: Pl	Dther: D Trip Bland astic G: Glass J: Jar B: Bottle Z: Ziplo a <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> u: U	c/Resealable Bag E: Env	velope I	/Checked by Reviewed by Scanned by	:_ <u>{Mb</u>

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# WORK ORDER NUMBER: 14-08-0938

### The difference is service



AIR SOIL WATER MARINE CHEMISTRY

Analytical Report For Client: Cardno ERI Client Project Name: ExxonMobil 99105/022783C Attention: Greg Gurss 601 North McDowell Blvd. Petaluma, CA 94954-2312



BY: .....

Cereta L. in Ang

Approved for release on 08/25/2014 by: Cecile deGuia Project Manager



Page 1 of 30

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

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NELAP ID: 03220CA | ACLASS DoD-ELAP ID: ADE-1864 (ISO/IEC 17025 2005) | CSDLAC ID: 10109 | SCAQMD ID: 93LA0830

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#### **Work Order Narrative**

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#### Work Order: 14-08-0938

#### Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 08/13/14. They were assigned to Work Order 14-08-0938.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

#### Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

#### Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

#### Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

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

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

#### Subcontractor Information:

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

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#### Sample Summary

Client:	Cardno ERI	Work Order:	14-08-0938
	601 North McDowell Blvd.	Project Name:	ExxonMobil 99105/022783C
	Petaluma, CA 94954-2312	PO Number:	022783C
		Date/Time Received:	08/13/14 10:15
		Number of Containers:	6
Attn:	Grea Gurss		

#### Attn: Greg Gurss

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
S-5-MW6	14-08-0938-1	08/11/14 09:45	1	Solid
S-10-MW6	14-08-0938-2	08/11/14 09:55	1	Solid
S-15-MW6	14-08-0938-3	08/11/14 09:59	1	Solid
S-5-MW7	14-08-0938-4	08/11/14 12:25	1	Solid
S-10-MW7	14-08-0938-5	08/11/14 13:05	1	Solid
S-15-MW7	14-08-0938-6	08/11/14 13:10	1	Solid

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#### Analytical Report

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Cardno ERI			Date Re	eceived:			08/13/14
601 North McDowell Blvd.			Work O	rder:			14-08-093
Petaluma, CA 94954-2312			Prepara	tion:			EPA 3550
			Method:			E	PA 8015B (M
			Units:				mg/kg
Project: ExxonMobil 99105/0227	783C		ernter			Pa	age 1 of 2
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-MW6	14-08-0938-1-A	08/11/14 09:45	Solid	GC 48	08/15/14	08/15/14 20:45	140815B09
Parameter		Result		RL	DF	Qua	alifiers
TPH as Diesel		83		25	5.00	SG	,HD
Surrogate		<u>Rec. (%)</u>		Control Limits	<u>Qualifiers</u>		
n-Octacosane		62		61-145			
S-10-MW6	14-08-0938-2-A	08/11/14 09:55	Solid	GC 48	08/15/14	08/15/14 21:01	140815B09
Parameter		Result		RL	DF	Qua	alifiers
TPH as Diesel		47		25	5.00	SG	,HD
Surrogate		<u>Rec. (%)</u>		Control Limits	Qualifiers		
n-Octacosane		67		61-145			
S-15-MW6	14-08-0938-3-A	08/11/14 09:59	Solid	GC 48	08/15/14	08/15/14 21:17	140815B09
Parameter		Result		<u>RL</u>	<u>DF</u>	Qua	alifiers
TPH as Diesel		ND		4.9	1.00	SG	
Surrogate		<u>Rec. (%)</u>		Control Limits	Qualifiers		
n-Octacosane		80		61-145			
S-5-MW7	14-08-0938-4-A	08/11/14 12:25	Solid	GC 48	08/15/14	08/15/14 22:04	140815B09
Parameter		Result		<u></u>	DE	Qui	alifiers
TPH as Diesel		ND		5.0	1.00	SG	
Surrogate		<u>Rec. (%)</u>		Control Limits	<u>Qualifiers</u>		
n-Octacosane		75		61-145			
S-10-MW7	14-08-0938-5-A	08/11/14 13:05	Solid	GC 48	08/15/14	08/15/14 22:21	140815B09
Parameter		Result		RL	DE	Qua	alifiers
TPH as Diesel		ND		5.0	1.00	SG	
					0.117		
Surrogate		<u>Rec. (%)</u>		Control Limits	Qualifiers		

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

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#### **Analytical Report**

Cardno ERI			Date Re	ceived:			08/13/14
601 North McDowell Blvd.	Work Order:				14-08-093		
Petaluma, CA 94954-2312			Prepara	tion:			EPA 3550E
			Method:			E	PA 8015B (M
			Units:				mg/kg
Project: ExxonMobil 99105/022	2783C					Pa	ige 2 of 2
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-15-MW7	14-08-0938-6-A	08/11/14 13:10	Solid	GC 48	08/15/14	08/15/14 22:36	140815B09
Parameter		Result		<u>RL</u>	DE	Qualifiers	
TPH as Diesel		ND		5.0	1.00	SG	
Surrogate		<u>Rec. (%)</u>		Control Limits	<u>Qualifiers</u>		
n-Octacosane		77		61-145			
Method Blank	099-15-422-1295	N/A	Solid	GC 48	08/15/14	08/15/14 17:18	140815B09
Parameter		Result		<u>RL</u>	DF	Qua	alifiers
TPH as Diesel		ND		5.0	1.00		
Surrogate		<u>Rec. (%)</u>		Control Limits	<u>Qualifiers</u>		
n-Octacosane		80		61-145			

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#### **Analytical Report**

Cardno ERI			Date Re	ceived:			08/13/14
601 North McDowell Blvd.			Work O	der:			14-08-0938
Petaluma, CA 94954-2312			Prepara	tion:			EPA 50300
			Method:			E	PA 8015B (M
			Units:				mg/kg
Project: ExxonMobil 99105/0227	783C					Pa	ge 1 of 2
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-MW6	14-08-0938-1-A	08/11/14 09:45	Solid	GC 42	08/13/14	08/19/14 16:45	140819L036
Parameter		Result		<u>RL</u>	DF	Qua	alifiers
TPH as Gasoline		ND		0.53	1.00		
Surrogate		<u>Rec. (%)</u>		Control Limits	<u>Qualifiers</u>		
1,4-Bromofluorobenzene - FID		76		42-126			
S-10-MW6	14-08-0938-2-A	08/11/14 09:55	Solid	GC 42	08/13/14	08/19/14 17:20	140819L036
Parameter		Result		RL	DF	Qua	alifiers
TPH as Gasoline		4.4		0.50	1.00	HD	
Surrogate		<u>Rec. (%)</u>		Control Limits	Qualifiers		
1,4-Bromofluorobenzene - FID		108		42-126			
S-15-MW6	14-08-0938-3-A	08/11/14 09:59	Solid	GC 42	08/13/14	08/19/14 17:55	140819L036
Parameter		Result		RL	DE	Qua	alifiers
TPH as Gasoline		2.2		0.49	1.00	HD	
Surroqate		<u>Rec. (%)</u>		Control Limits	Qualifiers		
1,4-Bromofluorobenzene - FID		81		42-126			
S-5-MW7	14-08-0938-4-A	08/11/14 12:25	Solid	GC 42	08/13/14	08/19/14 15:00	140819L036
Parameter		<u>Result</u>		<u>RL</u>	DF	Qua	alifiers
TPH as Gasoline		ND		0.48	1.00		
Surrogate		<u>Rec. (%)</u>		Control Limits	Qualifiers		
1,4-Bromofluorobenzene - FID		70		42-126			
S-10-MW7	14-08-0938-5-A	08/11/14 13:05	Solid	GC 42	08/13/14	08/19/14 18:30	140819L036
Parameter		Result		RL	DF	Qu	alifiers
TPH as Gasoline		ND		0.49	1.00		
Surrogate		<u>Rec. (%)</u>		Control Limits	Qualifiers		

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#### **Analytical Report**

Cardno ERI			Date Re	ceived:			08/13/14
601 North McDowell Blvd.		Work Order:			14-08-0938		
Petaluma, CA 94954-2312			Prepara	tion:			EPA 50300
			Method:			E	PA 8015B (M
			Units:				mg/k
Project: ExxonMobil 99105/022	2783C					Pa	ige 2 of 2
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-15-MW7	14-08-0938-6-A	08/11/14 13:10	Solid	GC 42	08/13/14	08/19/14 19:05	140819L036
Parameter		<u>Result</u>		<u>RL</u>	DF	Qua	alifiers
TPH as Gasoline		ND		0.49	1.00		
Surrogate		<u>Rec. (%)</u>		Control Limits	<u>Qualifiers</u>		
1,4-Bromofluorobenzene - FID		78		42-126			
Method Blank	099-14-571-1805	N/A	Solid	GC 42	08/19/14	08/19/14 13:15	140819L036
Parameter		Result		RL	DF	Qua	alifiers
TPH as Gasoline		ND		0.50	1.00		
Surrogate		<u>Rec. (%)</u>		Control Limits	Qualifiers		
1,4-Bromofluorobenzene - FID		72		42-126			

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#### **Analytical Report**

Cardno ERI	Date Received:	08/13/14
601 North McDowell Blvd.	Work Order:	14-08-0938
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	mg/kg
Project: ExxonMobil 99105/022783C		Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-15-MW6	14-08-0938-3-A	08/11/14 09:59	Solid	GC/MS RR	08/13/14	08/15/14 14:40	140815L010
Parameter		Result		RL	<u>DE</u>	Qua	alifiers
Benzene		ND		0.0048	1.00		
Toluene		ND		0.0048	1.00		
Ethylbenzene		ND		0.0048	1.00		
o-Xylene		ND		0.0048	1.00		
p/m-Xylene		ND		0.0048	1.00		
Xylenes (total)		ND		0.0048	1.00		
Methyl-t-Butyl Ether (MTBE)		ND		0.0048	1.00		
Tert-Butyl Alcohol (TBA)		ND		0.048	1.00		
Diisopropyl Ether (DIPE)		ND		0.0095	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND		0.0095	1.00		
Tert-Amyl-Methyl Ether (TAME)		ND		0.0095	1.00		
1,2-Dibromoethane		ND		0.0048	1.00		
1,2-Dichloroethane		ND		0.0048	1.00		
Surrogate		<u>Rec. (%)</u>		Control Limits	Qualifiers		
1,4-Bromofluorobenzene		104		60-132			
Dibromofluoromethane		101		63-141			
1,2-Dichloroethane-d4		101		62-146			
Toluene-d8		111		80-120			

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

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#### **Analytical Report**

Cardno ERI	Date Received:	08/13/14
601 North McDowell Blvd.	Work Order:	14-08-0938
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	mg/kg
Project: ExxonMobil 99105/022783C		Page 2 of 4

#### Date/Time QC Batch ID Lab Sample Date/Time Matrix Instrument Date **Client Sample Number** Number Collected Prepared Analyzed 08/11/14 13:10 08/14/14 21:14 S-15-MW7 14-08-0938-6-A Solid GC/MS RR 08/13/14 140814L056 Parameter **Result** RL DF Qualifiers ND 0.0050 1.00 Benzene ND 0.0050 1.00 Toluene Ethylbenzene ND 0.0050 1.00 ND 0.0050 1.00 o-Xylene 1.00 ND 0.0050 p/m-Xylene ND 0.0050 1.00 Xylenes (total) 0.0050 1.00 Methyl-t-Butyl Ether (MTBE) ND Tert-Butyl Alcohol (TBA) ND 0.050 1.00 Diisopropyl Ether (DIPE) ND 0.010 1.00 ND 0.010 1.00 Ethyl-t-Butyl Ether (ETBE) 0.010 1.00 Tert-Amyl-Methyl Ether (TAME) ND 1,2-Dibromoethane ND 0.0050 1.00 0.0050 1.00 ND 1,2-Dichloroethane Rec. (%) **Control Limits** Qualifiers Surrogate 60-132 1,4-Bromofluorobenzene 96 105 63-141 Dibromofluoromethane 1,2-Dichloroethane-d4 104 62-146 Toluene-d8 101 80-120

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### **Analytical Report**

Cardno ERI	Date Received:	08/13/14
601 North McDowell Blvd.	Work Order:	14-08-0938
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	mg/kg
Project: ExxonMobil 99105/022783C		Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-796-8796	N/A	Solid	Solid GC/MS RR	08/14/14	08/14/14 12:24	140814L056
Parameter		Result		RL	DF	Qua	lifiers
Benzene		ND		0.0050	1.00		
Toluene		ND		0.0050	1.00		
Ethylbenzene		ND		0.0050	1.00		
o-Xylene		ND		0.0050	1.00		
p/m-Xylene		ND		0.0050	1.00		
Xylenes (total)		ND		0.0050	1.00		
Methyl-t-Butyl Ether (MTBE)		ND		0.0050	1.00		
Tert-Butyl Alcohol (TBA)		ND		0.050	1.00		
Diisopropyl Ether (DIPE)		ND		0.010	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND		0.010	1.00		
Tert-Amyl-Methyl Ether (TAME)		ND		0.010	1.00		
1,2-Dibromoethane		ND		0.0050	1.00		
1,2-Dichloroethane		ND		0.0050	1.00		
Surrogate		<u>Rec. (%)</u>		Control Limits	<u>Qualifiers</u>		
1,4-Bromofluorobenzene		97		60-132			
Dibromofluoromethane		108		63-141			
1,2-Dichloroethane-d4		108		62-146			
Toluene-d8		102		80-120			

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#### **Analytical Report**

Cardno ERI	Date Received:	08/13/14
601 North McDowell Blvd.	Work Order:	14-08-0938
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	mg/kg
Project: ExxonMobil 99105/022783C		Page 4 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-796-8788	N/A	Solid	GC/MS RR	08/15/14	08/15/14 13:16	140815L010
Parameter		Result		<u>RL</u>	DF	Qua	alifiers
Benzene		ND		0.0050	1.00		
Toluene		ND		0.0050	1.00		
Ethylbenzene		ND		0.0050	1.00		
o-Xylene		ND		0.0050	1.00		
p/m-Xylene		ND		0.0050	1.00		
Xylenes (total)		ND		0.0050	1.00		
Methyl-t-Butyl Ether (MTBE)		ND		0.0050	1.00		
Tert-Butyl Alcohol (TBA)		ND		0.050	1.00		
Diisopropyl Ether (DIPE)		ND		0.010	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND		0.010	1.00		
Tert-Amyl-Methyl Ether (TAME)		ND		0.010	1.00		
1,2-Dibromoethane		ND		0.0050	1.00		
1,2-Dichloroethane		ND		0.0050	1.00		
Surrogate		<u>Rec. (%)</u>		Control Limits	Qualifiers		
1,4-Bromofluorobenzene		96		60-132			
Dibromofluoromethane		104		63-141			
1,2-Dichloroethane-d4		104		62-146			
Toluene-d8		101		80-120			

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### **Analytical Report**

2		
Cardno ERI	Date Received:	08/13/14
601 North McDowell Blvd.	Work Order:	14-08-0938
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	mg/kg
Project: ExxonMobil 99105/022783C		Page 1 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-MW6	14-08-0938-1-A	08/11/14 09:45	Solid	GC/MS RR	08/13/14	08/14/14 19:23	140814L005
Parameter		Result		<u>RL</u>	DF	Qua	<u>lifiers</u>
Benzene		ND		0.0049	1.00		
Toluene		ND		0.0049	1.00		
Ethylbenzene		ND		0.0049	1.00		
o-Xylene		ND		0.0049	1.00		
p/m-Xylene		ND		0.0049	1.00		
Xylenes (total)		ND		0.0049	1.00		
Methyl-t-Butyl Ether (MTBE)		ND		0.0049	1.00		
Tert-Butyl Alcohol (TBA)		ND		0.049	1.00		
Diisopropyl Ether (DIPE)		ND		0.0099	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND		0.0099	1.00		
Tert-Amyl-Methyl Ether (TAME)		ND		0.0099	1.00		
1,2-Dibromoethane		ND		0.0049	1.00		
1,2-Dichloroethane		ND		0.0049	1.00		
Naphthalene		ND		0.049	1.00		
Surrogate		<u>Rec. (%)</u>		Control Limits	Qualifiers		
1,4-Bromofluorobenzene		94		60-132			
Dibromofluoromethane		98		63-141			
1,2-Dichloroethane-d4		100		62-146			
Toluene-d8		100		80-120			

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#### **Analytical Report**

Cardno ERI	Date Received:	08/13/14
601 North McDowell Blvd.	Work Order:	14-08-0938
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	mg/kg
Project: ExxonMobil 99105/022783C		Page 2 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-10-MW6	14-08-0938-2-A	08/11/14 09:55	Solid	GC/MS RR	08/13/14	08/14/14 19:50	140814L005
Parameter		Result		<u>RL</u>	DF	Qua	lifiers
Benzene		ND		0.0052	1.00		
Toluene		ND		0.0052	1.00		
Ethylbenzene		ND		0.0052	1.00		
o-Xylene		ND		0.0052	1.00		
p/m-Xylene		ND		0.0052	1.00		
Xylenes (total)		ND		0.0052	1.00		
Methyl-t-Butyl Ether (MTBE)		ND		0.0052	1.00		
Tert-Butyl Alcohol (TBA)		ND		0.052	1.00		
Diisopropyl Ether (DIPE)		ND		0.010	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND		0.010	1.00		
Tert-Amyl-Methyl Ether (TAME)		ND		0.010	1.00		
1,2-Dibromoethane		ND		0.0052	1.00		
1,2-Dichloroethane		ND		0.0052	1.00		
Naphthalene		ND		0.052	1.00		
Surrogate		<u>Rec. (%)</u>		Control Limits	Qualifiers		
1,4-Bromofluorobenzene		101		60-132			
Dibromofluoromethane		102		63-141			
1,2-Dichloroethane-d4		103		62-146			
Toluene-d8		107		80-120			

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#### **Analytical Report**

Cardno ERI	Date Received:	08/13/14
601 North McDowell Blvd.	Work Order:	14-08-0938
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	mg/kg
Project: ExxonMobil 99105/022783C		Page 3 of 5

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-MW7	14-08-0938-4-A	08/11/14 12:25	Solid	GC/MS RR	08/13/14	08/14/14 12:52	140814L005
Parameter		Result		<u>RL</u>	DF	Qua	lifiers
Benzene		ND		0.0050	1.00		
Toluene		ND		0.0050	1.00		
Ethylbenzene		ND		0.0050	1.00		
o-Xylene		ND		0.0050	1.00		
p/m-Xylene		ND		0.0050	1.00		
Xylenes (total)		ND		0.0050	1.00		
Methyl-t-Butyl Ether (MTBE)		ND		0.0050	1.00		
Tert-Butyl Alcohol (TBA)		ND		0.050	1.00		
Diisopropyl Ether (DIPE)		ND		0.010	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND		0.010	1.00		
Tert-Amyl-Methyl Ether (TAME)		ND		0.010	1.00		
1,2-Dibromoethane		ND		0.0050	1.00		
1,2-Dichloroethane		ND		0.0050	1.00		
Naphthalene		ND		0.050	1.00		
Surrogate		<u>Rec. (%)</u>		Control Limits	<u>Qualifiers</u>		
1,4-Bromofluorobenzene		97		60-132			
Dibromofluoromethane		107		63-141			
1,2-Dichloroethane-d4		105		62-146			
Toluene-d8		102		80-120			

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#### **Analytical Report**

Cardno ERI	Date Received:	08/13/14
601 North McDowell Blvd.	Work Order:	14-08-0938
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
·	Method:	EPA 8260B
	Units:	mg/kg
Project: ExxonMobil 99105/022783C		Page 4 of 5

#### Lab Sample Number Date/Time QC Batch ID Date/Time Matrix Instrument Date **Client Sample Number** Prepared Analyzed Collected 08/14/14 20:46 GC/MS RR 08/13/14 140814L005 S-10-MW7 14-08-0938-5-A 08/11/14 Solid 13:05 DF Qualifiers Parameter **Result** RL 1.00 ND 0.0049 Benzene ND 0.0049 1.00 Toluene 1.00 ND 0.0049 Ethylbenzene 1.00 ND 0.0049 o-Xylene ND 0.0049 1.00 p/m-Xylene 0.0049 1.00 Xylenes (total) ND 1.00 ND 0.0049 Methyl-t-Butyl Ether (MTBE) Tert-Butyl Alcohol (TBA) ND 0.049 1.00 1.00 0.0098 ND Diisopropyl Ether (DIPE) 0.0098 1.00 Ethyl-t-Butyl Ether (ETBE) ND Tert-Amyl-Methyl Ether (TAME) ND 0.0098 1.00 1.00 ND 0.0049 1,2-Dibromoethane ND 0.0049 1.00 1,2-Dichloroethane 1.00 Naphthalene ND 0.049 Control Limits **Qualifiers** Rec. (%) Surrogate 98 60-132 1,4-Bromofluorobenzene 63-141 Dibromofluoromethane 103 105 62-146 1,2-Dichloroethane-d4 Toluene-d8 100 80-120

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#### **Analytical Report**

Cardno ERI	Date Received:	08/13/14
601 North McDowell Blvd.	Work Order:	14-08-0938
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	mg/kg
Project: ExxonMobil 99105/022783C		Page 5 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-882-1652	N/A	Solid	GC/MS RR	08/14/14	08/14/14 12:24	140814L005
Parameter		Result		RL	DF	Qua	alifiers
Benzene		ND		0.0050	1.00		
Toluene		ND		0.0050	1.00		
Ethylbenzene		ND		0.0050	1.00		
o-Xylene		ND		0.0050	1.00		
p/m-Xylene		ND		0.0050	1.00		
Xylenes (total)		ND		0.0050	1.00		
Methyl-t-Butyl Ether (MTBE)		ND		0.0050	1.00		
Tert-Butyl Alcohol (TBA)		ND		0.050	1.00		
Diisopropyl Ether (DIPE)		ND		0.010	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND		0.010	1.00		
Tert-Amyl-Methyl Ether (TAME)		ND		0.010	1.00		
1,2-Dibromoethane		ND		0.0050	1.00		
1,2-Dichloroethane		ND		0.0050	1.00	1	
Naphthalene		ND		0.050	1.00		
Surrogate		<u>Rec. (%)</u>		Control Limits	<u>Qualifiers</u>		
1,4-Bromofluorobenzene		97		60-132			
Dibromofluoromethane		108		63-141			
1,2-Dichloroethane-d4		108		62-146			
Toluene-d8		102		80-120			

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#### **Quality Control - Spike/Spike Duplicate**

Cardno ERI				Date F	Received	:				08/13/14	
601 North McDowell Blvd	l.			Work	Order:			14-08-09			
Petaluma, CA 94954-231	2			Prepa	ration:		EPA 3550				
Meth					d:	EPA 8015B (M)					
Project: ExxonMobil 9910	)5/022783C								Page 1	of 4	
Quality Control Sample ID	Туре		Matrix	Inst	rument	Date Prepared	Date Ana	alyzed	MS/MSD Ba	tch Number	
S-10-MW7	Sample	201	Solid	GC	48	08/15/14	08/15/14	22:21	140815S09		
S-10-MW7	Matrix Spike		Solid	GC	48	08/15/14	08/15/14	18:06	140815S09		
S-10-MW7	Matrix Spike	Duplicate	Solid	GC	48	08/15/14	08/15/14	18:22	140815S09	- <u>-</u>	
Parameter	<u>Sample</u> Conc.	<u>Spike</u> Added	<u>MS</u> Conc.	<u>MS</u> %Rec.	<u>MSD</u> Conc.	<u>MSD</u> %Rec.	<u>%Rec. CL</u>	<u>RPD</u>	RPD CL	<u>Qualifiers</u>	
TPH as Diesel	ND	400.0	322.2	81	350.0	87	64-130	8	0-15		

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### Quality Control - Spike/Spike Duplicate

Cardno ERI				Date F	Received	:			08/13/14			
601 North McDowell Blvd		Work Order:					14-					
Petaluma, CA 94954-231	2			Preparation:					EPA 5			
					Method:					EPA 8015B (M)		
Project: ExxonMobil 9910	)5/022783C								Page 2	of 4		
Quality Control Sample ID	Туре		Matrix	Inst	rument	Date Prepared	Date Ana	ilyzed	MS/MSD Bat	ch Number		
S-5-MW7	Sample	5 5 6	Solid	GC	42	08/13/14	08/19/14	15:00	140819S024			
S-5-MW7	Matrix Spike		Solid	GC	42	08/13/14	08/19/14	15:35	1408195024			
S-5-MW7	Matrix Spike	Duplicate	Solid	GC	42	08/13/14	08/19/14	16:10	1408195024	1.1.1		
Parameter	Sample Conc.	<u>Spike</u> Added	MS Conc.	<u>MS</u> %Rec.	<u>MSD</u> Conc.	MSD %Rec.	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	Qualifiers		
TPH as Gasoline	ND	10.00	9.495	95	9.044	90	48-114	5	0-23			

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#### **Quality Control - Spike/Spike Duplicate**

Cardno ERI				Date	e Received:					08/13/14
601 North McDowell Blvd.				Woi	k Order:				14	-08-0938
Petaluma, CA 94954-2312				Pre	paration:				EF	PA 5030C
,				Met	hod:				EF	PA 8260B
Project: ExxonMobil 99105/	022783C								Page 3	of 4
Quality Control Sample ID	Туре		Matrix	1	nstrument	Date Prepared	Date Ana	lyzed	MS/MSD Bat	ch Number
14-08-0939-5	Sample	11 12 1	Solid		GC/MS RR	08/14/14	08/15/14	14:12	1408155009	
14-08-0939-5	Matrix Spike		Solid	(	GC/MS RR	08/14/14	08/15/14	15:08	1408158009	
14-08-0939-5	Matrix Spike	Duplicate	Solid	(	GC/MS RR	08/14/14	08/15/14	15:36	1408158009	1212
Parameter	<u>Sample</u> Conc.	<u>Spike</u> Added	<u>MS</u> Conc.	<u>MS</u> %Rec	<u>MSD</u> Conc.	MSD %Rec.	<u>%Rec. CL</u>	<u>RPD</u>	RPD CL	<u>Qualifiers</u>
Benzene	ND	0.05000	0.04680	94	0.05150	103	61-127	10	0-20	
Toluene	ND	0.05000	0.04767	95	0.05198	104	63-123	9	0-20	
Ethylbenzene	ND	0.05000	0.04525	90	0.04929	99	57-129	9	0-22	
o-Xylene	ND	0.05000	0.04672	93	0.05113	102	70-130	9	0-30	
p/m-Xylene	ND	0.1000	0.09188	92	0.1005	101	70-130	9	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	0.05000	0.04204	84	0.04776	96	57-123	13	0-21	
Tert-Butyl Alcohol (TBA)	ND	0.2500	0.2178	87	0.2372	95	30-168	9	0-34	
Diisopropyl Ether (DIPE)	ND	0.05000	0.04986	100	0.05526	111	57-129	10	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	0.05000	0.04187	84	0.04729	95	55-127	12	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	0.05000	0.03743	75	0.04274	85	58-124	13	0-20	
1,2-Dibromoethane	ND	0.05000	0.04303	86	0.04770	95	64-124	10	0-20	
1,2-Dichloroethane	ND	0.05000	0.04740	95	0.05298	106	80-120	11	0-20	

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### **Quality Control - Spike/Spike Duplicate**

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Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312	-2312 Preparation:									08/13/14 -08-0938 PA 50300
Project: ExxonMobil 99105/			Me	thod:				EF Page 4	PA 8260E of 4	
Quality Control Sample ID	Туре		Matrix		Instrument	Date Prepared	Date Ana	lyzed		
S-5-MW7	Sample	1.00	Solid	100	GC/MS RR	08/13/14	08/14/14	12:52	1408145013	
S-5-MW7	Matrix Spike		Salid		GC/MS RR	08/13/14	08/14/14	13:20	1408145013	
S-5-MW7	Matrix Spike	Duplicate	Salid		GC/MS RR	08/13/14	08/14/14	13:47	1408149013	
Parameter	<u>Sample</u> Conc.	Spike Added	MS Conc.	<u>MS</u> %Re	c. <u>MSD</u> Conc.	<u>MSD</u> %Rec.	<u>%Rec. CL</u>	<u>RPD</u>	RPD CL	Qualifiers
Benzene	ND	0.05000	0.04470	89	0.05248		61-127	16	0-20	
Toluene	ND	0.05000	0.04455	89	0.05233	105	63-123	16	0-20	
Ethylbenzene	ND	0.05000	0.04332	87	0.04986	100	57-129	14	0-22	
o-Xylene	ND	0.05000	0.04491	90	0.05156	103	70-130	14	0-30	
p/m-Xylene	ND	0.1000	0.08869	89	0.1026	103	70-130	15	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	0.05000	0.03753	75	0.04392	88	57-123	16	0-21	
Tert-Butyl Alcohol (TBA)	ND	0.2500	0.2135	85	0.2453	98	30-168	14	0-34	
Diisopropyl Ether (DIPE)	ND	0.05000	0.04663	93	0.05470	109	57-129	16	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	0.05000	0.03701	74	0.04357	87	55-127	16	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	0.05000	0.03246	65	0.03798	76	58-124	16	0-20	
1,2-Dibromoethane	ND	0.05000	0.04023	80	0.04541	91	64-124	12	0-20	
1,2-Dichloroethane	ND	0.05000	0.04477	90	0.05259	105	80-120	16	0-20	

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TPH as Diesel

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#### **Quality Control - LCS**

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Cardno ERI			Date Receiv	ed:		08/13/1			
601 North McDowell Blvd.			Work Order:	Work Order:					
Petaluma, CA 94954-231	luma, CA 94954-2312 Preparation:								
			Method:			EPA 8015B (N			
Project: ExxonMobil 9910	5/022783C					Page 1 of 5			
Quality Control Sample ID	Туре	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number			
099-15-422-1295	LCS	Solid	GC 48	08/15/14	08/15/14 17:34	140815B09			
Parameter		Spike Added	Conc. Recove	ered LCS %R	ec. <u>%Rec</u>	. CL Qualifiers			

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#### **Quality Control - LCS**

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Cardno ERI			Date Receiv	ved:		08/13/14
601 North McDowell Blvd			Work Order	:		14-08-0938
Petaluma, CA 94954-231.	2		Preparation	:		EPA 50300
			Method:			EPA 8015B (M
Project: ExxonMobil 9910	5/022783C					Page 2 of 5
Quality Control Sample ID	Туре	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-571-1805	LCS	Solid	GC 42	08/19/14	08/19/14 14:25	140819L036
Parameter		Spike Added	Conc. Recov	vered LCS %R	ec. <u>%Rec</u>	CL Qualifiers

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#### **Quality Control - LCS**

Cardno ERI			Date Receiv	ved:		08/13/14
601 North McDowell Blvd			Work Order		14-08-0938	
Petaluma, CA 94954-231	2		Preparation	:		EPA 5030C
			Method:			EPA 8260B
Project: ExxonMobil 9910	5/022783C					Page 3 of 5
Quality Control Sample ID	Туре	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-796-8796	LCS	Solid	GC/MS RR	08/14/14	08/14/14 10:57	140814L056

099-12-796-8796 LC	S Solid	GC/MS R	R 08/14/14	08/14/14	10:57 140814L05	6
Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Benzene	0.05000	0.04876	98	78-120	71-127	
Toluene	0.05000	0.04882	98	77-120	70-127	
Ethylbenzene	0.05000	0.04726	95	76-120	69-127	
o-Xylene	0.05000	0.04954	99	75-125	67-133	
o/m-Xylene	0.1000	0.09693	97	75-125	67-133	
Methyl-t-Butyl Ether (MTBE)	0.05000	0.04486	90	77-120	70-127	
Fert-Butyl Alcohol (TBA)	0.2500	0.2344	94	68-122	59-131	
Diisopropyl Ether (DIPE)	0.05000	0.05359	107	78-120	71-127	
Ethyl-t-Butyl Ether (ETBE)	0.05000	0.04436	89	78-120	71-127	
Tert-Amyl-Methyl Ether (TAME)	0.05000	0.03925	79	75-120	68-128	
1,2-Dibromoethane	0.05000	0.04578	92	80-120	73-127	
1,2-Dichloroethane	0.05000	0.05106	102	80-120	73-127	

Total number of LCS compounds: 12

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

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#### **Quality Control - LCS**

Cardno ERI	Date Received:	08/13/14
601 North McDowell Blvd.	Work Order:	14-08-0938
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
Project: ExxonMobil 99105/022783C		Page 4 of 5

Quality Control Sample ID	Туре	Matrix	Instrumen	t Date Prep	ared Date Ana	lyzed LCS Bate	ch Number
099-12-796-8788	LCS	Solid	GC/MS R	R 08/15/14	08/15/14	11:49 140815L	010
Parameter		Spike Added	Conc. Recovered	LCS %Rec.	<u>%Rec. CL</u>	ME CL	<u>Qualifiers</u>
Benzene		0.05000	0.04460	89	78-120	71-127	
Toluene		0.05000	0.04521	90	77-120	70-127	
Ethylbenzene		0.05000	0.04358	87	76-120	69-127	
o-Xylene		0.05000	0.04574	91	75-125	67-133	
p/m-Xylene		0.1000	0.08987	90	75-125	67-133	
Methyl-t-Butyl Ether (MTBE)		0.05000	0.04229	85	77-120	70-127	
Tert-Butyl Alcohol (TBA)		0.2500	0.2037	81	68-122	59-131	
Diisopropyl Ether (DIPE)		0.05000	0.04827	97	78-120	71-127	
Ethyl-t-Butyl Ether (ETBE)		0.05000	0.04263	85	78-120	71-127	
Tert-Amyl-Methyl Ether (TAME)		0.05000	0.03804	76	75-120	68-128	
1,2-Dibromoethane		0.05000	0.04208	84	80-120	73-127	
1,2-Dichloroethane		0.05000	0.04643	93	80-120	73-127	

Total number of LCS compounds: 12

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

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#### **Quality Control - LCS**

Work Order:	14-08-0938
Preparation:	EPA 5030C
Method:	EPA 8260B
	Page 5 of 5
	Preparation:

Quality Control Sample ID	Type	Matrix	Instrumen	t Date Prepa	ared Date Analy	zed LCS Batch N	lumber
099-12-882-1652	LCS	Solid	GC/MS RI	R 03/14/14	08/14/14 10	):57 140814L005	
Parameter		Spike Added	Conc. Recovered	LCS %Rec.	<u>%Rec. CL</u>	ME CL	Qualifiers
Benzene		0.05000	0.04876	98	78-120	71-127	
Toluene		0.05000	0.04882	98	77-120	70-127	
Ethylbenzene		0.05000	0.04726	95	76-120	69-127	
o-Xylene		0.05000	0.04954	99	75-125	67-133	
p/m-Xylene		0.1000	0.09693	97	75-125	67-133	
Methyl-t-Butyl Ether (MTBE)		0.05000	0.04486	90	77-120	70-127	
Tert-Butyl Alcohol (TBA)		0.2500	0.2344	94	68-122	59-131	
Diisopropyl Ether (DIPE)		0.05000	0.05359	107	78-120	71-127	
Ethyl-t-Butyl Ether (ETBE)		0.05000	0.04436	89	78-120	71-127	
Tert-Amyl-Methyl Ether (TAME)		0.05000	0.03925	79	75-120	68-128	
1,2-Dibromoethane		0.05000	0.04578	92	80-120	73-127	
1,2-Dichloroethane		0.05000	0.05106	102	80-120	73-127	

Total number of LCS compounds: 12 Total number of ME compounds: 0 Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

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#### **Glossary of Terms and Qualifiers**

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ik Oluel.	: 14-08-0938 Page 1 of	<u> </u>
ualifiers	Definition	
AZ	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compoun in control and, therefore, the sample data was reported without further clarification.	d wa
в	Analyte was present in the associated method blank.	
BA	The MS/MSD RPD was out of control due to suspected matrix interference.	
BB	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.	
BU	Sample analyzed after holding time expired.	
BV	Sample received after holding time expired.	
DF	Reporting limits elevated due to matrix interferences.	
Е	Concentration exceeds the calibration range.	
ET	Sample was extracted past end of recommended max. holding time.	
GE	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.	
HD	Chromat, profile inconsistent with pattern(s) of ref. fuel stnds.	
но	High concentration matrix spike recovery out of limits	
HT	Analytical value calculated using results from associated tests.	
ΗХ	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS was in control.	
IL.	Relative percent difference out of control.	
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.	
JA	Analyte positively identified but quantitation is an estimate.	
LD	Analyte presence was not confirmed by second column or GC/MS analysis.	
LP	The LCS and/or LCSD recoveries for this analyte were above the upper control limit. The associated sample was non-detected. The the sample data was reported without further clarification.	refo
LQ	LCS recovery above method control limits.	
LR	LCS recovery below method control limits.	
ND	Parameter not detected at the indicated reporting limit.	
QO	Compound did not meet method-described identification guidelines. Identification was based on additional GC/MS characteristics.	
RU	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).	
SG	A silica gel cleanup procedure was performed.	
SN	See applicable analysis comment.	
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results a reported on a wet weight basis.	
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minute (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.	es he
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reporte estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.	∍d,

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Consultant C	ity/State/Zip:	Petaluma,	CA 94954				_											Rej	port	To:	Gre	g Gui	35		_		_							_	
ExxonMobil	Project Mgr:	Jennifer S	edlachek						_					Second			Pro	jec	t Na	me:	02	2783	6			_									
Consultant	Project Mgr:	Greg Gurs	s			_				_					Exc	xoni	Mob				_		-	991	-			<u> -</u>	Major Project	:(AF	E	:		_	
Consultant Teleph	one Number:	(707) 766-	2000	4.0			Fa	x Ne	b.: (	707)	789	-04	14	-								1 Ser	_		Ave	-									
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3 S-15-MW6	MWG	8/11/14			X			Γ	Π	Τ		Π	X			Γ	Π	Τ	1			Х		X	Х	X									
4 5-5-MW7	MWT	8/11/14			X					Τ			X						1			X		X	Х	×	X						Ц		
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5 5-10-MW7	MWT	8/11/14			×			L	Ц			Ц	_ ×	4			Ц		1			x		_	×	_	X	L		$\square$	L		Ц		_
5-15-MW7	MW7	8/11/14	1310	V	X				Ц			Ц	7	4			Ц		1			7	_	*	×	*		L		$\square$			V	1_	
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			Page 30	of 30
eurofins	work ord	er #: 14-(	)8-09	38
	AMPLE RECEIPT F			
LIENT: <u>Carduo G</u>	<u>714</u>	DATE: _	08/13/	14
Temperature       ∠       • C       °C         □ Sample(s) outside temperature         □ Sample(s) outside temperature         □ Received at amblent temperature	ID: SC1 (Criteria: $0.0 ^{\circ}\text{C} - 6.0 ^{\circ}\text{C}$ , not f $-0.3 ^{\circ}\text{C}$ (CF) = <u>2</u> . <u>3</u> $^{\circ}\text{C}$ criteria (PM/APM contacted by: criteria but received on ice/chilled on sa ture, placed on ice for transport to	□ Blank _) ame day of sampl	Sample	846
Ambient Temperature: 🗆 Air	🗇 Filter		Checked by.	
COOLER       Image: Cooler         Sample       Image: Cooler	□ No (Not Intact) □ Not Pre □ No (Not Intact)   ✓ Not Pre		Checked by: Checked by:	876 Ro 2
COC document(s) received comp	Int(s) received with samples lete # of containers logged in based on sample elinguished.			N/A
□ No analysis requested. □ Not re Sampler's name indicated on CO	C	Þ		
Sample container label(s) consist	ent with COC			
Sample container(s) intact and go	ood condition	Þ		
Proper containers and sufficient v	olume for analyses requested	🗖		
Analyses received within holding Aqueous samples received within	time	Ø		
	issolved Sulfides Dissolved Oxygen			ø
Proper preservation noted on CO	C or sample container			Ø
Unpreserved vials received for	volatiles analysis	- n		Ø
Volatile analysis container(s) free	e of headspace			Ø
CONTAINER TYPE: Solid: 0402CGJ 0802CGJ 0	$\exists 16 \text{oz} CGJ \not \square Sleeve ( \mathcal{R} / \mathcal{S}) \overset{(\mathcal{H})}{\square} E$	nCores <sup>®</sup> ⊡Terr	aCores <sup>®</sup> □	7
Aqueous: OVOA OVOAh OVO	Ana₂ □125AGB □125AĠBh □125	AGBp □1AGB	□1AGBna₂ □	1AGB <b>s</b>
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# WORK ORDER NUMBER: 14-08-1369

### The difference is service



AIR SOIL WATER MARINE CHEMISTRY

Analytical Report For Client: Cardno ERI Client Project Name: ExxonMobil 99105/022783C Attention: Greg Gurss 601 North McDowell Blvd



BY: .....

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

Approved for release on 08/29/2014 by: Cecile deGuia Project Manager



Page 1 of 26

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Calscience

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NELAP ID: 03220CA [ ACLASS DoD-ELAP ID: ADE-1864 (ISO/IEC 17025:2005) ] CSDLAC ID: 10109 ] SCAQMD ID: 93LA0830

ResultLink )

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## Contents

	ject Name: er Number:	ExxonMobil 99105/022783C 14-08-1369	
WORK OT LE	er number.	14-06-1309	
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2	Sample S	Summary	4
3	<ul><li>3.1 EPA</li><li>3.2 EPA</li></ul>	mple Data	5 5 6 8
4	4.1 MS/N	ontrol Sample Data. MSD	14 14 18
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#### **Work Order Narrative**

Work Order: 14-08-1369

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#### **Condition Upon Receipt:**

Samples were received under Chain-of-Custody (COC) on 08/19/14. They were assigned to Work Order 14-08-1369.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

#### Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

#### **Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

#### Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

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

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

#### Subcontractor Information:

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

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#### Sample Summary

Client:	Cardno ERI	Work Order:	14-08-1369
	601 North McDowell Blvd.	Project Name:	ExxonMobil 99105/022783C
	Petaluma, CA 94954-2312	PO Number:	022783C
		Date/Time Received:	08/19/14 12:55
		Number of Containers:	4
Attn:	Greg Gurss		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
S-5-MW8	14-08-1369-1	08/15/14 08:35	1	Solid
S-8-MW8	14-08-1369-2	08/15/14 09:10	1	Solid
S-10-MW8	14-08-1369-3	08/15/14 08:43	1	Solid
S-15-MW8	14-08-1369-4	08/15/14 08:50	1	Solid

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#### **Analytical Report**

Cardno ERI			Date Re	ceived:			08/19/14
601 North McDowell Blvd.			Work O	rder:			14-08-1369
Petaluma, CA 94954-2312			Prepara	tion:			EPA 3550B
			Method:	:		E	PA 8015B (M)
			Units:				mg/kg
Project: ExxonMobil 99105/0227	83C					Pε	ige 1 of 1
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-MW8	14-08-1369-1-A	08/15/14 08:35	Solid	GC 45	08/19/14	08/20/14 09:16	140819B10A
Parameter		Result		<u>RL</u>	DE	Qua	alifiers
TPH as Diesel		ND		5.0	1.00	SG	
<u>Surrogate</u> n-Octacosane		<u>Rec. (%)</u> 86		<u>Control Limits</u> 61-145	<u>Qualifiers</u>		
S-8-MW8	14-08-1369-2-A	08/15/14 09:10	Solid	GC 45	08/19/14	08/20/14 09:34	140819B10A
Parameter		Result		<u>RL</u>	DF	Qua	alifiers
TPH as Diesel		41		5.0	1.00	SG,	HD
<u>Surroqate</u> n-Octacosane		<u>Rec. (%)</u> 86		<u>Control Limits</u> 61-145	<u>Qualifiers</u>		
S-10-MW8	14-08-1369-3-A	08/15/14 08:43	Solid	GC 45	08/19/14	08/20/14 09:54	140819B10A
<u>Parameter</u>		Result		RL	DF	Qua	lifiers
TPH as Diesel		ND		5.0	1.00	SG	
<u>Surrogate</u> n-Octacosane		<u>Rec. (%)</u> 84		<u>Control Limits</u> 61-145	<u>Qualifiers</u>		
S-15-MW8	14-08-1369-4-A	08/15/14 08:50	Solid	GC 45	08/19/14	08/20/14 10:13	140819B10A
Parameter		<u>Result</u>		RL	DE	Qua	alifiers
TPH as Diesel		ND		5.0	1.00	SG	
Surrogate		<u>Rec. (%)</u>		Control Limits	<u>Qualifiers</u>		
n-Octacosane		87		61-145	<u>Quantoro</u>		
Method Blank	099-15-422-1303	N/A	Solid	GC 45	08/19/14	08/20/14 03:53	140819B10A
Parameter		Result		RL	DF	Qua	alifiers
TPH as Diesel		ND		5.0	1.00		
<u>Surrogate</u> n-Octacosane		<u>Rec. (%)</u> 96		<u>Control Limits</u> 61-145	<u>Qualifiers</u>		

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#### **Analytical Report**

Cardno ERI			Date Re	ceived:			08/19/14
601 North McDowell Blvd.			Work O	rder:			14-08-1369
Petaluma, CA 94954-2312			Prepara	tion:			EPA 5030C
			Method			E	PA 8015B (M)
			Units:				mg/kg
Project: ExxonMobil 99105/0227	'83C		ornito.			Pa	ige 1 of 2
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-MW8	14-08-1369-1-A	08/15/14 08:35	Solid	GC 56	08/19/14	08/22/14 17:01	140822L042
Parameter		Result		<u>RL</u>	DF	Qua	alifiers
TPH as Gasoline		ND		0.50	1.00		
Surrogate		<u>Rec. (%)</u>		Control Limits	Qualifiers		
1,4-Bromofluorobenzene - FID		74		42-126			
S-8-MW8	14-08-1369-2-A	08/15/14 09:10	Solid	GC 56	08/19/14	08/20/14 20:08	140820L053
Parameter		Result		RL	DF	Qua	alifiers
TPH as Gasoline		22		0.49	1.00		
Surrogate		<u>Rec. (%)</u>		Control Limits	<u>Qualifiers</u>		
1,4-Bromofluorobenzene - FID		76		42-126			
S-10-MW8	14-08-1369-3-A	08/15/14 08:43	Solid	GC 56	08/19/14	08/22/14 17:32	140822L042
Parameter		Result		<u>RL</u>	DF	Qua	alifiers
TPH as Gasoline		3.3		0.52	1.00		
Quere moto		$\square = \langle 0 \rangle$		Control Limito	Ovalifiana		
Surrogate 1,4-Bromofluorobenzene - FID		<u>Rec. (%)</u> 88		Control Limits 42-126	<u>Qualifiers</u>		
1,4-biomondorobenzene - 1 ib		00		42-120			
S-15-MW8	14-08-1369-4-A	08/15/14 08:50	Solid	GC 56	08/19/14	08/20/14 22:14	140820L053
Parameter		Result		<u>RL</u>	DF	Qua	alifiers
TPH as Gasoline		ND		0.48	1.00		
		-		O a u tura la la institu	0		
Our man and a				Control Limits	<u>Qualifiers</u>		
Surrogate		<u>Rec. (%)</u> 76		12 126			
<u>Surrogate</u> 1,4-Bromofluorobenzene - FID		<u>Rec. (%)</u> 76		42-126			
1,4-Bromofluorobenzene - FID	099-14-571-1811		Solid	42-126 GC 56	08/20/14	08/20/14 10:35	140820L053
1,4-Bromofluorobenzene - FID	099-14-571-1811	76	Solid		08/20/14 DE	10:35	140820L053
1,4-Bromofluorobenzene - FID Method Blank	099-14-571-1811	76 N/A	Solid	GC 56	N SE ME TÉ '	10:35	
1,4-Bromofluorobenzene - FID Method Blank Parameter TPH as Gasoline	099-14-571-1811	76 N/A Result ND	Solid	<b>GC 56</b> <u>RL</u> 0.50	<u>DE</u> 1.00	10:35	
1,4-Bromofluorobenzene - FID Method Blank Parameter	099-14-571-1811	76 N/A <u>Result</u>	Solid	<b>GC 56</b>	DE	10:35	

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

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#### **Analytical Report**

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Cardno ERI			Date Re	ceived:			08/19/14	
601 North McDowell Blvd.				rder:		14-08-1369		
Petaluma, CA 94954-2312			Preparation:				EPA 5030C	
			Method:			E	PA 8015B (M)	
			Units:				mg/kg	
Project: ExxonMobil 99105/022	2783C					Pa	ige 2 of 2	
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID	
Method Blank	099-14-571-1815	N/A	Solid	GC 56	08/22/14	08/22/14 11:10	140822L042	
Parameter		<u>Result</u>		RL	DF	Qua	alifiers	
TPH as Gasoline		ND		0.50	1.00			
Surrogate		<u>Rec. (%)</u>		Control Limits	<u>Qualifiers</u>			
1,4-Bromofluorobenzene - FID		75		42-126				

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#### **Analytical Report**

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Cardno ERI	Date Received:	08/19/14
601 North McDowell Blvd.	Work Order:	14-08-1369
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	mg/kg
Project: ExxonMobil 99105/022783C		Page 1 of 6

#### Lab Sample **Client Sample Number** Date/Time

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-MW8	14-08-1369-1-A	08/15/14 08:35	Solid	GC/MS LL	08/19/14	08/20/14 05:37	140819L055
Parameter		Result		RL	DF	Qua	alifiers
Benzene		0.0051		0.0048	1.00		
Toluene		ND		0.0048	1.00		
Ethylbenzene		ND		0.0048	1.00		
o-Xylene		ND		0.0048	1.00		
p/m-Xylene		ND		0.0048	1.00		
Xylenes (total)		ND		0.0048	1.00		
Methyl-t-Butyl Ether (MTBE)		ND		0.0048	1.00		
Tert-Butyl Alcohol (TBA)		ND		0.048	1.00		
Diisopropyl Ether (DIPE)		ND		0.0096	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND		0.0096	1.00		
Tert-Amyl-Methyl Ether (TAME)		ND		0.0096	1.00		
1,2-Dibromoethane		ND		0.0048	1.00		
1,2-Dichloroethane		ND		0.0048	1.00		
Naphthalene		ND		0.048	1.00		
Surrogate		<u>Rec. (%)</u>		Control Limits	Qualifiers		
1,4-Bromofluorobenzene		98		60-132			
Dibromofluoromethane		97		63-141			
1,2-Dichloroethane-d4		100		62-146			
Toluene-d8		100		80-120			

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#### **Analytical Report**

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Cardno ERI	Date Received:	08/19/14
601 North McDowell Blvd.	Work Order:	14-08-1369
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	mg/kg
Project: ExxonMobil 99105/022783C		Page 2 of 6

#### Lab Sample Date/Time Matrix Instrument Date Date/Time QC Batch ID **Client Sample Number** Number Collected Prepared Analyzed 08/20/14 06:05 08/15/14 09:10 08/19/14 140819L056 S-8-MW8 GC/MS LL 14-08-1369-2-A Solid <u>RL</u> DE **Qualifiers** Parameter <u>Result</u> ND 0.50 50.0 Benzene 50.0 ND 0.50 Toluene 50.0 Ethylbenzene 3.4 0.50 o-Xylene ND 0.50 50.0 50.0 0.50 p/m-Xylene 2.1 1.00 Xylenes (total) 2.1 0.50 Methyl-t-Butyl Ether (MTBE) ND 0.50 50.0 50.0 Tert-Butyl Alcohol (TBA) ND 5.0 Diisopropyl Ether (DIPE) ND 0.99 50.0 Ethyl-t-Butyl Ether (ETBE) ND 0.99 50.0 0.99 50.0 Tert-Amyl-Methyl Ether (TAME) ND ND 0.50 50.0 1,2-Dibromoethane 1,2-Dichloroethane ND 0.50 50.0 50.0 Naphthalene ND 5.0 Rec. (%) Control Limits Qualifiers Surrogate 60-132 1,4-Bromofluorobenzene 103 95 63-141 Dibromofluoromethane 1,2-Dichloroethane-d4 94 62-146 Toluene-d8 102 80-120

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#### **Analytical Report**

Cardno ERI	Date Received:	08/19/14
601 North McDowell Blvd.	Work Order:	14-08-1369
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	mg/kg
Project: ExxonMobil 99105/022783C		Page 3 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-10-MW8	14-08-1369-3-A	08/15/14 08:43	Solid	GC/MS LL	08/19/14	08/20/14 06:34	140819L055
Parameter		<u>Result</u>		<u>RL</u>	DF	Qua	lifiers
Benzene		0.044		0.0051	1.00		
Toluene		ND		0.0051	1.00		
Ethylbenzene		0.17		0.0051	1.00		
o-Xylene		ND		0.0051	1.00		
p/m-Xylene		0.15		0.0051	1.00		
Xylenes (total)		0.15		0.0051	1.00		
Methyl-t-Butyl Ether (MTBE)		ND		0.0051	1.00		
Tert-Butyl Alcohol (TBA)		ND		0.051	1.00		
Diisopropyl Ether (DIPE)		ND		0.010	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND		0.010	1.00		
Tert-Amyl-Methyl Ether (TAME)		ND		0.010	1.00		
1,2-Dibromoethane		ND		0.0051	1.00		
1,2-Dichloroethane		ND		0.0051	1.00		
Naphthalene		0.15		0.051	1.00		
Surrogate		<u>Rec. (%)</u>		Control Limits	<b>Qualifiers</b>		
1,4-Bromofluorobenzene		102		60-132			
Dibromofluoromethane		100		63-141			
1,2-Dichloroethane-d4		100		62-146			
Toluene-d8		102		80-120			

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### **Analytical Report**

Cardno ERI	Date Received:	08/19/14
601 North McDowell Blvd.	Work Order:	14-08-1369
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	mg/kg
Project: ExxonMobil 99105/022783C		Page 4 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-15-MW8	14-08-1369-4-A	08/15/14 08:50	Solid	GC/MS LL	08/19/14	08/20/14 07:02	140819L055
Parameter		Result		RL	DF	Qua	lifiers
Benzene		0.032		0.0052	1.00		
Toluene		ND		0.0052	1.00		
Ethylbenzene		ND		0.0052	1.00		
o-Xylene		ND		0.0052	1.00		
p/m-Xylene		ND		0.0052	1.00		
Xylenes (total)		ND		0.0052	1.00		
Methyl-t-Butyl Ether (MTBE)		ND		0.0052	1.00		
Tert-Butyl Alcohol (TBA)		ND		0.052	1.00		
Diisopropyl Ether (DIPE)		ND		0.010	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND		0.010	1.00		
Tert-Amyl-Methyl Ether (TAME)		ND		0.010	1.00		
1,2-Dibromoethane		ND		0.0052	1.00		
1,2-Dichloroethane		ND		0.0052	1.00		
Naphthalene		ND		0.052	1.00		
Surrogate		<u>Rec. (%)</u>		Control Limits	Qualifiers		
1,4-Bromofluorobenzene		99		60-132			
Dibromofluoromethane		98		63-141			
1,2-Dichloroethane-d4		98		62-146			
Toluene-d8		97		80-120			

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### **Analytical Report**

Cardno ERI	Date Received:	08/19/14
601 North McDowell Blvd.	Work Order:	14-08-1369
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	mg/kg
Project: ExxonMobil 99105/022783C		Page 5 of 6

#### **Client Sample Number** Lab Sample Date/Time Matrix Instrument Date Date/Time QC Batch ID Number Collected Prepared Analyzed 08/20/14 02:47 Method Blank 099-12-882-1661 N/A Solid GC/MS LL 08/19/14 140819L055 Parameter Result <u>RL</u> DE Qualifiers ND 0.0050 Benzene 1.00 Toluene ND 0.0050 1.00 Ethylbenzene ND 0.0050 1.00 o-Xylene ND 0.0050 1.00 p/m-Xylene ND 0.0050 1.00 Xylenes (total) ND 0.0050 1.00 Methyl-t-Butyl Ether (MTBE) ND 0.0050 1.00 Tert-Butyl Alcohol (TBA) ND 0.050 1.00 Diisopropyl Ether (DIPE) ND 0.010 1.00 Ethyl-t-Butyl Ether (ETBE) ND 0.010 1.00 Tert-Amyl-Methyl Ether (TAME) ND 0.010 1.00 1,2-Dibromoethane ND 0.0050 1.00 1,2-Dichloroethane 0.0050 1.00 ND Naphthalene ND 0.050 1.00 Surrogate Rec. (%) Control Limits Qualifiers 1,4-Bromofluorobenzene 100 60-132 Dibromofluoromethane 98 63-141 1,2-Dichloroethane-d4 102 62-146 Toluene-d8 99 80-120

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

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### **Analytical Report**

Condea EDI	Date Received:	08/19/14
Cardno ERI		
601 North McDowell Blvd.	Work Order:	14-08-1369
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	mg/kg
Project: ExxonMobil 99105/022783C		Page 6 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-882-1662	N/A	Solid	GC/MS LL	08/19/14	08/20/14 03:15	140819L056
Parameter		<u>Result</u>		<u>RL</u>	DF	Qua	lifiers
Benzene		ND		0.50	50.0		
Toluene		ND		0.50	50.0		
Ethylbenzene		ND		0.50	50.0		
o-Xylene		ND		0.50	50.0		
p/m-Xylene		ND		0.50	50.0		
Xylenes (total)		ND		0.50	1.00		
Methyl-t-Butyl Ether (MTBE)		ND		0.50	50.0		
Tert-Butyl Alcohol (TBA)		ND		5.0	50.0		
Diisopropyl Ether (DIPE)		ND		1.0	50.0		
Ethyl-t-Butyl Ether (ETBE)		ND		1.0	50.0		
Tert-Amyl-Methyl Ether (TAME)		ND		1.0	50.0		
1,2-Dibromoethane		ND		0.50	50.0		
1,2-Dichloroethane		ND		0.50	50.0		
Naphthalene		ND		5.0	50.0		
Surrogate		<u>Rec. (%)</u>		Control Limits	<u>Qualifiers</u>		
1,4-Bromofluorobenzene		101		60-132			
Dibromofluoromethane		95		63-141			
1,2-Dichloroethane-d4		97		62-146			
Toluene-d8		100		80-120			

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

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### Quality Control - Spike/Spike Duplicate

Cardno ERI				Date F	Received	:				08/19/14
601 North McDowell Blvd				Work Order:					14	4-08-1369
Petaluma, CA 94954-231				Prepa			Е	PA 3550B		
				Method:				EPA 801		
Project: ExxonMobil 9910	5/022783C								Page 1	of 4
Quality Control Sample ID	Туре		Matrix	Inst	rument	Date Prepared	Date Ana	lyzed	MS/MSD Ba	tch Number
14-08-1367-1	Sample	1.842	Solid	GC	45	08/19/14	08/20/14	06:05	140819510	v 2. 14.
14-08-1367-1	Matrix Spike		Solid	GC	45	08/19/14	08/20/14	04:50	140819510	
14-08-1367-1	Matrix Spike	Duplicate	Solid	GC	45	08/19/14	08/20/14	05:09	140819510	
Parameter	<u>Sample</u> Conc.	<u>Spike</u> Added	MS Conc.	<u>MS</u> %Rec.	<u>MSD</u> Conc.	<u>MSD</u> %Rec.	%Rec. CL	<u>RPD</u>	RPD CL	<u>Qualifiers</u>
TPH as Diesel	ND	400.0	429.6	107	457.5	114	71-125	6	0-12	

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### **Quality Control - Spike/Spike Duplicate**

Cardno ERI				Date Received:				08/19/14		
601 North McDowell Blvd				Work Order:				14-08-1369		
Petaluma, CA 94954-231	2			Prepa	ration:			EPA		
				Metho	d:				EPA 8	8015B (M)
Project: ExxonMobil 9910	)5/022783C								Page 2	of 4
Quality Control Sample ID	Туре		Matrix	Inst	rument	Date Prepared	Date Ana	lyzed	MS/MSD Bat	ch Number
14-08-1424-1	Sample		Solid	GC	56	08/20/14	08/20/14	16:59	1408205020	
14-08-1424-1	Matrix Spike		Solid	GC	56	08/20/14	08/20/14	14:31	1408205020	t kan≓,
14-08-1424-1	Matrix Spike	Duplicate	Solid	GC	56	08/20/14	08/20/14	15:03	1408205020	
Parameter	<u>Sample</u> <u>Conc.</u>	<u>Spike</u> Added	<u>MS</u> Conc.	<u>MS</u> <u>%Rec.</u>	<u>MSD</u> Conc.	<u>MSD</u> <u>%Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	RPD CL	Qualifiers
TPH as Gasoline	ND	10.00	6.389	64	6.825	68	48-114	7	0-23	

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Cardno ERI				Date F	Received	:				08/19/14
601 North McDowell Blvd	l.			Work	Order:				14	1-08-1369
Petaluma, CA 94954-231	2	1			Preparation:					PA 5030C
			Method:				EPA {			3015B (M)
Project: ExxonMobil 9910	)5/022783C								Page 3	of 4
Quality Control Sample ID	Туре		Matrix	Inst	rument	Date Prepared	Date Ana	lyzed	MS/MSD Bat	ch Number
14-08-1641-1	Sample		Solid	GC	56	08/22/14	08/22/14	14:39	1408225024	Prage I
14-08-1641-1	Matrix Spike		Solid	GC	56	08/22/14	08/22/14	15:10	140822S024	
14-08-1641-1	Matrix Spike	Duplicate	Solid	GC	56	08/22/14	08/22/14	15:42	1408225024	
Parameter	<u>Sample</u> <u>Conc.</u>	<u>Spike</u> Added	<u>MŞ</u> Conc.	<u>MS</u> %Rec.	<u>MSD</u> Conc.	<u>MSD</u> %Rec.	<u>%Rec. CL</u>	<u>RPD</u>	RPD CL	<u>Qualifiers</u>
TPH as Gasoline	ND	10.00	6.633	66	5.992	60	48-114	10	0-23	

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Cardno ERI				Date	Received	:				08/19/14
601 North McDowell Blvd.				Work	Order:				14	-08-1369
Petaluma, CA 94954-2312				Prepa	ration:				EF	PA 5030C
				Metho	od:				EF	PA 8260B
Project: ExxonMobil 99105/	022783C								Page 4	of 4
Quality Control Sample ID	Туре		Matrix	Ins	trument	Date Prepared	Date Ana	lyzed	MS/MSD Bat	ch Number
14-08-1239-7	Sampto		Solid	GC	MS LL	08/13/14	08/20/14	03:44	1408198036	
14-08-1239-7	Matrix Spike		Solid	GC	MS LL	08/18/14	08/20/14	04:12	1408198036	
14-08-1239-7	Matrix Spike	Duplicate	Solid	GC	MS LL	08/18/14	08/20/14	04:40	1408198036	
Parameter	<u>Sample</u> Conc.	<u>Spike</u> Added	<u>MS</u> Conc.	<u>MS</u> <u>%Rec.</u>	MSD Conc.	<u>MSD</u> %Rec.	<u>%Rec. CL</u>	<u>RPD</u>	RPD CL	<u>Qualifiers</u>
Benzene	3.862	5.000	8.551	94	8.466	92	61-127	1	0-20	
Toluene	11.51	5.000	15.73	84	15.62	82	63-123	1	0-20	
Ethylbenzene	4.070	5.000	8.719	93	8.749	94	57-129	0	0-22	
o-Xylene	5.585	5.000	10.40	96	10.32	95	70-130	1	0-30	
p/m-Xylene	14.69	10.00	23.44	87	23.50	88	70-130	0	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	5.000	4.595	92	4.599	92	57-123	0	0-21	
Fert-Butyl Alcohol (TBA)	ND	25.00	25.11	100	24.59	98	30-168	2	0-34	
Diisopropyl Ether (DIPE)	ND	5.000	4.536	91	4.538	91	57-129	0	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	5.000	4.266	85	4.473	89	55-127	5	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	5.000	5.251	105	5.218	104	58-124	1	0-20	
1,2-Dibromoethane	ND	5.000	4.868	97	4.783	96	64-124	2	0-20	
1,2-Dichloroethane	ND	5.000	5.110	102	4.983	100	80-120	3	0-20	

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### **Quality Control - LCS**

Cardno ERI			Date Receive	ed:		08/19/14
601 North McDowell Blvd			Work Order:			14-08-1369
Petaluma, CA 94954-231	2		Preparation:			EPA 3550B
			Method:			EPA 8015B (M)
Project: ExxonMobil 9910	5/022783C					Page 1 of 5
Quality Control Sample ID	Туре	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-422-1303	LCS	Solid	GC 45	08/19/14	08/20/14 04:11	140819B10A
Parameter		Spike Added	Conc. Recove	red LCS %R	ec. <u>%Rec</u>	. CL Qualifiers
TPH as Diesel		400.0	368.8	92	75-123	3

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Cardno ERI			Date Receive	d:		08/19/14
601 North McDowell Blvd			Work Order:		14-08-1369	
Petaluma, CA 94954-231	2		Preparation:			EPA 5030C
			Method:			EPA 8015B (M)
Project: ExxonMobil 9910	5/022783C					Page 2 of 5
Quality Control Sample ID	Туре	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-571-1811	LCS	Solid	GC 56	08/20/14	08/20/14 11:54	140820L053
Parameter		Spike Added	Conc. Recover	ed LCS %R	ec. <u>%Rec</u>	. CL Qualifiers
TPH as Gasoline		10.00	7.330	73	70-124	4

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Cardno ERI			Date Receive	d:		08/19/14
601 North McDowell Blvd			Work Order:			14-08-1369
Petaluma, CA 94954-231	2		Preparation:			EPA 5030C
			Method:			EPA 8015B (M)
Project: ExxonMobil 9910	5/022783C					Page 3 of 5
Quality Control Sample ID	Туре	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-571-1815	LCS	Solid	GC 56	08/22/14	08/22/14 11:42	140822L042
Parameter		Spike Added	Conc. Recover	ed LCS_%Re	ec. <u>%Rec</u> .	CL Qualifiers
TPH as Gasoline		10.00	9.818	98	70-124	1

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### **Quality Control - LCS**

Cardno ERI	Date Received:	08/19/14
601 North McDowell Blvd.	Work Order:	14-08-1369
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
Project: ExxonMobil 99105/022783C		Page 4 of 5

Quality Control Sample ID	Туре	Matrix	Instrumen	t Date Prep	ared Date Ana	lyzed LCS Bate	ch Number
099-12-882-1661	LCS	Solid	GC/MS LL	. 08/19/14	08/20/14	01:50 140819L	055
Parameter		Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Benzene		0.05000	0.04833	97	78-120	71-127	
Toluene		0.05000	0.04935	99	77-120	70-127	
Ethylbenzene		0.05000	0.04832	97	76-120	69-127	
o-Xylene		0.05000	0.04850	97	75-125	67-133	
p/m-Xylene		0.1000	0.09742	97	75-125	67-133	
Methyl-t-Butyl Ether (MTBE)		0.05000	0.04429	89	77-120	70-127	
Tert-Butyl Alcohol (TBA)		0.2500	0.2164	87	68-122	59-131	
Diisopropyl Ether (DIPE)		0.05000	0.04449	89	78-120	71-127	
Ethyl-t-Butyl Ether (ETBE)		0.05000	0.04486	90	78-120	71-127	
Tert-Amyl-Methyl Ether (TAME)		0.05000	0.04611	92	75-120	68-128	
1,2-Dibromoethane		0.05000	0.04618	92	80-120	73-127	
1,2-Dichloroethane		0.05000	0.04757	95	80-120	73-127	

Total number of LCS compounds: 12

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

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### **Quality Control - LCS**

Cardno ERI	Date Received:	08/19/14
601 North McDowell Blvd.	Work Order:	14-08-1369
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
Project: ExxonMobil 99105/022783C		Page 5 of 5

Quality Control Sample ID	Туре	Matrix	Instrument	t Date Prepa	red Date Analyz	ed LCS Batch N	umber
099-12-882-1662	LCS	Solid	GC/MS LL	08/19/14	08/20/14 01	:50 140819L056	
Parameter		Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Benzene		0.05000	0.04833	97	78-120	71-127	
Toluene		0.05000	0.04935	99	77-120	70-127	
Ethylbenzene		0.05000	0.04832	97	76-120	69-127	
o-Xylene		0.05000	0.04850	97	75-125	67-133	
p/m-Xylene		0.1000	0.09742	97	75-125	67-133	
Methyl-t-Butyl Ether (MTBE)		0.05000	0.04429	89	77-120	70-127	
Tert-Butyl Alcohol (TBA)		0.2500	0.2164	87	68-122	59-131	
Diisopropyl Ether (DIPE)		0.05000	0.04449	89	78-120	71-127	
Ethyl-t-Butyl Ether (ETBE)		0.05000	0.04486	90	78-120	71-127	
Tert-Amyl-Methyl Ether (TAME)		0.05000	0.04611	92	75-120	68-128	
1,2-Dibromoethane		0.05000	0.04618	92	80-120	73-127	
1,2-Dichloroethane		0.05000	0.04757	95	80-120	73-127	

Total number of LCS compounds: 12

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

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### Calscience

### **Glossary of Terms and Qualifiers**

	: 14-08-1369 Page 1 of 1	_
Qualifiers	Definition	
AZ	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound in control and, therefore, the sample data was reported without further clarification.	Wa
В	Analyte was present in the associated method blank,	
BA	The MS/MSD RPD was out of control due to suspected matrix interference.	
BB	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.	
BU	Sample analyzed after holding time expired	
BV	Sample received after holding time expired.	
DF	Reporting limits elevated due to matrix interferences.	
E	Concentration exceeds the calibration range,	
ΕT	Sample was extracted past end of recommended max. holding time.	
GE	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.	
HD	Chromat. profile inconsistent with pattern(s) of ref. fuel stnds.	
НО	High concentration matrix spike recovery out of limits	
ΗT	Analytical value calculated using results from associated tests.	
ΗХ	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS was in control.	
IL	Relative percent difference out of control.	
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.	
JA	Analyte positively identified but quantitation is an estimate.	
LD	Analyte presence was not confirmed by second column or GC/MS analysis.	
LP	The LCS and/or LCSD recoveries for this analyte were above the upper control limit. The associated sample was non-detected. Ther the sample data was reported without further clarification.	efo
LQ	LCS recovery above method control limits.	
LR	LCS recovery below method control limits.	
ND	Parameter not detected at the indicated reporting limit.	
QO	Compound did not meet method-described identification guidelines. Identification was based on additional GC/MS characteristics.	
RU	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).	
SG	A silica gel cleanup procedure was performed.	
SN	See applicable analysis comment.	
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results ar reported on a wet weight basis.	в
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minute (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.	s Ə
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.	1,

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Sample ID	Field Point Name	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Methanol	Sodium Bisuriare	NaOH	H <sub>2</sub> SO <sub>4</sub> Plastic	HNO3	5		None	Groundwater	Wastewater Drinking Water	Siudge	Sol	Air Other (enertiv): Distilled Water	terrain and the second straining	TPHA TPHA 80158*	- 100	BTEX 8260B	8260 see list	Naphthalene 8260				RUSH TAT (Pre-Schedule	5-day TAT	Standard 10-day TAT	Due Date of Report
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OTEP D - Fold this page in half.

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

TEP o - 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:

Sund Label Via Email Create Return Label

#### TERMS AND CONDITIONS:

Hy giving us your shipment to deliver, you agree to all the service terms and conditions described in this section. Our finability 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 baser 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 whethers, war, strikes, or civil commotion. The highest declared value for our GSO Priority Letter or GSO Priority Prockage is \$500. For other shipments the highest declared value is \$10,000 unless your package contains items of "Staroordinary value", in which case the highest declared value we allow is \$500. Items of "extraordinary value" include, but or net limited to, artwork, jewetry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.

eurofins	DER #: <b>14-</b> (	Page 26	~
Calscience			신변나
	FORM o	ooler 🦯	of/
CLIENT: Cardno EM	DATE:	08/19/	14
TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C - 6.0 °C, no         Temperature       2       8       °C - 0.3 °C (CF)       =       2       6       °C         Image: Sample(s) outside temperature criteria (PM/APM contacted by:       Image: Sample(s) outside temperature criteria but received on ice/chilled on state       Image: Sample(s) outside temperature criteria but received on ice/chilled on state	C , D Blank ) same day of sampl	☐ Sample	)
□ Received at ambient temperature, placed on ice for transport	by Courier.	<b>.</b>	8
Ambient Temperature:  Air  Filter		Checked by	<u>. 076</u>
CUSTODY SEALS INTACT:           Cooler         Image: Not Not Intact)         Image: Not Not Intact)         Image: Not Not Press           Sample         Image: Not Not Intact)         Image: Not Not Not Intact)         Image: Not Not Press		Checked by: Checked by:	836 8116
SAMPLE CONDITION: 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	e labels.	No □ □	N/A
<ul> <li>□ No analysis requested.</li> <li>□ Not relinquished.</li> <li>□ No date/time relinquishe</li> <li>Sampler's name indicated on COC</li> <li>Sample container label(s) consistent with COC</li> <li>Sample container(s) intact and good condition</li> </ul>			
Proper containers and sufficient volume for analyses requested Analyses received within holding time			
Aqueous samples received within 15-minute holding time pH Residual Chlorine Dissolved Sulfides Dissolved Oxygen Proper preservation noted on COC or sample container			
<ul> <li>Unpreserved vials received for Volatiles analysis</li> <li>Volatile analysis container(s) free of headspace</li> <li>Tedlar bag(s) free of condensation</li> </ul>			R R
CONTAINER TYPE: Solid: $\Box$ 4ozCGJ $\Box$ 8ozCGJ $\Box$ 16ozCGJ $\Box$ Sleeve ( $\underline{P}$ ) $\Box$ E Aqueous: $\Box$ VOA $\Box$ VOAh $\Box$ VOAna <sub>2</sub> $\Box$ 125AGB $\Box$ 125AGBh $\Box$ 125 $\Box$ 500AGB $\Box$ 500AGJ $\Box$ 500AGJs $\Box$ 250AGB $\Box$ 250CGB $\Box$ 250 $\Box$ 250PB $\Box$ 250PBn $\Box$ 125PB $\Box$ 125PBznna $\Box$ 100PJ $\Box$ 100PJna	GAGBp □1AGB □ DCGBs □1PB □	]1AGB <b>na₂</b> □	
Air: Tedlar <sup>®</sup> Canister Other: <b>Trip Blank Lot#:</b> Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag 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> u: Ultra-pure znna: Z	g E: Envelope R	Checked by: _ Reviewed by: _ Scanned by:_	-0

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# Calscience

# WORK ORDER NUMBER: 14-08-1899

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AIR SOIL WATER MARINE CHEMISTRY

Analytical Report For Client: Cardno ERI Client Project Name: ExxonMobil 99105/022783C Attention: Greg Gurss 601 North McDowell Blvd. Petaluma, CA 94954-2312

Care to A. In Ang

Approved for release on 09/02/2014 by: Cecile deGuia Project Manager



Page 1 of 28

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

7440 Lincoln Way, Garden Grove, CA 92841-1432 + TEL: (714) 895-5494 + FAX: (714) 894-7501 + www.calscience.com

NELAP ID: 03220CA | ACLASS DoD-ELAP ID: ADE-1864 (ISO/IEC 17025/2005) | CSDLAC ID: 10109 | SCAQMD ID: 93LA0830

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## Contents

			_
	oject Name: er Number:	ExxonMobil 99105/022783C 14-08-1899	
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2	Sample S	Summary	4
3	3.1 EPA 3.2 EPA	mple Data. 8015B (M) TPH Diesel (Aqueous). 8015B (M) TPH Gasoline (Aqueous). 8260B Volatile Organics (Aqueous).	5 5 6 7
4	4.1 MS/	control Sample Data	12 12 15
5	Glossary	of Terms and Qualifiers	19
6	Chain-of-	Custody/Sample Receipt Form	20

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Work Order: 14-08-1899

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#### **Condition Upon Receipt:**

Samples were received under Chain-of-Custody (COC) on 08/26/14. They were assigned to Work Order 14-08-1899.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

#### Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

#### **Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

#### **Additional Comments:**

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

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

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

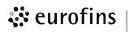
#### Subcontractor Information:

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

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Client:	Cardno ERI	Work Order:	14-08-1899
	601 North McDowell Blvd.	Project Name:	ExxonMobil 99105/022783C
	Petaluma, CA 94954-2312	PO Number:	
		Date/Time Received:	08/26/14 10:10
		Number of Containers:	24
Attn:	Greg Gurss		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
W-9.60-MW5	14-08-1899-1	08/22/14 14:35	8	Aqueous
W-11.20-MW6	14-08-1899-2	08/22/14 14:55	8	Aqueous
W-13.10-MW8	14-08-1899-3	08/22/14 15:25	8	Aqueous



### **Analytical Report**

Cardno ERI			Date Recei	ved:			08/26/14
601 North McDowell Blvd.			Work Order				14-08-1899
Petaluma, CA 94954-2312			Preparation	1:			EPA 35100
			Method:			E	PA 8015B (M
			Units:				ug/l
Project: ExxonMobil 99105/022	783C					Pa	ige 1 of 1
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-9.60-MW5	14-08-1899-1-H	08/22/14 14:35	Aqueous	GC 45	08/27/14	08/28/14 06:20	140827B14
Parameter		Result	RL		DF		alifiers
TPH as Diesel		5800	50		1.00	HD,	SG
Surrogate		<u>Rec. (%)</u>	Co	ntrol Limits	Qualifiers		
n-Octacosane		80	68-	140			
W-11.20-MW6	14-08-1899-2-H	08/22/14 14:55	Aqueous	GC 45	08/27/14	08/28/14 06:39	140827B14
Parameter		<u>Result</u>	RL		DF	Qua	alifiers
TPH as Diesel		1000	50		1.00	HD,	SG
Surrogate		<u>Rec. (%)</u>	Co	ntrol Limits	Qualifiers		
n-Octacosane		80	68-	-140			
W-13.10-MW8	14-08-1899-3-H	08/22/14 15:25	Aqueous	GC 45	08/27/14	08/28/14 06:56	140827B14
Parameter		Result	RL		<u>DF</u>	Qua	alifiers
TPH as Diesel		350	50		1.00	HD,	SG
Surrogate		<u>Rec. (%)</u>	<u>Co</u>	ntrol Limits	<u>Qualifiers</u>		
n-Octacosane		70	68-	-140			
Method Blank	099-15-304-806	N/A	Aqueous	GC 45	08/27/14	08/28/14 05:25	140827B14
Parameter		Result	RL		DF	Qua	alifiers
TPH as Diesel		ND	50		1.00		
Surrogate		<u>Rec. (%)</u>	<u>Co</u>	ntrol Limits	<u>Qualifiers</u>		
n-Octacosane		71	68-	-140			

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

### **Analytical Report**

Cardno ERI			Date Recei	ved:			08/26/14
601 North McDowell Blvd.			Work Ordei	r:			14-08-1899
Petaluma, CA 94954-2312			Preparatior	1:			EPA 50300
			Method:			E	PA 8015B (M
			Units:				ug/L
Project: ExxonMobil 99105/022	783C					Ра	ge 1 of 1
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-9.60-MW5	14-08-1899-1-E	08/22/14 14:35	Aqueous	GC 25	08/28/14	08/28/14 17:21	140828L044
Parameter		Result	RL		<u>DF</u>	Qua	lifiers
TPH as Gasoline		5100	25	00	50.0		
Surrogate		<u>Rec. (%)</u>	Co	ntrol Limits	Qualifiers		
1,4-Bromofluorobenzene		68	38-	-134			
W-11.20-MW6	14-08-1899-2-E	08/22/14 14:55	Aqueous	GC 25	08/28/14	08/28/14 17:54	140828L044
Parameter		Result	RL	;	DF	Qua	lifiers
TPH as Gasoline		1500	50		1.00	HD	
Surrogate		<u>Rec. (%)</u>	<u>Co</u>	ntrol Limits	<u>Qualifiers</u>		
1,4-Bromofluorobenzene		97	38-	-134			
W-13.10-MW8	14-08-1899-3-E	08/22/14 15:25	Aqueous	GC 25	08/28/14	08/28/14 18:28	140828L044
Parameter		Result	RL		DF	Qua	lifiers
TPH as Gasoline		950	50		1.00	HD	
Surrogate		<u>Rec. (%)</u>	Co	ntrol Limits	Qualifiers		
1,4-Bromofluorobenzene		73	38-	-134			
Method Blank	099-12-436-9523	N/A	Aqueous	GC 25	08/28/14	08/28/14 12:51	140828L044
Parameter		<u>Result</u>	RL		DF	Qua	llifiers
TPH as Gasoline		ND	50		1.00		
Surrogate		<u>Rec. (%)</u>	<u>Co</u>	ntrol Limits	<u>Qualifiers</u>		
1,4-Bromofluorobenzene		72	38-	-134			

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

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### **Analytical Report**

Cardno ERI	Date Received:	08/26/14
601 North McDowell Blvd.	Work Order:	14-08-1899
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: ExxonMobil 99105/022783C		Page 1 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-9.60-MW5	14-08-1899-1-A	08/22/14 14:35	Aqueous	GC/MS L	08/27/14	08/28/14 01:10	140827L047
Parameter		<u>Result</u>	RL	;	DF	Qua	lifiers
Toluene		ND	5.0	)	10.0		
Ethylbenzene		320	5.0	)	10.0		
o-Xylene		ND	5.0	)	10.0		
p/m-Xylene		81	5.0	)	10.0		
Xylenes (total)		81	5.0	)	1.00		
Methyl-t-Butyl Ether (MTBE)		ND	5.0	)	10.0		
Tert-Butyl Alcohol (TBA)		ND	50		10.0		
Diisopropyl Ether (DIPE)		ND	5.0	)	10.0		
Ethyl-t-Butyl Ether (ETBE)		ND	5.0	)	10.0		
Tert-Amyl-Methyl Ether (TAME)		ND	5.0	)	10.0		
1,2-Dibromoethane		ND	5.0	)	10.0		
1,2-Dichloroethane		ND	5.0	)	10.0		
Surrogate		<u>Rec. (%)</u>	Co	ntrol Limits	Qualifiers		
1,4-Bromofluorobenzene		98	68	-120			
Dibromofluoromethane		89	80	-127			
1,2-Dichloroethane-d4		95	80	-128			
Toluene-d8		99	80	-120			

W-9.60-MW5	14-08-1899-1-B	08/22/14 14:35	Aqueous GC/MS L	08/28/14	08/28/14 140828L018 16:42
Parameter		Result	RL	DE	Qualifiers
Benzene		520	10	20.0	
Surrogate		<u>Rec. (%)</u>	Control Limits	Qualifiers	
1,4-Bromofluorobenzene		93	68-120		
Dibromofluoromethane		101	80-127		
1,2-Dichloroethane-d4		103	80-128		
Toluene-d8		102	80-120		

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

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Cardno ERI	Date Received:	08/26/14
601 North McDowell Blvd.	Work Order:	14-08-1899
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: ExxonMobil 99105/022783C		Page 2 of 5

### Project: ExxonMobil 99105/022783C

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-11.20-MW6	14-08-1899-2-A	08/22/14 14:55	Aqueous	GC/MS L	08/27/14	08/28/14 00:42	140827L047
Parameter		<u>Result</u>	RL		DF	Qua	alifiers
Benzene		ND	0.8	50	1.00		
Toluene		ND	0.8	50	1.00		
Ethylbenzene		ND	0.8	50	1.00		
o-Xylene		ND	0.8	50	1.00		
p/m-Xylene		ND	0.5	50	1.00		
Xylenes (total)		ND	0.8	50	1.00		
Methyl-t-Butyl Ether (MTBE)		ND	0.8	50	1.00		
Tert-Butyl Alcohol (TBA)		12	5.0	)	1.00		
Diisopropyl Ether (DIPE)		ND	0.8	50	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND	0.8	50	1.00		
Tert-Amyl-Methyl Ether (TAME)		ND	0.8	50	1.00		
1,2-Dibromoethane		ND	0.8	50	1.00		
1,2-Dichloroethane		ND	0.5	50	1.00		
Surrogate		<u>Rec. (%)</u>	<u>Cc</u>	ontrol Limits	Qualifiers		
1,4-Bromofluorobenzene		94	68	-120			
Dibromofluoromethane		88	80	-127			
1,2-Dichloroethane-d4		93	80	-128			
Toluene-d8		116	80	-120			

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

### **Analytical Report**

Calscience

Cardno ERI	Date Received:	08/26/14
601 North McDowell Blvd.	Work Order:	14-08-1899
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: ExxonMobil 99105/022783C		Page 3 of 5

Project:	ExxonMobil	99105/0227	/83C

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-13.10-MW8	14-08-1899-3-B	08/22/14 15:25	Aqueous	GC/MS L	08/28/14	08/28/14 17:11	140828L018
Parameter		Result	RL		DF	Qua	lifiers
Benzene		5.7	0.5	50	1.00		
Toluene		ND	0.5	50	1.00		
Ethylbenzene		4.2	0.5	50	1.00		
o-Xylene		1.4	0.5	50	1.00		
p/m-Xylene		5.0	0.8	50	1.00		
Xylenes (total)		6.4	0.8	50	1.00		
Methyl-t-Butyl Ether (MTBE)		ND	0.5	50	1.00		
Tert-Butyl Alcohol (TBA)		31	5.0	)	1.00		
Diisopropyl Ether (DIPE)		ND	0.8	50	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND	0.5	50	1.00		
Tert-Amyl-Methyl Ether (TAME)		ND	0.5	50	1.00		
1,2-Dibromoethane		ND	0.5	50	1.00		
1,2-Dichloroethane		ND	0.5	50	1.00		
Surrogate		<u>Rec. (%)</u>	<u>Cc</u>	ontrol Limits	<u>Qualifiers</u>		
1,4-Bromofluorobenzene		97	68	-120			
Dibromofluoromethane		92	80	-127			
1,2-Dichloroethane-d4		98	80	-128			
Toluene-d8		103	80	-120			

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

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Cardno ERI	Date Received:	08/26/14
601 North McDowell Blvd.	Work Order:	14-08-1899
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: ExxonMobil 99105/022783C		Page 4 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-884-1192	N/A	Aqueous	GC/MS L	08/27/14	08/28/14 00:13	140827L047
Parameter		Result	RL	;	DF	Qua	lifiers
Benzene		ND	0.5	50	1.00		
Toluene		ND	0.5	50	1.00		
Ethylbenzene		ND	0.5	50	1.00		
o-Xylene		ND	0.5	50	1.00		
p/m-Xylene		ND	0.5	50	1.00		
Xylenes (total)		ND	0.5	50	1.00		
Methyl-t-Butyl Ether (MTBE)		ND	0.8	50	1.00		
Tert-Butyl Alcohol (TBA)		ND	5.0	)	1.00		
Diisopropyl Ether (DIPE)		ND	0.6	50	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND	0.5	50	1.00		
Tert-Amyl-Methyl Ether (TAME)		ND	0.8	50	1.00		
1,2-Dibromoethane		ND	0.8	50	1.00		
1,2-Dichloroethane		ND	0.8	50	1.00		
Surrogate		<u>Rec. (%)</u>	<u>Cc</u>	ontrol Limits	<u>Qualifiers</u>		
1,4-Bromofluorobenzene		86	68	-120			
Dibromofluoromethane		109	80	-127			
1,2-Dichloroethane-d4		110	80	-128			
Toluene-d8		104	80	-120			

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



Cardno ERI	Date Received:	08/26/14
601 North McDowell Blvd.	Work Order:	14-08-1899
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: ExxonMobil 99105/022783C		Page 5 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-884-1193	N/A	Aqueous	GC/MS L	08/28/14	08/28/14 11:58	140828L018
Parameter		<u>Result</u>	RL	;	DF	Qua	lifiers
Benzene		ND	0.5	50	1.00		
Toluene		ND	0.6	50	1.00		
Ethylbenzene		ND	0.5	50	1.00		
o-Xylene		ND	0.5	50	1.00		
p/m-Xylene		ND	0.5	50	1.00		
Xylenes (total)		ND	0.8	50	1.00		
Methyl-t-Butyl Ether (MTBE)		ND	0.8	50	1.00		
Tert-Butyl Alcohol (TBA)		ND	5.0	)	1.00		
Diisopropyl Ether (DIPE)		ND	0.8	50	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND	0.8	50	1.00		
Tert-Amyl-Methyl Ether (TAME)		ND	0.8	50	1.00		
1,2-Dibromoethane		ND	0.8	50	1.00		
1,2-Dichloroethane		ND	0.8	50	1.00		
Surrogate		<u>Rec. (%)</u>	<u>Cc</u>	ontrol Limits	Qualifiers		
1,4-Bromofluorobenzene		89	68	-120			
Dibromofluoromethane		108	80	-127			
1,2-Dichloroethane-d4		108	80	-128			
Toluene-d8		102	80	-120			

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

Calscience

### **Quality Control - Spike/Spike Duplicate**

Cardno ERI				Date Received:							
601 North McDowell Blvd				Work Order:					14-08		
Petaluma, CA 94954-231	2			Preparation:					EPA 5030		
				Metho	od:				EPA 8	015B (M)	
Project: ExxonMobil 9910	)5/022783C								Page 1	of 3	
Quality Control Sample ID	Туре		Matrix	Ins	trument	Date Prepared	Date Ana	lyzed	MS/MSD Bat	ch Number	
14-08-1633-1	Sample	민준이들의	Aqueous	GC	25	08/28/14	08/28/14	13:59	1408285020		
14-08-1633-1	Matrix Spike		Aqueous	GC	25	08/28/14	08/28/14	14:32	1408288020	i de la fina est	
14-08-1633-1	Matrix Spike	Duplicate	Aqueous	GC	25	08/28/14	08/28/14	15:05	1408285020	To we's a f	
Parameter	Sample Conc.	Spike Added	MS Conc.	<u>MS</u> %Rec.	MSD Conc.	<u>MSD</u> <u>%Rec.</u>	%Rec. CL	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>	
						81	68-122		0-18		

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Cardno ERI	Date Received:	08/26/14
601 North McDowell Blvd.	Work Order:	14-08-1899
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B

Project: ExxonMobil 99105/022783C

Quality Control Sample ID	Туре		Matrix		Instrument	Date Prepared	Date Ana	lyzed	MS/MSD Bat	ch Number
W-11.20-MW6	Sample	1 1 3 4	Aqueou	is (	GC/MS L	08/27/14	08/28/14	00:42	140827S027	
W-11.20-MW6	Matrix Spike		Aqueou	ıs (	GC/MS L	08/27/14	08/28/14	02:35	140827S027	
W-11.20-MW6	Matrix Spike	Duplicate	Aqueou	ıs (	GC/MS L	08/27/14	08/28/14	03:03	140827S027	
Parameter	<u>Sample</u> <u>Conc.</u>	<u>Spike</u> Added	<u>MS</u> Conc.	<u>MS</u> %Rec	<u>MSD</u> <u>Conc.</u>	MSD %Rec.	<u>%Rec. CL</u>	<u>RPD</u>	RPD CL	<u>Qualifiers</u>
Benzene	ND	10.00	10.73	107	10.60	106	75-125	1	0-20	
Toluene	ND	10.00	11.48	115	11.04	110	75-125	4	0-20	
Ethylbenzene	ND	10.00	11.18	112	11.14	111	75-125	0	0-20	
o-Xylene	ND	10.00	11.34	113	11.34	113	75-127	0	0-20	
p/m-Xylene	ND	20.00	22.61	113	22.11	111	75-125	2	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	10.00	11.13	111	11.37	114	71-131	2	0-20	
Tert-Butyl Alcohol (TBA)	12.37	50.00	61.76	99	57.14	90	20-180	8	0-40	
Diisopropyl Ether (DIPE)	ND	10.00	11.17	112	11.28	113	64-136	1	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	10.00	10.44	104	10.74	107	73-133	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	10.00	9.216	92	9.218	92	75-125	0	0-20	
1,2-Dibromoethane	ND	10.00	10.06	10 <b>1</b>	10.25	102	75-126	2	0-20	
1,2-Dichloroethane	ND	10.00	10.52	105	10.29	103	75-127	2	0-20	

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Calscience

Cardno ERI	Date Received:	08/26/14
601 North McDowell Blvd.	Work Order:	14-08-1899
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
•	Method:	EPA 8260B

Project: ExxonMobil 99105/022783C

Quality Control Sample ID	Туре		Matrix	Ins	strument	Date Prepared	Date Ana	lyzed	MS/MSD Bat	ch Number
14-08-2042-2	Sample	Sample		GC	C/MS L	08/28/14	08/28/14	12:55	140828S005	
14-08-2042-2	Matrix Spike		Aqueous	GC	C/MS L	08/28/14	08/28/14	14:48	140828S005	
14-08-2042-2	Matrix Spike	Duplicate	Aqueous	GC	C/MS L	08/28/14	08/28/14	15:17	140828S005	
Parameter	<u>Sample</u> <u>Conc.</u>	<u>Spike</u> Added	MS Conc.	<u>MS</u> %Rec.	MSD Conc.	MSD %Rec.	<u>%Rec. CL</u>	<u>RPD</u>	RPD CL	<u>Qualifiers</u>
Benzene	ND	10.00	11.21	112	11.00	110	77-121	2	0-21	
Toluene	ND	10.00	11.18	112	10.93	109	78-120	2	0-25	
Ethylbenzene	ND	10.00	10.88	109	10.90	109	78-120	0	0-23	
o-Xylene	ND	10.00	11.27	113	11.32	113	74-122	1	0-24	
p/m-Xylene	ND	20.00	22.66	113	22.50	112	74-122	1	0-23	
Methyl-t-Butyl Ether (MTBE)	ND	10.00	9.380	94	9.658	97	57-144	3	0-31	
Tert-Butyl Alcohol (TBA)	ND	50.00	61.75	123	50.62	101	43-170	20	0-38	
Diisopropyl Ether (DIPE)	ND	10.00	10.68	107	11.03	110	70-130	3	0-35	
Ethyl-t-Butyl Ether (ETBE)	ND	10.00	9.357	94	9.569	96	70-130	2	0-35	
Tert-Amyl-Methyl Ether (TAME)	ND	10.00	8.761	88	8.770	88	70-130	0	0-35	
1,2-Dibromoethane	ND	10.00	10.36	104	10.26	103	74-130	1	0-22	
1,2-Dichloroethane	ND	10.00	10.62	106	10.56	106	72-130	1	0-25	

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TPH as Diesel

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### **Quality Control - LCS/LCSD**

Cardno ERI			Date Receiv	ved:		08/26/14 14-08-1899		
601 North McDowell Blvd.			Work Order					
Petaluma, CA 94954-2312	etaluma, CA 94954-2312		Preparation	:		EPA 35100		
			Method:			EPA 8015B (M)		
Project: ExxonMobil 9910	5/022783C					Page 1 of 4		
Quality Control Sample ID	Туре	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number		
099-15-304-806	LCS	Aqueous	GC 45	08/27/14	08/28/14 05:44	140827B14		
099-15-304-806	LCSD	Aqueous	GC 45	08/27/14	08/28/14 06:01	140827B14		
Parameter	Spike Added LCS	<u>S Conc. LCS</u> <u>%Rec.</u>	LCSD Conc.	LCSD <u>%Re</u> %Rec.	c. CL RPD	RPD CL Qualifiers		

1822

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Cardno ERI			Date Receiv	ed:		08/26/14
601 North McDowell Blvd.			Work Order:			14-08-1899
Petaluma, CA 94954-2312	2		Preparation:			EPA 5030C
			Method:			EPA 8015B (M)
Project: ExxonMobil 9910	5/022783C					Page 2 of 4
Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number

Quality Control Sample ID	rype	IVIALITA	Insuument	Date Frepareu	Date Analyzeu	LOS Daten Number
099-12-436-9523	LCS	Aqueous	GC 25	08/28/14	08/28/14 13:25	140828L044
Parameter		Spike Added	Conc. Recov	vered LCS %R	ec. <u>%Rec</u>	. CL Qualifier
TPH as Gasoline		2000	1934	97	78-12	0

Calscience

Cardno ERI	Date Received:	08/26/14
601 North McDowell Blvd.	Work Order:	14-08-1899
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
Project: ExxonMobil 99105/022783C		Page 3 of 4

Project: ExxonMobil 99105/022783C

Quality Control Sample ID	Туре	Matri	x Instrumen	t Date Prep	ared Date Ana	lyzed LCS Bat	ch Number
099-12-884-1192	LCS	Aque	ous GC/MS L	08/27/14	08/27/14	23:17 140827L	.047
Parameter		Spike Added	Conc. Recovered	LCS %Rec.	<u>%Rec. CL</u>	ME CL	Qualifiers
Benzene		10.00	10.19	102	80-120	73-127	
Toluene		10.00	10.19	102	80-120	73-127	
Ethylbenzene		10.00	10.07	101	80-120	73-127	
o-Xylene		10.00	10.66	107	80-120	73-127	
o/m-Xylene		20.00	21.13	106	80-120	73-127	
Methyl-t-Butyl Ether (MTBE)		10.00	9.117	91	75-123	67-131	
Tert-Butyl Alcohol (TBA)		50.00	49.78	100	80-120	73-127	
Diisopropyl Ether (DIPE)		10.00	10.20	102	73-121	65-129	
Ethyl-t-Butyl Ether (ETBE)		10.00	8.892	89	76-124	68-132	
Tert-Amyl-Methyl Ether (TAME)		10.00	8.156	82	80-120	73-127	
1,2-Dibromoethane		10.00	9.637	96	80-120	73-127	
1,2-Dichloroethane		10.00	9.930	99	80-122	73-129	

Total number of LCS compounds: 12

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

### **Quality Control - LCS**

Cardno ERI	Date Received:	08/26/14
601 North McDowell Blvd.	Work Order:	14-08-1899
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
Project: ExxonMobil 99105/022783C		Page 4 of 4

Project: ExxonMobil 99105/022783C

Quality Control Sample ID	Туре	Matri	x Instru	ment Date P	repared Date Ana	lyzed LCS Bat	ch Number
099-12-884-1193	LCS	Aque	ous GC/N	IS L 08/28/1	4 08/28/14	10:47 1408281	.018
Parameter		Spike Added	Conc. Recov	ered LCS %Rec.	<u>%Rec. CL</u>	ME CL	Qualifiers
Benzene		10.00	10.27	103	80-120	73-127	
Toluene		10.00	10.36	104	80-120	73-127	
Ethylbenzene		10.00	10.51	105	80-120	73-127	
o-Xylene		10.00	10.90	109	80-120	73-127	
p/m-Xylene		20.00	22.10	111	80-120	73-127	
Methyl-t-Butyl Ether (MTBE)		10.00	8.673	87	75-123	67-131	
Tert-Butyl Alcohol (TBA)		50.00	49.76	100	80-120	73-127	
Diisopropyl Ether (DIPE)		10.00	10.16	102	73-121	65-129	
Ethyl-t-Butyl Ether (ETBE)		10.00	8.956	90	76-124	68-132	
Tert-Amyl-Methyl Ether (TAME)		10.00	8.097	81	80-120	73-127	
1,2-Dibromoethane		10.00	9.612	96	80-120	73-127	
1,2-Dichloroethane		10.00	9.372	94	80-122	73-129	

Total number of LCS compounds: 12

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Calscience

### **Glossary of Terms and Qualifiers**

#### Work Order: 14-08-1899

Page 1 of 1

Qualifiers	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.	
В	Analyte was present in the associated method blank.	
BA	The MS/MSD RPD was out of control due to suspected matrix interference.	
BB	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.	
BU	Sample analyzed after holding time expired.	
BV	Sample received after holding time expired.	
DF	Reporting limits elevated due to matrix interferences.	
E	Concentration exceeds the calibration range.	
ET	Sample was extracted past end of recommended max. holding time.	
GE	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.	
HD	Chromat. profile inconsistent with pattern(s) of ref. fuel stnds.	
НО	High concentration matrix spike recovery out of limits	
HT	Analytical value calculated using results from associated tests.	
HX	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS was in control.	
IL	Relative percent difference out of control.	
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.	
JA	Analyte positively identified but quantitation is an estimate.	
LD	Analyte presence was not confirmed by second column or GC/MS analysis.	
LP	The LCS and/or LCSD recoveries for this analyte were above the upper control limit. The associated sample was non-detected. Therefore, the sample data was reported without further clarification.	
LQ	LCS recovery above method control limits.	
LR	LCS recovery below method control limits.	
ND	Parameter not detected at the indicated reporting limit.	
QO	Compound did not meet method-described identification guidelines. Identification was based on additional GC/MS characteristics.	
RU	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).	
SG	A silica gel cleanup procedure was performed.	
SN	See applicable analysis comment.	
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.	
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.	
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.	

### Sandy Tat

From:	David R. Daniels <david.daniels@cardno.com></david.daniels@cardno.com>
Sent:	Wednesday, August 27, 2014 5:03 PM
То:	Sandy Tat
Subject:	RE: Change TAT on submitted samples
Attachments:	14-08-1899 Revised.pdf; 14-08-1907 Revised.pdf

Revised COCs attached. Thank You

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 <u>david.daniels@cardno.com</u> Web <u>www.cardno.com www.cardnoeri.com</u>

From: Sandy Tat [mailto:SandyTat@eurofinsUS.com] Sent: Wednesday, August 27, 2014 4:41 PM To: David R. Daniels Subject: RE: Change TAT on submitted samples

Here you go. Please revise the TAT.

Thanks!

Sandy Tat Project Manager Assistant

**From:** David R. Daniels [<u>mailto:david.daniels@cardno.com</u>] **Sent:** Wednesday, August 27, 2014 4:00 PM **To:** Cecile L de Guia; Sandy Tat **Subject:** RE: Change TAT on submitted samples

I should have mentioned that we will want 5-day TAT.

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 <u>david.daniels@cardno.com</u> Web <u>www.cardno.com www.cardnoeri.com</u>

From: David R. Daniels
Sent: Wednesday, August 27, 2014 3:55 PM
To: Cecile L de Guia (<u>CecileLdeGuia@eurofinsUS.com</u>); Sandy Tat (<u>SandyTat@eurofinsUS.com</u>)
Subject: Change TAT on submitted samples

We would like to change the TAT on some samples. I believe they arrived in Garden Grove yesterday. And should be on two COCs. They are for ExxonMobil site 99105. One of them is work order 14-08-1907. I'm not sure of the other one but

Page 21 of 28 it is water samples for the same site. I'll revise the COCs if you can send them to me. We have a report due September 10<sup>th</sup>.

Thanks,

David R. Daniels, PG 8737 PROJECT GEOLOGIST CARDNO ERI

Cardno

Sheping the Future

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 <u>david.daniels@cardno.com</u> Web <u>www.cardno.com</u> <u>www.cardnoeri.com</u>

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#### Sandy Tat

From:	David R. Daniels [david.daniels@cardno.com]
Sent:	Tuesday, August 26, 2014 3:39 PM
То:	Sandy Tat
Cc:	Azat Magdanov (Petaluma)
Subject:	RE: 14-08-1899
Attachments:	14-08-1899 Revised.pdf

Revised COC attached.

**Thank You** 

#### 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 Bivd., Petaluma, CA 94954-2312 USA Email <u>david.daniels@cardno.com</u> Web <u>www.cardno.com</u> <u>www.cardnoeri.com</u>

From: Sandy Tat [mailto:SandyTat@eurofinsUS.com] Sent: Tuesday, August 26, 2014 3:30 PM To: David R. Daniels; Azat Magdanov (Petaluma) Subject: 14-08-1899

Hi David / Azat,

Please fill in the depth for all the sample IDs. Please see attached Sample Anomaly Form.

Thanks!

Sandy Tat Project Manager Assistant

#### **Eurofins Calscience, Inc.**

7440 Lincoln Way Garden Grove, CA 92841-1427 USA Phone: (714) 895-5494 Fax: (714) 894-7501

Email: <u>Sandytat@eurofinsUS.com</u> Website: <u>www.Calscience.com</u>

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#### LABEL INSTRUCTIONS:

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

STEP 3 - 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 A - 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 we allow is \$500. 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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Ambient Temperature:  Air  Fill	ter			Checked	by:
CUSTODY SEALS INTACT:					
	o (Not Intact)	Not Present	D N/A	Checked I	by: <u>876</u>
□ Sample □ □ N	o (Not Intact)	Not Present		Checked I	
SAMPLE CONDITION:			Yes	No	N/A
Chain-Of-Custody (COC) document(s) re					
COC document(s) received complete					
<ul> <li>Collection date/time, matrix, and/or # of cont</li> <li>No analysis requested.</li> <li>Not relinquished</li> </ul>		ased on sample labels. me relinquished.			
Sampler's name indicated on COC		·	R		
Sample container label(s) consistent with				Ø	
Sample container(s) intact and good cond				, D	
Proper containers and sufficient volume f			· /		
Analyses received within holding time					
Aqueous samples received within 15-r	minute holding f	time			
🗆 pH 🛛 Residual Chlorine 🗖 Dissolved S	Sulfides 🗆 Disso	olved Oxygen			ø
Proper preservation noted on COC or sar	nple container.		ø		
Unpreserved vials received for Volatiles	•				
Volatile analysis container(s) free of head					
Tedlar bag(s) free of condensation					ø
Solid: 402CGJ 802CGJ 1602CG	GJ □Sleeve (_	)	s <sup>®</sup> □Terra	Cores® 🛛	
Aqueous: VOA					
□500AGB Ø500AGJ □500AGJs □2	50AGB 🗆 250	CGB □250CGBs	□1PB	□1PB <b>na</b> [	□500PB
□250PB □250PBn □125PB □125PB	znna ⊡100PJ	□100PJ <b>na₂</b> □			
Air: Tedlar <sup>®</sup> Canister Other: C Container: C: Clear A: Amber P: Plastic G: Glass J: Ja 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	ar B: Bottle Z: Ziplo	c/Resealable Bag E: En	velope F	Checked by Reviewed by Scanned b	1: 081



WORK ORDER #: **14-08-** [] [] [] []

# SAMPLE ANOMALY FORM

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SAMPLES - CONTAINERS & LABELS:	Comments:
SAMPLES - CONTAINERS & LABELS: 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 label(s) do not match COC – Note in comments Sample label(s) do not match COC – Note in comments Analysis Sample 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*)	Comments: Labekd as: (-1) W-9.60-MW5 (-2) W-11.20 -MW6 (-3) W-13.10 - MW8 (All collection dates and times watch C.O.C.)
□ Leaking (transferred into Client's Tedlar <sup>®</sup> Bag*) □ Other:	

### **HEADSPACE** – Containers with Bubble > 6mm or $\frac{1}{4}$ 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: 208 126/14

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# WORK ORDER NUMBER: 14-08-1455

### The difference is service

ResultLink >

Email your PM >



AIR SOIL WATER MARINE CHEMISTRY

Analytical Report For Client: Cardno ERI Client Project Name: ExxonMobil 99105/022783C Attention: Greg Gurss 601 North McDowell Blvd. Petaluma, CA 94954-2312

Cura la A. se Dung

Approved for release on 09/02/2014 by: Cecile deGuia Project Manager



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

7440 Lincoln Way, Garden Grove, CA 92841-1432 + TEL: (714) 895-5494 + FAX: (714) 894-7501 + www.calscience.com

NELAP ID: 03220CA | ACLASS DoD-ELAP ID: ADE-1864 (ISO/EC 17025 2005) | CSDLAC ID: 10109 | SCAGMD ID: 93LA0830

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### Work Order: 14-08-1455

#### Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 08/20/14. They were assigned to Work Order 14-08-1455.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

#### Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

#### **Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

#### Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

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

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

#### Subcontractor Information:

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

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### Sample Summary

Client:	Cardno ERI	Work Order:	14-08-1455
	601 North McDowell Blvd.	Project Name:	ExxonMobil 99105/022783C
	Petaluma, CA 94954-2312	PO Number:	022783C
		Date/Time Received:	08/20/14 09:30
		Number of Containers:	22
Attn:	Grea Gurss		

#### 5

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
W-14-MW6	14-08-1455-1	08/18/14 12:30	7	Aqueous
W-14-MW7	14-08-1455-2	08/18/14 12:15	7	Aqueous
W-13-MW8	14-08-1455-3	08/18/14 13:00	8	Aqueous

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### **Analytical Report**

Cardno ERI			Date Recei	ved:			08/20/14
601 North McDowell Blvd.			Work Order				14-08-1455
Petaluma, CA 94954-2312			Preparation	:			EPA 35100
			Method:			E	PA 8015B (M
			Units:				ug/l
Project: ExxonMobil 99105/022	783C					Pa	ge 1 of 1
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-14-MW6	14-08-1455-1-G	08/18/14 12:30	Aqueous	GC 45	08/21/14	08/22/14 03:36	140821B01A
Parameter		<u>Result</u>	RL		DF	Qua	lifiers
TPH as Diesel		350	50		1.00	SG.	HD
Surrogate		<u>Rec. (%)</u>	<u>Co</u>	ntrol Limits	<u>Qualifiers</u>		
n-Octacosane		77	68-	-140			
W-14-MW7	14-08-1455-2-G	08/18/14 12:15	Aqueous	GC 45	08/21/14	08/22/14 03:56	140821B01A
Parameter		Result	<u>RL</u>		DF	Qua	lifiers
TPH as Diesel		ND	51		1.00	SG	
Surrogate		<u>Rec. (%)</u>	<u>Co</u>	ntrol Limits	<u>Qualifiers</u>		
n-Octacosane		71	68-	-140			
W-13-MW8	14-08-1455-3-G	08/18/14 13:00	Aqueous	GC 45	08/21/14	08/22/14 04:14	140821B01A
Parameter		Result	RL		DE	Qua	lifiers
TPH as Diesel		440	48		1.00	SG,	HD
Surrogate		<u>Rec. (%)</u>	<u>Co</u>	ntrol Limits	<u>Qualifiers</u>		
n-Octacosane		69	68-	-140			
Method Blank	099-15-304-796	N/A	Aqueous	GC 45	08/21/14	08/21/14 09:32	140821B01A
Parameter		Result	RL		DF	Qua	lifiers
TPH as Diesel		ND	50		1.00		
Surrogate		<u>Rec. (%)</u>	<u>Co</u>	ntrol Limits	<u>Qualifiers</u>		
n-Octacosane		77	68-	-140			

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### **Analytical Report**

Cardno ERI			Date Recei				08/20/1
601 North McDowell Blvd.			Work Order	:			14-08-145
Petaluma, CA 94954-2312			Preparation	i:			EPA 50300
			Method:			E	PA 8015B (M
		I	Units:				ug/
Project: ExxonMobil 99105/0227	83C					Pa	ige 1 of 1
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-14-MW6	14-08-1455-1-E	08/18/14 12:30	Aqueous	GC 42	08/25/14	08/25/14 19:42	140825L045
Parameter		<u>Result</u>	RL		DF	Qua	alifiers
TPH as Gasoline		410	50		1.00	HD	
Surrogate		<u>Rec. (%)</u>	<u>Co</u>	ntrol Limits	Qualifiers		
1,4-Bromofluorobenzene		81	38-	-134			
W-14-MW7	14-08-1455-2-E	08/18/14 12:15	Aqueous	GC 42	08/25/14	08/25/14 20:17	140825L045
Parameter		Result	RL		DF	Qua	alifiers
TPH as Gasoline		ND	50		1.00		
Surrogate		<u>Rec. (%)</u>	Co	ntrol Limits	Qualifiers		
1,4-Bromofluorobenzene		69	38-	-134			
W-13-MW8	14-08-1455-3-E	08/18/14 13:00	Aqueous	GC 42	08/21/14	08/21/14 23:01	140821L038
Parameter		Result	RL		DE	Qua	alifiers
TPH as Gasoline		1600	50		1.00		
Surrogate		<u>Rec. (%)</u>	Co	ntrol Limits	Qualifiers		
1,4-Bromofluorobenzene		97	38	-134			
Method Blank	099-12-436-9511	N/A	Aqueous	GC 42	08/21/14	08/21/14 21:51	140821L038
Parameter		Result	RL		DF	Qui	alifiers
TPH as Gasoline		ND	50		1.00		
Surrogate		<u>Rec. (%)</u>	Co	ontrol Limits	Qualifiers		
1,4-Bromofluorobenzene		70	38	-134			
Method Blank	099-12-436-9516	N/A	Aqueous	GC 42	08/25/14	08/25/14 13:16	140825L045
Parameter		Result	RL		DF	Qua	alifiers
TPH as Gasoline		ND	50		1,00		
Surrogate		<u>Rec. (%)</u>	Co	ontrol Limits	<u>Qualifiers</u>		

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### **Analytical Report**

Cardno ERI	Date Received:	08/20/14
601 North McDowell Blvd.	Work Order:	14-08-1455
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: ExxonMobil 99105/022783C		Page 1 of 4

#### Project: ExxonMobil 99105/022783C

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID	
W-14-MW6	14-08-1455-1-B	08/18/14 12:30	Aqueous	GC/MS L	08/22/14	08/22/14 19:51	140822L004	
Parameter		<u>Result</u>	RL	;	<u>DF</u>	Qualifiers		
Benzene		NÐ	0.5	50	1.00			
Toluene		ND	0.5	50	1.00			
Ethylbenzene		ND	0.5	50	1.00			
o-Xylene		ND	0.5	50	1.00			
p/m-Xylene		ND	0.5	50	1.00			
Xylenes (total)		ND	0.5	50	1.00			
Methyl-t-Butyl Ether (MTBE)		0.60	0.5	50	1.00			
Tert-Butyl Alcohol (TBA)		14	5.0	)	1.00			
Diisopropyl Ether (DIPE)		ND	0.5	50	1.00			
Ethyl-t-Butyl Ether (ETBE)		ND	0.5	50	1.00			
Tert-Amyl-Methyl Ether (TAME)		ND	0.5	50	1.00			
1,2-Dibromoethane		ND	0.5	50	1.00			
1,2-Dichloroethane		1.1	0.5	50	1.00			
Surrogate		<u>Rec. (%)</u>	Co	ntrol Limits	<u>Qualifiers</u>			
1,4-Bromofluorobenzene		93	68	-120				
Dibromofluoromethane		101	80	-127				
1,2-Dichloroethane-d4		104	80	-128				
Toluene-d8		109	80	-120				

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### **Analytical Report**

Cardno ERI	Date Received:	08/20/14
601 North McDowell Blvd.	Work Order:	14-08-1455
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
· · · · · · · · · · · · · · · · · · ·	Method:	EPA 8260B
	Units:	ug/L
Project: ExxonMobil 99105/022783C		Page 2 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-14-MW7	14-08-1455-2-B	08/18/14 12:15	Aqueous	GC/MS L	08/22/14	08/22/14 20:20	140822L004
Parameter		Result	RL	;	DF	Qua	lifiers
Benzene		ND	0.5	50	1.00		
Toluene		ND	0.5	50	1.00		
Ethylbenzene		ND	0.5	50	1.00		
o-Xylene		ND	0.5	50	1.00		
p/m-Xylene		ND	0.5	50	1.00		
Xylenes (total)		ND	0.5	50	1.00		
Methyl-t-Butyl Ether (MTBE)		ND	0.5	50	1.00		
Tert-Butyl Alcohol (TBA)		21	5.0	)	1.00		
Diisopropyl Ether (DIPE)		ND	0.5	50	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND	0.5	50	1.00		
Tert-Amyl-Methyl Ether (TAME)		ND	0.5	50	1.00		
1,2-Dibromoethane		ND	0.5	50	1.00		
1,2-Dichloroethane		3.1	0.5	50	1.00		
Surrogate		<u>Rec. (%)</u>	Co	ontrol Limits	<u>Qualifiers</u>		
1,4-Bromofluorobenzene		90	68	-120			
Dibromofluoromethane		103	80	-127			
1,2-Dichloroethane-d4		103	80	-128			
Toluene-d8		103	80	-120			

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### **Analytical Report**

	Data Dapaiyada	08/20/14
Cardno ERI	Date Received:	••••
601 North McDowell Blvd.	Work Order:	14-08-1455
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: ExxonMobil 99105/022783C		Page 3 of 4

#### Project: ExxonMobil 99105/022783C

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-13-MW8	14-08-1455-3-B	08/18/14 13:00	Aqueous	GC/MS L	08/22/14	08/22/14 20:48	140822L004
Parameter		Result	RL		DF	Qua	alifiers
Toluene		ND	0.5	50	1.00		
Ethylbenzene		19	0.5	50	1.00		
o-Xylene		2.6	0,5	50	1.00		
p/m-Xylene		41	0.5	50	1.00		
Xylenes (total)		44	0.5	50	1.00		
Methyl-t-Butyl Ether (MTBE)		ND	0.5	50	1.00		
Tert-Butyl Alcohol (TBA)		20	5.0	)	1.00		
Diisopropyl Ether (DIPE)		ND	0.5	50	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND	0.5	50	1.00		
Tert-Amyl-Methyl Ether (TAME)		ND	0.5	50	1.00		
1,2-Dibromoethane		ND	0.5	50	1.00		
1,2-Dichloroethane		0.78	0,5	50	1.00		
Surrogate		<u>Rec. (%)</u>	Co	ntrol Limits	Qualifiers		
1,4-Bromofluorobenzene		98	68	-120			
Dibromofluoromethane		92	80	-127			
1,2-Dichloroethane-d4		93	80	-128			
Toluene-d8		105	80	-120			

W-13-MW8	14-08-1455-3-B	08/18/14 13:00	Aqueous GC/MS L	08/22/14	08/22/14 140822L004 21:16
Parameter		Result	<u>RL</u>	DF	Qualifiers
Benzene		39	1.0	2.00	
Surrogate		<u>Rec. (%)</u>	Control Limits	<u>Qualifiers</u>	
1,4-Bromofluorobenzene		96	68-120		
Dibromofluoromethane		93	80-127		
1,2-Dichloroethane-d4		95	80-128		
Toluene-d8		101	80-120		

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### **Analytical Report**

Cardno ERI	Date Received:	08/20/14
601 North McDowell Blvd.	Work Order:	14-08-1455
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: ExxonMobil 99105/022783C		Page 4 of 4

#### 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	099-12-884-1190	N/A	Aqueous	GC/MS L	08/22/14	08/22/14 11:48	140822L004
Parameter		Result	RL	;	<u>DF</u>	Qua	lifiers
Benzene		ND	0.5	50	1.00		
Toluene		ND	0.5	50	1.00		
Ethylbenzene		ND	0.5	50	1.00		
o-Xylene		ND	0.5	50	1.00		
p/m-Xylene		ND	0.5	50	1.00		
Xylenes (total)		ND	0.5	50	1.00		
Methyl-t-Butyl Ether (MTBE)		ND	0.5	50	1.00		
Tert-Butyl Alcohol (TBA)		ND	5.0	)	1.00		
Diisopropyl Ether (DIPE)		ND	0.5	50	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND	0.5	50	1.00		
Tert-Amyl-Methyl Ether (TAME)		ND	0.5	50	1.00		
1,2-Dibromoethane		ND	0.5	50	1.00		
1,2-Dichloroethane		ND	0.5	50	1.00		
Surrogate		<u>Rec. (%)</u>	<u>Cc</u>	ontrol Limits	<u>Qualifiers</u>		
1,4-Bromofluorobenzene		89	68	-120			
Dibromofluoromethane		109	80	-127			
1,2-Dichloroethane-d4		109	80	-128			
Toluene-d8		103	80	-120			

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### **Quality Control - Spike/Spike Duplicate**

Cardno ERI	Cardno ERI					Date Received:					
601 North McDowell Blvd.			Work Order:						14-08-145		
Petaluma, CA 94954-2312	Petaluma, CA 94954-2312				Preparation:					PA 5030C	
		Method:						EPA 8	015B (M)		
Project: ExxonMobil 9910	5/022783C								Page 1	of 3	
Quality Control Sample ID	Туре		Matrix	Ins	trument	Date Prepared	Date Ana	alyzed	MS/MSD Bat	ch Number	
W-13-MW8	Sample		Aqueous	GC	42	08/21/14	08/21/14	23:01	1408215023		
W-13-MW8	Matrix Spike		Aqueous	GC	42	03/21/14	08/21/14	23:36	1408215023		
W-13-MW8	Matrix Spike	Duplicate	Aqueous	GC	42	08/21/14	08/22/14	00:11	1408218023		
Parameter	<u>Sample</u> Conc.	Spike Added	MS Conc.	<u>MS</u> %Rec.	MSD Conc.	MSD %Rec.	<u>%Rec. CL</u>	<u>RPD</u>	RPD CL	Qualifiers	
TPH as Gasoline	1558	2000	3406	92	3442	94	68-122	1	0-18		

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RPD: Relative Percent Difference. CL: Control Limits

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### **Quality Control - Spike/Spike Duplicate**

Cardno ERI					Received	:	08/20/*			
601 North McDowell Blvd				Work	Order:				14	-08-1455
Petaluma, CA 94954-2312				Prep	aration:			EPA		
				EPA 8015B (M)						
Project: ExxonMobil 99105/022783C									Page 2	of 3
Quality Control Sample ID	Туре		Matrix	In	strument	Date Prepared	Date Ana	lyzed	MS/MSD Bat	ch Number
14-08-1650-6	Sample		Aqueou	s G	C 42	08/25/14	08/25/14	14:26	1408255046	
14-08-1650-6	Matrix Spike		Aqueou	s G	C 42	08/25/14	08/25/14	15:01	1408255046	
14-08-1650-6	Matrix Spike	Duplicate	Aqueou	s G	C 42	08/25/14	08/25/14	15:36	1408255046	
Parameter	<u>Sample</u> Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	<u>RPD</u>	<u>RPD CL</u>	Qualifiers
TPH as Gasoline	437.1	2000	2362	96	2207	89	68-122	7	0-18	

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RPD: Relative Percent Difference. CL: Control Limits

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### **Quality Control - Spike/Spike Duplicate**

Cardno ERI	ERI Date Rece									08/20/14
601 North McDowell Blvd.				W	ork Order:		14-08-1455			
Petaluma, CA 94954-2312				Pro	eparation:				EF	PA 5030C
,			Me	ethod:				EF	PA 8260B	
Project: ExxonMobil 99105/	022783C								Page 3	of 3
Quality Control Sample ID	Туре		Matrix		Instrument	Date Prepared	Date Ana	lyzed	MS/MSD Bat	ch Number
14-08-1510-1	Sample		Aqueous	s	GC/MS L	08/22/14	08/22/14	12:16	1408229002	
14-08-1510-1	Matrix Spike		Aqueou	9	GC/MS L	08/22/14	08/22/14	13:41	1408225002	
14-08-1510-1	Matrix Spike	Duplicate	Aqueou	5	GC/MS L	08/22/14	08/22/14	14:10	1408225002	
Parameter	<u>Sample</u> Conc.	<u>Spike</u> Added	MS Conc.	MS %Re	ec. MSD	MSD %Rec.	<u>%Rec. CL</u>	<u>RPD</u>	RPD CL	<u>Qualifiers</u>
Benzene	ND	10.00	10.81	108	10.55	106	77-121	2	0-21	
Toluene	ND	10.00	10.96	110	10.53	105	78-120	4	0-25	
Ethylbenzene	ND	10.00	10.74	107	10.33	103	78-120	4	0-23	
o-Xylene	ND	10.00	11.05	110	10.85	108	74-122	2	0-24	
p/m-Xylene	ND	20.00	22.35	112	21.56	108	74-122	4	0-23	
Methyl-t-Butyl Ether (MTBE)	ND	10.00	9.253	93	10.22	102	57-144	10	0-31	
Tert-Butyl Alcohol (TBA)	ND	50.00	71.10	142	60.09	120	43-170	17	0-38	
Diisopropyl Ether (DIPE)	ND	10.00	10.41	104	11.00	110	70-130	6	0-35	
Ethyl-t-Butyl Ether (ETBE)	ND	10.00	9.232	92	10.03	100	70-130	8	0-35	
Tert-Amyl-Methyl Ether (TAME)	ND	10.00	8.554	86	8.892	89	70-130	4	0-35	
1,2-Dibromoethane	ND	10.00	9.999	100	10.19	102	74-130	2	0-22	
1,2-Dichloroethane	ND	10.00	10.00	100	10.33	103	72-130	3	0-25	

### Page 14 of 21

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## Calscience

### **Quality Control - LCS/LCSD**

14

Cardno ERI					Date Recei	ved:					08/20/14
601 North McDowell Blvd					Work Order	r:				-	4-08-1455
Petaluma, CA 94954-231	2				Preparation	r:				E	EPA 3510C
					Method:					EPA	8015B (M)
Project: ExxonMobil 9910	5/022783C									Page	1 of 4
Quality Control Sample ID	Туре		Mat	rix	Instrument	Date Pre	pared	Date	Analyzed	LCS/LCSD Ba	atch Number
099-15-304-796	LCS	8 C 40	Aqu	leous	GC 45	03/21/14	7000.00	08/21	/14 09:51	140821B01A	
099-15-304-796	LCSD		Aq	icous	GC 45	08/21/14		08/21	/14 10:09	140821B01A	he finder
Parameter	Spike Added	LCS	Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	<u>%Rec</u>	:. CL	<u>RPD</u>	RPD CL	Qualifiers
				701100.		701 10 01					

Return to Contents

### Calscience

### **Quality Control - LCS**

Cardno ERI			Date Receive	əd;		08/20/14
601 North McDowell Blvd			Work Order:			14-08-1455
Petaluma, CA 94954-231.	2		Preparation:			EPA 5030C
			Method:			EPA 8015B (M)
Project: ExxonMobil 9910	5/022783C					Page 2 of 4
Quality Control Sample ID	Туре	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-436-9511	LCS	Aqueous	GC 42	08/21/14	08/21/14 22:26	140821L038
Parameter		Spike Added	Conc. Recove	red LCS %R	ec. <u>%Rec</u> .	CL Qualifiers
TPH as Gasoline		2000	1959	98	78-120	)

RPD: Relative Percent Difference. CL: Control Limits

TPH as Gasoline

Calscience

### **Quality Control - LCS**

Cardno ERI			Date Recei	ved:		08/20/14
601 North McDowell Blvd			Work Order	r:		14-08-145
Petaluma, CA 94954-231	2		Preparation	1:		EPA 50300
			Method:			EPA 8015B (M
Project: ExxonMobil 9910	5/022783C					Page 3 of 4
Quality Control Sample ID	Туре	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-436-9516	LGS	Aqueous	GC 42	08/25/14	08/25/14 13:51	140825L045
Parameter		Spike Added	Conc. Recov	vered LCS %R	ec. %Rec	CL Qualifiers

2057

103

78-120

2000

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RPD: Relative Percent Difference. CL: Control Limits

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### **Quality Control - LCS**

Cardno ERI	Date Received:	08/20/14
601 North McDowell Blvd.	Work Order:	14-08-1455
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B
Project: ExxonMobil 99105/022783C		Page 4 of 4

Quality Control Sample ID	Туре	Matrix	d Instrumen	t Date Prepa	ared Date Ana	yzed LCS Bato	h Number
099-12-884-1190	LCS	Aque	ous GC/MS L	08/22/14	08/22/14	10:42 140822L	004
Parameter		Spike Added	Conc. Recovered	LCS %Rec.	<u>%Rec. CL</u>	ME CL	Qualifiers
Benzene		10.00	10.82	108	80-120	73-127	
Toluene		10.00	10.88	109	80-120	73-127	
Ethylbenzene		10.00	10.73	107	80-120	73-127	
o-Xylene		10.00	11.21	112	80-120	73-127	
p/m-Xylene		20.00	22.67	113	80-120	73-127	
Methyl-t-Butyl Ether (MTBE)		10.00	9.440	94	75-123	67-131	
Tert-Butyl Alcohol (TBA)		50.00	47.06	94	80-120	73-127	
Diisopropyl Ether (DIPE)		10.00	10.54	105	73-121	65-129	
Ethyl-t-Butyl Ether (ETBE)		10.00	9.486	95	76-124	68-132	
Tert-Amyl-Methyl Ether (TAME)		10.00	8.610	86	80-120	73-127	
1,2-Dibromoethane		10.00	9.957	100	80-120	73-127	
1,2-Dichloroethane		10.00	10.08	101	80-122	73-129	

Total number of LCS compounds: 12

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

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### Calscience

### **Glossary of Terms and Qualifiers**

	14-08-1455	Page 1 of 1
Qualifiers	Definition	
AZ	Surrogate compound recovery was out of control due to matrix interference. The associated method blank su in control and, therefore, the sample data was reported without further clarification.	rrogate spike compound w
в	Analyte was present in the associated method blank.	
BA	The MS/MSD RPD was out of control due to suspected matrix interference.	
BB	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample e concentration by a factor of four or greater.	exceeding the spike
BU	Sample analyzed after holding time expired.	
BV	Sample received after holding time expired.	
DF	Reporting limits elevated due to matrix interferences.	
E	Concentration exceeds the calibration range.	
ET	Sample was extracted past end of recommended max. holding time.	
GE	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected mate	rix interference.
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 matri associated LCS was in control.	x interference. The
IL	Relative percent difference out of control.	
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection li estimated.	imit. Reported value is
JA	Analyte positively identified but quantitation is an estimate.	
LD	Analyte presence was not confirmed by second column or GC/MS analysis.	
LP	The LCS and/or LCSD recoveries for this analyte were above the upper control limit. The associated sample the sample data was reported without further clarification.	was non-detected. Theref
LQ	LCS recovery above method control limits.	
LR	LCS recovery below method control limits.	
ND	Parameter not detected at the indicated reporting limit.	
QO	Compound did not meet method-described identification guidelines. Identification was based on additional GC	/MS characteristics.
RU	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).	
SG	A silica gel cleanup procedure was performed.	
SN	See applicable analysis comment.	
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % more reported on a wet weight basis.	oisture. All QC results are
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holdi (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as bein stated holding time unless received at the laboratory within 15 minutes of the collection time.	ing time of <= 15 minutes ig received outside of the
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/o estimated concentration. Component concentrations showing not detected (ND) are summed into the calculat concentrations.	r, if "J" flags are reported, ted total result as zero

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																										1	4-08	-1	4	5	5	
Con	nsultant Name	: Cardno ER	1															Acc	oun	t#J	NA				P	Oik:	Dir	ect B	HN C	and	NO ER	l:
Consu	litant Address	: 601 N McD	owell														_	Invo	ice '	To:	Dire	<b>ct Bill Ca</b>	rdno	ERI		_						
Consultant	City/State/Zip	: Petaluma,	CA 94954									_					_	Rep	ort '	To:	Gre	g Gurss			_							
ExxonMob	oil Project Mgr	r: Jennifer S	ediachek								_	_		_	_		Pro	oject	: Nar	ne:	022	783 C			_							
Consultar	nt Project Mgr	r: Greg Gurs	8											_	Ex	conN							9910				Major Project	t (Al	FE#	<b>}:</b>		
Consultant Telep							Fa	x No	.: (7	07)7	789-(	0414	4							1.1		1 San Pal		Ve	_	_						
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Sample ID	ield Point Name	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Methanol	SOUNDIN DRUNAVE	NaOH	H <sub>2</sub> SO <sub>2</sub> Plastic H.SO <sub>2</sub> Glass	HNOs	(ce	Other	None	Groundwater	Wastewater	Drinking Water Studae	Soil	11	Other (apecify): Distilled Wat	TPHd 8015B*		IPHG 80155	Mathanol hv 8015	8260 see list		Ethanol	RUSH TAT (Pre-Schedule	5-day TAT	Standard 10-day TAT	Due Date of Report
W-14-MW6	MW6	8/18/14	1230	6V/1A	x			$\mathbf{H}$	19	++	1	T	T <sub>x</sub>		1A	x		T	T	Π		x	-	x		Tx		T	Ē		X	
W-14-MW7	MW7	8/18/14	1215	6V/1A	x			H	20	1 1	T	Τ			1A	x		T		Ħ		x	-	x		X		$\top$	T		X	
W-13-MW8	MW8	8/18/14	1300	6V/2A	x				20		T	Т	Ix		2A	X			Τ	Π		x		x	x	Tx		Τ	Г	Г	X	
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Comments/Special Instructions:	OXY's rep	Only inclu ort MTBE, Di gel clean-up	PE, TBA,	TAME, E			1,21	DCA					PL	.EAS	ie e-m/							oratory ( Temperal Sample (	lture Conta	Upor liner:	Ree s Inta	act?			Y		N	
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CEL	GARDEN GROVE	k
7440 LINCOLN WAY GARDEN GROVE, CA 92841	CARDEN ONOTE	
COD:	D92845A	
\$0,00		
Referen <mark>ce:</mark> CARDNO ERI,PHILLIPS 66, EKI		
Delivery Instructions:		
Signature Type: SIGNATURE REQUIRED		
	and a second for a second s	Print Date : 06/19/14 14:52 PM Package 1 of 1

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  $\mathbb R$  - 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:

and the second sec	
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.

LIENT: Cardno E	<u>р</u>	EIPT FOR	DATE:	08/a	
TEMPERATURE: Thermomet         Temperature       3       6       °         Image: Sample(s) outside temperature         Image: Sample(s	<b>C</b> - <b>0.3</b> ° <b>C</b> (CF) = $3$ are criteria (PM/APM contactor received on interview of the contactor received on interview of the contactor received on interview of the contactor received on the contact	3°C ted by:) ce/chilled on same da	Blank	🗆 Samı	
Ambient Temperature:	□ Filter			Checked	by: 836
CUSTODY SEALS INTACT:		□ Not Present ,⊄ Not Present	🗆 N/A		by: <u> </u>
SAMPLE CONDITION: Chain-Of-Custody (COC) docur	nent(s) received with san		res Æ	No □	N/A
COC document(s) received con					
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No analysis requested.	t relinquished. 🛛 🗆 No date/ti	me relinquished.	-		_
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□ No analysis requested. □ Not Sampler's name indicated on C Sample container label(s) consi Sample container(s) intact and g Proper containers and sufficient Analyses received within holdin Aqueous samples received w □ pH □ Residual Chlorine □ Proper preservation noted on C □ Unpreserved vials received for	t relinquished.	me relinquished. Juested time blved Oxygen	ව ව ර ර ර ර		
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<ul> <li>□ No analysis requested.</li> <li>□ Not</li> <li>Sampler's name indicated on C</li> <li>Sample container label(s) consi</li> <li>Sample container(s) intact and g</li> <li>Proper containers and sufficient</li> <li>Analyses received within holding</li> <li>Aqueous samples received within holding</li> <li>Aqueous samples received within holding</li> <li>Proper preservation noted on C</li> <li>□ Unpreserved vials received for</li> <li>Volatile analysis container(s) free</li> <li>Tedlar bag(s) free of condensate</li> <li>CONTAINER TYPE:</li> <li>Solid: □4ozCGJ □8ozCGJ</li> </ul>	t relinquished.	me relinquished.	を で で で ® □Terra □1AGB [	Cores <sup>®</sup>	

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# Calscience

# WORK ORDER NUMBER: 14-08-1447

### The difference is service



AIR SOIL WATER MARINE CHEMISTRY

Analytical Report For Client: Cardno ERI Client Project Name: ExxonMobil 99105/022783C Attention: Greg Gurss 601 North McDowell Blvd. Petaluma, CA 94954-2312

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Approved for release on 09/03/2014 by: Cecile deGuia Project Manager



Page 1 of 25

ResultLink >

Email your PM >

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

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NELAP ID 03220CA | ACLASS DoD ELAP ID: ADE-1864 (ISO/IEC 17025:2005) | CSDLAC ID: 10109 | SCAQMD ID: 93LA0830

Calscience

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4	4.1 Sam	ontrol Sample Data ple Duplicate /LCSD	16 16 17
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6	Chain-of-	Custody/Sample Receipt Form	23

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Work Order: 14-08-1447

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#### **Condition Upon Receipt:**

Samples were received under Chain-of-Custody (COC) on 08/20/14. They were assigned to Work Order 14-08-1447.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

#### Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

#### Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

#### Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

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

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

#### Subcontractor Information:

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

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Client	Cardno ERI	Work Order:	14-08-1447
	601 North McDowell Blvd.	Project Name:	ExxonMobil 99105/022783C
	Petaluma, CA 94954-2312	PO Number:	022783C
		Date/Time Received:	08/20/14 09:50
		Number of Containers:	3
Attn:	Greg Gurss		

### Attil. Greg Guiss

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
V-INF-MW6-2	14-08-1447-1	08/18/14 19:35	1	Air
V-INF-COMP-1	14-08-1447-2	08/18/14 20:35	1	Air
V-EFF-1	14-08-1447-3	08/18/14 20:30	1	Air

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### **Analytical Report**

Cardno ERI	Date Received:	08/20/14
601 North McDowell Blvd.	Work Order:	14-08-1447
Petaluma, CA 94954-2312	Preparation:	N/A
	Method:	EPA TO-15M
	Units:	mg/m3
Project: ExxonMobil 99105/022783C		Page 1 of 10

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V-INF-MW6-2	14-08-1447-1-A	08/18/14 19:35	Air	GC/MS KKK	N/A	08/21/14 13:35	140820L01
Comment(s): - The method has been	n modified to use Tedlar	Bags instead of	of Summa ca	nisters and is not	NY NELAC a	ccredited.	
Parameter		<u>Result</u>	Ī	RL	DF	Qua	lifiers
Acetone		ND	4	1.8	40.0		
Benzene		ND	(	0.064	40.0		
Benzyl Chloride		ND	(	0.31	40.0		
Bromodichloromethane	÷.	ND	(	).13	40.0		
Bromoform		ND	(	).21	40.0		
Bromomethane		ND	(	0.078	40.0		
2-Butanone		ND	(	0.18	40.0		
Carbon Disulfide		ND		1.2	40.0		
Carbon Tetrachloride		ND	(	0.13	40.0		
Chlorobenzene		ND	(	0.092	40.0		
Chloroethane		ND	(	0.053	40.0		
Chloroform		ND	(	0.098	40.0		
Chloromethane		ND	(	0.041	40.0		
Dibromochloromethane		ND	(	0.17	40.0		
Dichlorodifluoromethane		ND	(	0.099	40.0		
Diisopropyl Ether (DIPE)		ND	(	0.33	40.0		
1,1-Dichloroethane		ND	(	0.081	40.0		
1,1-Dichloroethene		ND	(	0.079	40.0		
1,2-Dibromoethane		ND	(	0.15	40.0		
Dichlorotetrafluoroethane		ND	(	0.56	40.0		
1,2-Dichlorobenzene		ND	(	0.12	40.0		
1,2-Dichloroethane		ND	(	0.081	40.0		
1,2-Dichloropropane		ND	(	0.092	40.0		
1,3-Dichlorobenzene		ND	(	0.12	40.0		
1,4-Dichlorobenzene		ND	(	0.12	40.0		
c-1,3-Dichloropropene		ND	(	0.091	40.0		
c-1,2-Dichloroethene		ND	(	0.079	40.0		
t-1,2-Dichloroethene		ND	(	0.079	40.0		
t-1,3-Dichloropropene		ND	(	D.18	40.0		
Ethyl-t-Butyl Ether (ETBE)		ND		0.33	40.0		
Ethylbenzene		0.36	(	0.087	40.0		
4-Ethyltoluene		0.10	I	0.098	40.0		
Hexachloro-1,3-Butadiene		ND		0.64	40.0		
2-Hexanone		ND	(	0.25	40.0		

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### **Analytical Report**

Cardno ERI Date Received:				08/20/14		
601 North McDowell Blvd.	Wo	Work Order:				
Petaluma, CA 94954-2312	Pre	paration:		14-08-1447 N/A		
		thod:		EPA TO-15M		
	Uni			mg/m3		
Drainath EvyanMahil 00105/0227820	On			Page 2 of 10		
Project: ExxonMobil 99105/022783C						
Parameter	<u>Result</u>	<u>RL</u>	DF	Qualifiers		
Methyl-t-Butyl Ether (MTBE)	ND	0.29	40.0			
Methylene Chloride	ND	0.69	40.0			
4-Methyl-2-Pentanone	ND	0.25	40.0			
Naphthalene	ND	1.0	40.0			
o-Xylene	0.33	0.087	40.0			
p/m-Xylene	0.83	0.35	40.0			
Xylenes (total)	1.2	0.087	1.00			
Styrene	ND	0.26	40.0			
Tert-Amyl-Methyl Ether (TAME)	ND	0.33	40.0			
Tert-Butyl Alcohol (TBA)	ND	0.61	40.0			
Tetrachloroethene	ND	0.14	40.0			
Toluene	ND	0.75	40.0			
Trichloroethene	ND	0.11	40.0			
Trichlorofluoromethane	ND	0.22	40.0			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.46	40.0			
1,1,1-Trichloroethane	ND	0.11	40.0			
1,1,2-Trichloroethane	ND	0.11	40.0			
1,3,5-Trimethylbenzene	0.11	0.098	40.0			
1,1,2,2-Tetrachloroethane	ND	0.27	40.0			
1,2,4-Trimethylbenzene	ND	0.29	40.0			
1,2,4-Trichlorobenzene	ND	0.59	40.0			
Vinyl Acetate	ND	0.28	40.0			
Vinyl Chloride	ND	0.051	40.0			
Surrogate	<u>Rec. (%)</u>	Control Limits	<u>Qualifiers</u>			
1,4-Bromofluorobenzene	118	57-129				
1,2-Dichloroethane-d4	100	47-137				
Toluene-d8	89	78-156				



### **Analytical Report**

Cardno ERI	Date Received:	08/20/14
601 North McDowell Blvd.	Work Order:	14-08-1447
Petaluma, CA 94954-2312	Preparation:	N/A
	Method:	EPA TO-15M
	Units:	mg/m3
Project: ExxonMobil 99105/022783C		Page 3 of 10

#### KOMMODII 99105/0 UJECI.

IV-RF-COMP-1         14-08-1447-2-A         02/15/4         Air         GC/MS II         NA         08/2/14 11:36         140920101           Comment(s):         - The method has been modified to use Tedlar Bags instead of Summa canisters and is not NY NELAC accredited.         Examiler         Result         RL         DE         Qualifiers           Acetorie         ND         1.2         10.0         Constraints         Constraints	Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
ParameterResultRLDEQualifiersAcetoreND1.210.0Berzere2.000.0610.0Berzyl ChlorideND0.07810.0BromodichloromethaneND0.03210.0BromodichloromethaneND0.01910.0BromodichloromethaneND0.01910.02-Butanone0.120.04410.0Carbon TetrachlorideND0.3110.0Carbon TetrachlorideND0.02310.0ChlorobenzeneND0.01310.0ChlorobenzeneND0.02310.0ChlorobentaneND0.04110.0DibtoroditoromethaneND0.02310.0DibtoroditoromethaneND0.02410.0DibtoroditoromethaneND0.04110.0DibtoroditoromethaneND0.02510.0DibtoroditoromethaneND0.02010.01.1-DichloroethaneND0.02010.01.2-DichloroethaneND0.02010.01.2-DichloroethaneND0.03110.01.2-DichloroethaneND0.03110.01.2-DichloroethaneND0.03210.01.2-DichloroethaneND0.03110.01.2-DichloroethaneND0.03110.01.2-DichloroethaneND0.03110.01.2-DichloroethaneND0.03110.01.2-DichloroethaneND0.031 <td< th=""><th>V-INF-COMP-1</th><th>14-08-1447-2-A</th><th></th><th>Air</th><th>GC/MS II</th><th>N/A</th><th>08/21/14 11:36</th><th>140820L01</th></td<>	V-INF-COMP-1	14-08-1447-2-A		Air	GC/MS II	N/A	08/21/14 11:36	140820L01
AcetoneND1.210.0Benzene2.00.01610.0Benzyl ChlorideND0.07810.0BromodichloromethaneND0.03410.0BromodichloromethaneND0.05210.0BromodichloromethaneND0.01910.0Selutanone0.120.04410.0Carbon DisulfideND0.3110.0Carbon TetrachlorideND0.03110.0ChlorobenzeneND0.02310.0ChloroformND0.02310.0ChloroformND0.02410.0ChloroformND0.02410.0ChlorobenzeneND0.01310.0ChloroformND0.02410.0ChloroformND0.02410.0DisomochloromethaneND0.02510.0DisomochloromethaneND0.02010.01.1-DichloroethaneND0.02010.01.2-DichloroethaneND0.03810.01.2-DichloroethaneND0.03010.01.2-DichloroethaneND0.02010.01.2-DichloroethaneND0.03110.01.2-DichloroethaneND0.03010.01.2-DichloroethaneND0.03010.01.2-DichloroethaneND0.02010.01.2-DichloroethaneND0.03110.01.2-DichloroethaneND0.02010.01.2-DichloroethaneND <td>Comment(s): - The method has been</td> <td>n modified to use Tedlar</td> <td>Bags instead o</td> <td>f Summa ca</td> <td>nisters and is no</td> <td>t NY NELAC ac</td> <td>credited.</td> <td></td>	Comment(s): - The method has been	n modified to use Tedlar	Bags instead o	f Summa ca	nisters and is no	t NY NELAC ac	credited.	
Berzere         2.0         0.016         1.0.0           Berzy Chioride         ND         0.078         10.0           Bromolichloromethane         ND         0.034         10.0           Bromolichloromethane         ND         0.052         10.0           Bromolichloromethane         ND         0.019         10.0           2-Butanone         0.12         0.044         10.0           Carbon Fischloride         ND         0.31         10.0           Carbon Fischloride         ND         0.023         10.0           Chlorobenzene         ND         0.024         10.0           Chlorobethane         ND         0.024         10.0           Chlorobethane         ND         0.024         10.0           Dichlorobethane         ND         0.043         10.0           Dichlorobethane         ND         0.020         10.0           1.1-Dichlorobethane         ND         0.021         10.0           1.1-Dichlorobethane         ND         0.020         10.0           1.2-Dichlorobethane         ND         0.021         10.0           1.2-Dichlorobethane         ND         0.030         10.0           1.2-Dichlorobe	<u>Parameter</u>		<u>Result</u>	E	<u> </u>	<u>DF</u>	<u>Qua</u>	lifiers
Berzyl ChiorideND0.07810.0BromodichloromethaneND0.03410.0BromomethaneND0.05210.0BromomethaneND0.01910.02.Butanone0.120.04410.0Carbon DisulfideND0.3110.0Carbon DisulfideND0.03110.0ChlorobenzeneND0.01310.0ChlorobenzeneND0.01310.0ChlorobenzeneND0.01310.0ChlorobenzeneND0.01310.0ChlorobenzeneND0.04310.0DibromochloromethaneND0.04310.0DibromochloromethaneND0.04310.0DibromochloromethaneND0.02010.01,1-DichoroethaneND0.02010.01,2-DichoroethaneND0.02010.01,2-DichoroethaneND0.03010.01,2-DichoroethaneND0.03010.01,2-DichoroethaneND0.03010.01,2-DichoroethaneND0.03010.01,2-DichoroethaneND0.03010.01,2-DichoropenzeneND0.03010.01,3-DichoropenzeneND0.03010.01,3-DichoropenzeneND0.03010.01,3-DichoropenzeneND0.03010.01,3-DichoropenzeneND0.03010.01,3-DichoropenzeneND0.02110.01,3-Dich	Acetone		ND	1	.2	10.0		
BrowodichloromethaneND0.03410.0BromootomND0.05210.0BromomethaneND0.01910.0Sebutanone0.120.044410.0Carbon DisulfideND0.3110.0Carbon TetrachlorideND0.03110.0ChlorobenzeneND0.01310.0ChloroothaneND0.01310.0ChloroothaneND0.01310.0ChloroothaneND0.01010.0DibromochloromethaneND0.01010.0DibromochloromethaneND0.02510.0Disopropyl Ether (DIPE)ND0.02010.01,1-DichloroethaneND0.02010.01,2-DibromoethaneND0.03310.01,2-DibromoethaneND0.03010.01,2-DichoroethaneND0.03010.01,2-DichoroethaneND0.03010.01,2-DichoroethaneND0.03010.01,2-DichoroethaneND0.03010.01,2-DichoroethaneND0.03010.01,2-DichoroethaneND0.03010.01,2-DichoroethaneND0.03010.01,2-DichoroethaneND0.03010.01,2-DichoroethaneND0.03010.01,2-DichoroethaneND0.02010.01,2-DichoroethaneND0.02010.01,2-DichoroethaneND0.02010.01,2-D	Benzene		2.0	C	0.016	10.0		
BromoformND0.05210.0BromomethaneND0.01910.02-Butanone0.120.04410.0Carbon DisulfideND0.3110.0Carbon TetrachlorideND0.03110.0ChlorobenzeneND0.02310.0ChlorobenzeneND0.02410.0ChloroformND0.02410.0ChloromethaneND0.04310.0DisoromothoromethaneND0.04310.0DisoromothoromethaneND0.02410.0Disoropyl Ether (DIPE)ND0.02410.01,1-DichloroethaneND0.02410.01,2-DichloroethaneND0.02410.01,2-DichloroethaneND0.02410.01,2-DichloroethaneND0.02010.01,2-DichloroethaneND0.02010.01,2-DichloroethaneND0.03310.01,2-DichloroethaneND0.03010.01,2-DichloroethaneND0.03010.01,2-DichloroethaneND0.03010.01,2-DichloroethaneND0.03010.01,2-DichloroethaneND0.02010.01,2-DichloroethaneND0.02010.01,2-DichloroethaneND0.02010.01,2-DichloroethaneND0.02010.01,3-DichloroptopeneND0.02010.01,3-DichloroptopeneND0.02010.0<	Benzyl Chloride		ND	C	0.078	10.0		
BromomethaneND0.01910.02-Butanone0.120.04410.0Carbon DisulfideND0.3110.0Carbon TetrachlorideND0.03110.0ChlorobenzeneND0.02310.0ChloroberhaneND0.01310.0ChloroberhaneND0.02410.0ChloroberhaneND0.01010.0DibromochloromethaneND0.04310.0DichorodifluoromethaneND0.02510.0DichorodifluoromethaneND0.02010.01,1-DichoroethaneND0.02010.01,1-DichoroethaneND0.02010.01,1-DichoroethaneND0.02010.01,2-DichoroethaneND0.02010.01,2-DichoroethaneND0.03110.01,2-DichoroethaneND0.02310.01,2-DichoroethaneND0.03010.01,2-DichoroethaneND0.03110.01,2-DichoroethaneND0.03010.01,2-DichoroethaneND0.02310.01,3-DichloropropeneND0.02310.01,3-DichloropropeneND0.02010.01,3-DichloropropeneND0.02010.01,3-DichloropropeneND0.02010.01,3-DichloropropeneND0.02010.01,3-DichloropropeneND0.02010.01,3-DichloropropeneND0.02010.0 </td <td>Bromodichloromethane</td> <td></td> <td>ND</td> <td>C</td> <td>0.034</td> <td>10.0</td> <td></td> <td></td>	Bromodichloromethane		ND	C	0.034	10.0		
2-Butanone0.120.04410.0Carbon DisulfideND0.3110.0Carbon TetrachlorideND0.03110.0ChlorobenzeneND0.02310.0ChloroethaneND0.01310.0ChloroethaneND0.02410.0ChloroethaneND0.04310.0DiboromochloromethaneND0.04310.0DichoroethaneND0.02510.0Disoropyl Ether (DIPE)ND0.02010.01,1-DichloroethaneND0.02010.01,2-DichloroethaneND0.02010.01,2-DichloroethaneND0.02010.01,2-DichloroethaneND0.03310.01,2-DichloroethaneND0.03310.01,2-DichloroethaneND0.02110.01,2-DichloroethaneND0.02310.01,2-DichloroethaneND0.02310.01,2-DichloroethaneND0.03010.01,2-DichloroethaneND0.03010.01,3-DichloropopaneND0.02310.01,3-DichloropopaneND0.02010.01,3-DichloropopaneND0.02010.01,3-DichloropopeneND0.02010.01,3-DichloropopeneND0.02010.01,3-DichloropopeneND0.02010.01,3-DichloropopeneND0.02010.01,3-DichloropopeneND0.02010.0 <td>Bromoform</td> <td></td> <td>ND</td> <td>C</td> <td>0.052</td> <td>10.0</td> <td></td> <td></td>	Bromoform		ND	C	0.052	10.0		
Carbon Disulfide         ND         0.31         10.0           Carbon Tetrachloride         ND         0.031         10.0           Chlorobenzene         ND         0.023         10.0           Chloroform         ND         0.024         10.0           Chloroform         ND         0.024         10.0           Chloroform         ND         0.024         10.0           Chloroform         ND         0.043         10.0           Dichloroffluoromethane         ND         0.025         10.0           Dislopropyl Ether (DIPE)         ND         0.020         10.0           1.1-Dichloroethane         ND         0.020         10.0           1.2-Dichloroethane         ND         0.020         10.0           1.2-Dichloroethane         ND         0.020         10.0           1.2-Dichloroethane         ND         0.020         10.0           1.2-Dichloroethane         ND         0.030         10.0           1.2-Dichloroethane         ND         0.020         10.0           1.2-Dichloroethane         ND         0.030         10.0           1.2-Dichloroethane         ND         0.030         10.0           1.3-Dichlor	Bromomethane		ND	C	0.019	10.0		
Carbon TetrachlorideND0.03110.0ChlorobenzeneND0.02310.0ChloroethaneND0.01310.0ChloroethaneND0.02410.0ChloromethaneND0.01010.0DikoronchloromethaneND0.04310.0DichorodifluoromethaneND0.02510.0DichorodifluoromethaneND0.02010.01,1-DichloroethaneND0.02010.01,2-DichoroethaneND0.02010.01,2-DichloroethaneND0.02010.01,2-DichloroethaneND0.03810.01,2-DichloroethaneND0.03810.01,2-DichloroethaneND0.03010.01,2-DichloroethaneND0.02310.01,2-DichloroethaneND0.03010.01,2-DichloroethaneND0.03010.01,2-DichloroethaneND0.03010.01,2-DichloroethaneND0.02310.01,2-DichloroethaneND0.02310.01,2-DichloroethaneND0.02010.01,2-DichloroethaneND0.02010.01,2-DichloroethaneND0.02010.01,2-DichloroetheneND0.02010.01,2-DichloroetheneND0.02010.01,2-DichloroetheneND0.02010.01,2-DichloroetheneND0.04510.01,2-DichloroetheneND0.046	2-Butanone		0.12	C	0.044	10.0		
ChlorobenzeneND0.02310.0ChloroethaneND0.01310.0ChloroformND0.02410.0ChloromethaneND0.01010.0DibromochloromethaneND0.04310.0DichorodiflucomethaneND0.02510.0Disopropyl Ether (DIPE)ND0.02010.01.1-DichloroethaneND0.02010.01.2-DichloroethaneND0.02010.01.2-DichloroethaneND0.02010.01.2-DichloroethaneND0.03810.01.2-DichloroethaneND0.03010.01.2-DichloroethaneND0.03010.01.2-DichloroethaneND0.03010.01.2-DichloropenaneND0.02310.01.2-DichloropenaneND0.03010.01.2-DichloropenaneND0.03010.01.2-DichloropenaneND0.02010.01.3-DichloropenaneND0.02310.01.4-DichloropenaneND0.02010.01.3-DichloropenaneND0.02010.01.3-DichloropenaneND0.02010.01.3-DichloropenaneND0.02010.01.3-DichloropenaneND0.02010.01.3-DichloropenaneND0.02010.01.3-DichloropenaneND0.02010.01.3-DichloropenaneND0.04510.0Ethyl-Extly Ether (ETBE)ND0.	Carbon Disulfide		ND	C	).31	10.0		
Chlorodinane         ND         0.013         10.0           Chloroform         ND         0.024         10.0           Chlorodintane         ND         0.010         10.0           Dibromochloromethane         ND         0.043         10.0           Dichlorodifluoromethane         ND         0.025         10.0           Disopropyl Ether (DIPE)         ND         0.020         10.0           1,1-Dichloroethane         ND         0.020         10.0           1,1-Dichloroethane         ND         0.020         10.0           1,2-Dibhoroethane         ND         0.020         10.0           1,2-Dichloroethane         ND         0.038         10.0           1,2-Dichloroethane         ND         0.030         10.0           1,2-Dichlorobenzene         ND         0.020         10.0           1,2-Dichloropopane         ND         0.020         10.0           1,3-Dichloropopane         ND         0.023         10.0           1,4-Dichloropopane         ND         0.020         10.0           1,4-Dichloropopane         ND         0.020         10.0           1,4-Dichloropopane         ND         0.020         10.0	Carbon Tetrachloride		ND	C	0.031	10.0		
Chloroform         ND         0.024         10.0           Chloromethane         ND         0.010         10.0           Dibromochloromethane         ND         0.043         10.0           Dichlorodifluoromethane         ND         0.025         10.0           Disopropyl Ether (DIPE)         ND         0.020         10.0           1,1-Dichloroethane         ND         0.020         10.0           1,1-Dichloroethane         ND         0.020         10.0           1,2-Dichloroethane         ND         0.020         10.0           1,2-Dichloroethane         ND         0.038         10.0           1,2-Dichloroethane         ND         0.030         10.0           1,2-Dichlorobenzene         ND         0.020         10.0           1,2-Dichlorobenzene         ND         0.020         10.0           1,2-Dichloropopane         ND         0.020         10.0           1,3-Dichloropopane         ND         0.030         10.0           1,4-Dichlorobenzene         ND         0.020         10.0           1,4-Dichloropopene         ND         0.020         10.0           1,3-Dichloropopene         ND         0.020         10.0	Chlorobenzene		ND	C	0.023	10.0		
Chloromethane         ND         0.010         10.0           Dibromochloromethane         ND         0.043         10.0           Dischlorodifluoromethane         ND         0.025         10.0           Disopropyl Ether (DIPE)         ND         0.084         10.0           1,1-Dichloroethane         ND         0.020         10.0           1,1-Dichloroethane         ND         0.020         10.0           1,2-Dichloroethane         ND         0.038         10.0           1,2-Dichloroethane         ND         0.038         10.0           1,2-Dichloroethane         ND         0.030         10.0           1,2-Dichloroethane         ND         0.020         10.0           1,2-Dichloroethane         ND         0.020         10.0           1,2-Dichloroethane         ND         0.023         10.0           1,2-Dichloropenzene         ND         0.030         10.0           1,4-Dichlorobenzene         ND         0.030         10.0           1,4-Dichloropenpene         ND         0.023         10.0           c1,2-Dichloropenene         ND         0.020         10.0           c1,2-Dichloropenene         ND         0.020         10.0	Chloroethane		ND	C	0.013	10.0		
Dibromochloromethane         ND         0.043         10.0           Dichlorodifluoromethane         ND         0.025         10.0           Disopropyl Ether (DIPE)         ND         0.084         10.0           1,1-Dichloroethane         ND         0.020         10.0           1,1-Dichloroethane         ND         0.020         10.0           1,2-Dibromoethane         ND         0.020         10.0           1,2-Dichloroethane         ND         0.038         10.0           1,2-Dichloroethane         ND         0.030         10.0           1,2-Dichloroethane         ND         0.030         10.0           1,2-Dichloropenzene         ND         0.020         10.0           1,2-Dichloropenzene         ND         0.023         10.0           1,3-Dichloropenzene         ND         0.030         10.0           1,4-Dichloropenzene         ND         0.030         10.0           -1,3-Dichloropenzene         ND         0.020         10.0           -1,2-Dichloropenzene         ND         0.020         10.0           -1,2-Dichloropenzene         ND         0.020         10.0           -1,2-Dichloropenzene         ND         0.020         1	Chloroform		ND	C	0.024	10.0		
Dichlorodifluoromethane         ND         0.025         10.0           Disopropyl Ether (DIPE)         ND         0.084         10.0           1,1-Dichloroethane         ND         0.020         10.0           1,1-Dichloroethane         ND         0.020         10.0           1,2-Dibromoethane         ND         0.038         10.0           1,2-Dichloroethane         ND         0.14         10.0           1,2-Dichloroethane         ND         0.020         10.0           1,2-Dichloroethane         ND         0.038         10.0           1,2-Dichloroethane         ND         0.020         10.0           1,2-Dichloroethane         ND         0.020         10.0           1,2-Dichloroppane         ND         0.023         10.0           1,3-Dichloroppane         ND         0.030         10.0           1,4-Dichloroppane         ND         0.020         10.0           c-1,3-Dichloroppane         ND         0.020         10.0           c-1,2-Dichloroppene         ND         0.020         10.0           c+1,2-Dichloroptenene         ND         0.020         10.0           t+1,2-Dichloroptenene         ND         0.045         10.0	Chloromethane		ND	C	0.010	10.0		
Disopropyl Ether (DIPE)ND0.08410.01,1-DichloroethaneND0.02010.01,1-DichloroethaneND0.02010.01,2-DibromoethaneND0.03810.0DichloroethaneND0.1410.01,2-DichlorobenzeneND0.03010.01,2-DichloroethaneND0.02010.01,2-DichloroethaneND0.02010.01,2-DichloroethaneND0.02110.01,2-DichloroethaneND0.02310.01,3-DichloropropaneND0.03010.01,4-DichloroethaneND0.03010.01,4-DichloropropaneND0.02310.01,4-DichloroptopeneND0.02310.0c-1,3-DichloroptopeneND0.02010.0t-1,2-DichloroethaneND0.02010.0t-1,2-DichloroethaneND0.02010.0t-1,3-DichloroptopeneND0.02010.0t-1,3-DichloroptopeneND0.02110.0t-1,3-DichloroptopeneND0.04510.0t-1,3-DichloroptopeneND0.04510.0t-1,3-DichloroptopeneND0.04510.0t-1,3-DichloroptopeneND0.02210.0t-1,3-DichloroptopeneND0.04510.0t-1,3-DichloroptopeneND0.04510.0t-1,4-DichloroptopeneND0.02310.0t-1,4-DichloroptopeneND0.04510.0	Dibromochloromethane		ND	C	0.043	10.0		
1,1-Dichloroethane       ND       0.020       10.0         1,1-Dichloroethane       ND       0.020       10.0         1,2-Dichloroethane       ND       0.038       10.0         Dichloroethane       ND       0.14       10.0         1,2-Dichloroethane       ND       0.030       10.0         1,2-Dichloroethane       ND       0.020       10.0         1,2-Dichloroethane       ND       0.020       10.0         1,2-Dichloroethane       ND       0.023       10.0         1,2-Dichloroethane       ND       0.023       10.0         1,2-Dichloroethane       ND       0.030       10.0         1,3-Dichloropopane       ND       0.030       10.0         1,4-Dichloroethenene       ND       0.023       10.0         1,4-Dichloropopene       ND       0.020       10.0         c-1,3-Dichloroptenene       ND       0.020       10.0         t-1,2-Dichloroethene       ND       0.020       10.0         t-1,3-Dichloroptenene       ND       0.045       10.0         t-1,3-Dichloroptenene       ND       0.045       10.0         t-1,3-Dichloroptenene       ND       0.084       10.0 <tr< td=""><td>Dichlorodifluoromethane</td><td></td><td>ND</td><td>C</td><td>0.025</td><td>10.0</td><td></td><td></td></tr<>	Dichlorodifluoromethane		ND	C	0.025	10.0		
1,1-DichloroetheneND0.02010.01,2-DibromoethaneND0.03810.0DichloroethaneND0.1410.01,2-DichlorobenzeneND0.03010.01,2-DichloroethaneND0.02010.01,2-DichloroethaneND0.02310.01,2-DichloropaneND0.03010.01,3-DichlorobenzeneND0.03010.01,4-DichloropropeneND0.03010.01,4-DichloropropeneND0.02310.0c-1,3-DichloropropeneND0.02310.0t-1,2-DichloroetheneND0.02010.0t-1,2-DichloroptheneND0.02010.0t-1,2-DichloroptheneND0.02010.0t-1,3-DichloroptheneND0.02010.0t-1,3-DichloroptheneND0.02010.0t-1,3-DichloroptheneND0.02110.0t-1,3-DichloroptheneND0.04510.0t-1,3-DichloroptheneND0.04510.0t-1,3-DichloroptheneND0.02210.0t-1,4-DichloroptheneND0.02210.0t-1,4-DichloroptheneND0.02210.0t-1,4-DichloroptheneND0.02210.0t-1,4-DichloroptheneND0.02210.0t-1,4-DichloroptheneND0.02210.0t-1,4-DichloroptheneND0.02510.0	Diisopropyl Ether (DIPE)		ND	C	0.084	10.0		
1,2-DiromoethaneND0.03810.0DichlorotetrafluoroethaneND0.1410.01,2-DichlorobenzeneND0.03010.01,2-DichloropthaneND0.02010.01,2-DichloropthaneND0.02310.01,2-DichloropthaneND0.03010.01,3-DichloropthaneND0.03010.01,3-DichloropthaneND0.03010.01,4-DichlorobenzeneND0.03010.0c-1,3-DichloropthaneND0.02310.0c-1,2-DichloropthaneND0.02010.0t-1,2-DichloropthaneND0.02010.0t-1,2-DichloropthaneND0.02010.0t-1,3-DichloropthaneND0.04510.0t-1,3-DichloropthaneND0.04510.0t-1,3-DichloropthaneND0.04510.0t-1,3-DichloropthaneND0.02210.0t-1,3-DichloropthaneND0.02310.0t-1,3-DichloropthaneND0.04510.0t-1,3-DichloropthaneND0.02410.0t-1,3-DichloropthaneND0.02210.0t-1,3-DichloropthaneND0.02310.0t-1,3-DichloropthaneND0.02410.0t-1,3-DichloropthaneND0.02510.0t-1,3-DichloropthaneND0.02510.0	1,1-Dichloroethane		ND	C	0.020	10.0		
Dichlorotetrafluoroethane         ND         0.14         10.0           1,2-Dichlorobenzene         ND         0.030         10.0           1,2-Dichloroethane         ND         0.020         10.0           1,2-Dichloropopane         ND         0.023         10.0           1,3-Dichlorobenzene         ND         0.030         10.0           1,4-Dichlorobenzene         ND         0.030         10.0           1,4-Dichlorobenzene         ND         0.030         10.0           c-1,3-Dichloropopane         ND         0.023         10.0           c-1,3-Dichloropopane         ND         0.023         10.0           c-1,3-Dichloropopane         ND         0.023         10.0           c-1,2-Dichloropopane         ND         0.020         10.0           t-1,2-Dichloroptopene         ND         0.020         10.0           t-1,3-Dichloroptopene         ND         0.045         10.0           t-1,3-Dichloroptopene         ND         0.084         10.0           t-thyltenre         0.26         0.022         10.0	1,1-Dichloroethene		ND	C	0.020	10.0		
1,2-DichlorobenzeneND0.03010.01,2-DichloroethaneND0.02010.01,2-DichloropropaneND0.02310.01,3-DichlorobenzeneND0.03010.01,4-DichloropropaneND0.03010.0c-1,3-DichloropropeneND0.02310.0c-1,2-DichloroetheneND0.02310.0t-1,2-DichloroetheneND0.02010.0t-1,3-DichloropropeneND0.02010.0t-1,3-DichloropropeneND0.04510.0t-1,3-DichloropropeneND0.04510.0t-1,3-DichloropropeneND0.04510.0t-1,3-DichloropropeneND0.02110.0t-1,3-DichloropropeneND0.04510.0t-1,3-DichloropropeneND0.08410.0t-1,3-DichloropropeneND0.02210.0t-1,3-DichloropropeneND0.02510.0	1,2-Dibromoethane		ND	C	0.038	10.0		
1,2-DichloroethaneND0.02010.01,2-DichloropropaneND0.02310.01,3-DichlorobenzeneND0.03010.01,4-DichlorobenzeneND0.03010.0c-1,3-DichloropropeneND0.02310.0c-1,2-DichloroetheneND0.02010.0t-1,2-DichloroetheneND0.02010.0t-1,2-DichloropropeneND0.02010.0t-1,2-DichloropropeneND0.04510.0t-1,3-DichloropropeneND0.04510.0t-1,3-DichloropropeneND0.08410.0t-1,3-DichloropropeneND0.02210.0t-1,3-DichloropropeneND0.02510.0	Dichlorotetrafluoroethane		ND	C	).14	10.0		
1,2-DichloropropaneND0.02310.01,3-DichlorobenzeneND0.03010.01,4-DichlorobenzeneND0.03010.0c-1,3-DichloropropeneND0.02310.0c-1,2-DichloroetheneND0.02010.0t-1,2-DichloropropeneND0.02010.0t-1,3-DichloropropeneND0.02010.0t-1,2-DichloropropeneND0.04510.0t-1,3-DichloropropeneND0.04510.0t-1,3-DichloropropeneND0.08410.0t-t,3-DichloropropeneND0.02210.0t-t,4-Butyl Ether (ETBE)ND0.02510.0	1,2-Dichlorobenzene		ND	C	0.030	10.0		
1,3-DichlorobenzeneND0.03010.01,4-DichlorobenzeneND0.03010.0c-1,3-DichloropropeneND0.02310.0c-1,2-DichloroetheneND0.02010.0t-1,2-DichloroetheneND0.02010.0t-1,3-DichloropropeneND0.02010.0t-1,3-DichloropropeneND0.04510.0t-1,3-DichloropropeneND0.04510.0t-t,4-Butyl Ether (ETBE)ND0.08410.0Ethyl-t-Butyl Ether (ETBE)0.260.02210.04-EthyltolueneND0.02510.0	1,2-Dichloroethane		ND	C	0.020	10.0		
1,4-DichlorobenzeneND0.03010.0c-1,3-DichloropropeneND0.02310.0c-1,2-DichloroetheneND0.02010.0t-1,2-DichloroetheneND0.02010.0t-1,3-DichloropropeneND0.04510.0t-1,3-DichloropropeneND0.04510.0t-t,3-DichloropropeneND0.08410.0Ethyl-t-Butyl Ether (ETBE)0.260.02210.04-EthyltolueneND0.02510.0	1,2-Dichloropropane		ND	C	0.023	10.0		
c-1,3-Dichloropropene       ND       0.023       10.0         c-1,2-Dichloroethene       ND       0.020       10.0         t-1,2-Dichloroethene       ND       0.020       10.0         t-1,3-Dichloropropene       ND       0.045       10.0         t-1,3-Dichloropropene       ND       0.045       10.0         Ethyl-t-Butyl Ether (ETBE)       ND       0.084       10.0         Ethylbenzene       0.260       0.022       10.0         4-Ethyltoluene       ND       0.025       10.0	1,3-Dichlorobenzene		ND	(	0.030	10.0		
c-1,2-Dichloroethene       ND       0.020       10.0         t-1,2-Dichloroethene       ND       0.020       10.0         t-1,3-Dichloropropene       ND       0.045       10.0         Ethyl-t-Butyl Ether (ETBE)       ND       0.084       10.0         Ethylbenzene       0.260       0.022       10.0         4-Ethyltoluene       ND       0.025       10.0	1,4-Dichlorobenzene		ND	(	0.030	10.0		
t-1,2-Dichloroethene       ND       0.020       10.0         t-1,3-Dichloropropene       ND       0.045       10.0         Ethyl-t-Butyl Ether (ETBE)       ND       0.084       10.0         Ethylbenzene       0.260       0.022       10.0         4-Ethyltoluene       ND       0.025       10.0	c-1,3-Dichloropropene		ND	(	0.023	10.0		
t-1,3-DichloropropeneND0.04510.0Ethyl-t-Butyl Ether (ETBE)ND0.08410.0Ethylbenzene0.260.02210.04-EthyltolueneND0.02510.0	c-1,2-Dichloroethene		ND	(	0.020	10.0		
Ethyl-t-Butyl Ether (ETBE)ND0.08410.0Ethylbenzene0.260.02210.04-EthyltolueneND0.02510.0	t-1,2-Dichloroethene		ND	(	0.020	10.0		
Ethylbenzene         0.26         0.022         10.0           4-Ethyltoluene         ND         0.025         10.0	t-1,3-Dichloropropene		ND	(	0.045	10.0		
4-Ethyltoluene ND 0.025 10.0			ND	(	0.084	10.0		
,	Ethylbenzene		0.26	(	0.022	10.0		
	4-Ethyltoluene		ND	(	0.025	10.0		
	-		ND	(	0.16	10.0		
2-Hexanone ND 0.061 10.0	2-Hexanone		ND	(	0.061	10.0		

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### **Analytical Report**

Cardno ERI	Dat	e Received:		08/20/14		
601 North McDowell Blvd.	Wo	Work Order:				
Petaluma, CA 94954-2312	Pre	paration:		14-08-1447 N/A		
relaidina, CA 34334-2312		thod:		EPA TO-15M		
	Uni			mg/m3		
Project: ExxonMobil 99105/022783C	Uni	15.		Page 4 of 10		
Parameter	Result	<u>RL</u>	DF	<u>Qualifiers</u>		
Methyl-t-Butyl Ether (MTBE)	ND	0.072	10.0			
Methylene Chloride	ND	0.17	10.0			
4-Methyl-2-Pentanone	ND	0.061	10.0			
Naphthalene	ND	0.26	10.0			
o-Xylene	0.083	0.022	10.0			
p/m-Xylene	0.23	0.087	10.0			
Xylenes (total)	0.31	0.022	1.00			
Styrene	ND	0.064	10.0			
Tert-Amyl-Methyl Ether (TAME)	ND	0.084	10.0			
Tert-Butyl Alcohol (TBA)	ND	0.15	10.0			
Tetrachloroethene	ND	0.034	10.0			
Toluene	ND	0.19	10.0			
Trichloroethene	ND	0.027	10.0			
Trichlorofluoromethane	ND	0.056	10.0			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.11	10.0			
1,1,1-Trichloroethane	ND	0.027	10.0			
1,1,2-Trichloroethane	ND	0.027	10.0			
1,3,5-Trimethylbenzene	ND	0.025	10.0			
1,1,2,2-Tetrachloroethane	ND	0.069	10.0			
1,2,4-Trimethylbenzene	ND	0.074	10.0			
1,2,4-Trichlorobenzene	ND	0.15	10.0			
Vinyl Acetate	ND	0.070	10.0			
Vinyl Chloride	ND	0.013	10.0			
Surrogate	<u>Rec. (%)</u>	Control Limits	<u>Qualifiers</u>			
1,4-Bromofluorobenzene	107	57-129				
1,2-Dichloroethane-d4	85	47-137				
Toluene-d8	75	78-156	AZ			



Cardno ERI	Date Received:	08/20/14
601 North McDowell Blvd.	Work Order:	14-08-1447
Petaluma, CA 94954-2312	Preparation:	N/A
	Method:	EPA TO-15M
	Units:	mg/m3
Project: ExxonMobil 99105/022783C		Page 5 of 10
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V-EFF-1	14-08-1447-3-A	08/18/14 20:30	Air	GC/MS II	N/A	08/20/14 17:34	140820L01
Comment(s): - The method has been	n modified to use Tedlar	Bags instead o	f Summa ca	nisters and is no	t NY NELAC ac	credited.	
Parameter		<u>Result</u>	E	<u> </u>	<u>DF</u>	Qua	lifiers
Acetone		ND	(	).12	1.00		
Benzene		0.0052	(	0.0016	1.00		
Benzyl Chloride		ND	(	).0078	1.00		
Bromodichloromethane		ND	(	0.0034	1.00		
Bromoform		ND	(	0.0052	1.00		
Bromomethane		ND	C	0.0019	1.00		
2-Butanone		ND	(	0.0044	1.00		
Carbon Disulfide		ND	C	0.031	1.00		
Carbon Tetrachloride		ND	C	0.0031	1.00		
Chlorobenzene		ND	C	0.0023	1.00		
Chloroethane		ND	(	).0013	1.00		
Chloroform		ND	(	).0024	1.00		
Chloromethane		0.0011	(	0.0010	1.00		
Dibromochloromethane		ND	(	0.0043	1.00		
Dichlorodifluoromethane		ND	(	0.0025	1.00		
Diisopropyl Ether (DIPE)		ND	(	0.0084	1.00		
1,1-Dichloroethane		ND	(	0.0020	1.00		
1,1-Dichloroethene		ND	(	0.0020	1.00		
1,2-Dibromoethane		ND	(	0.0038	1.00		
Dichlorotetrafluoroethane		ND	(	0.014	1.00		
1,2-Dichlorobenzene		ND	(	0.0030	1.00		
1,2-Dichloroethane		ND	(	0.0020	1.00		
1,2-Dichloropropane		ND	(	0.0023	1.00		
1,3-Dichlorobenzene		ND	(	0.0030	1.00		
1,4-Dichlorobenzene		ND	(	0.0030	1.00		
c-1,3-Dichloropropene		ND	(	0.0023	1.00		
c-1,2-Dichloroethene		ND	(	0.0020	1.00		
t-1,2-Dichloroethene		ND	(	0.0020	1.00		
t-1,3-Dichloropropene		ND		0.0045	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND	(	0.0084	1.00		
Ethylbenzene		ND		0.0022	1.00		
4-Ethyltoluene		ND		0.0025	1.00		
Hexachloro-1,3-Butadiene		ND		0.016	1.00		
2-Hexanone		ND		0.0061	1.00		



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Cardno ERI	Da	ate Received:		08/20/14
601 North McDowell Blvd.	W	ork Order:	14-08-1447	
Petaluma, CA 94954-2312	Pr	reparation:		N/A
		ethod:		EPA TO-15M
		nits:		mg/m3
Project: ExxonMobil 99105/022783C				Page 6 of 10
Parameter	Result	<u>RL</u>	DF	Qualifiers
Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1.00	
Methylene Chloride	ND	0.017	1.00	
4-Methyl-2-Pentanone	ND	0.0061	1.00	
Naphthalene	ND	0.026	1.00	
o-Xylene	ND	0.0022	1.00	
p/m-Xylene	ND	0.0087	1.00	
Xylenes (total)	ND	0.0022	1.00	
Styrene	ND	0.0064	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0084	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.015	1.00	
Tetrachloroethene	ND	0.0034	1.00	
Toluene	ND	0.019	1.00	
Trichloroethene	ND	0.0027	1.00	
Trichlorofluoromethane	ND	0.0056	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.011	1.00	
1,1,1-Trichloroethane	ND	0.0027	1.00	
1,1,2-Trichloroethane	ND	0.0027	1.00	
1,3,5-Trimethylbenzene	ND	0.0025	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0069	1.00	
1,2,4-Trimethylbenzene	ND	0.0074	1.00	
1,2,4-Trichlorobenzene	ND	0.015	1.00	
Vinyl Acetate	ND	0.0070	1.00	
Vinyl Chloride	ND	0.0013	1.00	
Surrogate	<u>Rec. (%)</u>	Control Limits	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	98	57-129		
1,2-Dichloroethane-d4	103	47-137		
Toluene-d8	97	78-156		

Calscience

Cardno ERI	Date Received:	08/20/14
601 North McDowell Blvd.	Work Order:	14-08-1447
Petaluma, CA 94954-2312	Preparation:	N/A
	Method:	EPA TO-15M
	Units:	mg/m3
Project: ExxonMobil 99105/022783C		Page 7 of 10

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	099-12-981-4659	N/A	Air	GC/MS II	N/A	08/20/14 16:44	140820L01
Parameter		Result	RL		DF	Qua	lifiers
Acetone		ND		0.12	1.00		
Benzene		ND		0.0016	1.00		
Benzyl Chloride		ND		0.0078	1.00		
Bromodichloromethane		ND		0.0034	1.00		
Bromoform		ND		0.0052	1.00		
Bromomethane		ND		0.0019	1.00		
2-Butanone		ND		0.0044	1.00		
Carbon Disulfide		ND		0.031	1.00		
Carbon Tetrachloride		ND		0.0031	1.00		
Chlorobenzene		ND		0.0023	1.00		
Chloroethane		ND		0.0013	1.00		
Chloroform		ND		0.0024	1.00		
Chloromethane		ND		0.0010	1.00		
Dibromochloromethane		ND		0.0043	1.00		
Dichlorodifluoromethane		ND		0.0025	1.00		
Diisopropyl Ether (DIPE)		ND		0.0084	1.00		
1,1-Dichloroethane		ND		0.0020	1.00		
1,1-Dichloroethene		ND		0.0020	1.00		
1,2-Dibromoethane		ND		0.0038	1.00		
Dichlorotetrafluoroethane		ND		0.014	1.00		
1,2-Dichlorobenzene		ND		0.0030	1.00		
1,2-Dichloroethane		ND		0.0020	1.00		
1,2-Dichloropropane		ND		0.0023	1.00		
1,3-Dichlorobenzene		ND		0.0030	1.00		
1,4-Dichlorobenzene		ND		0.0030	1.00		
c-1,3-Dichloropropene		ND		0.0023	1.00		
c-1,2-Dichloroethene		ND		0.0020	1.00		
t-1,2-Dichloroethene		ND		0.0020	1.00		
t-1,3-Dichloropropene		ND		0.0045	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND		0.0084	1.00		
Ethylbenzene		ND		0.0022	1.00		
4-Ethyltoluene		ND		0.0025	1.00		
Hexachloro-1,3-Butadiene		ND		0.016	1.00		
2-Hexanone		ND		0.0061	1.00		
Methyl-t-Butyl Ether (MTBE)		ND		0.0072	1.00		

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Cardno ERI	Dat	e Received:		08/20/14
601 North McDowell Blvd.	Wo	rk Order:		14-08-1447
Petaluma, CA 94954-2312	Pre	paration:		N/A
		thod:		EPA TO-15M
	Uni			mg/m3
Project: ExxonMobil 99105/022783C	UII	13.		Page 8 of 10
¢				
Parameter	<u>Result</u>	RL	DF	Qualifiers
Methylene Chloride	ND	0.017	1.00	
4-Methyl-2-Pentanone	ND	0.0061	1.00	
Naphthalene	ND	0.026	1.00	
o-Xylene	ND	0.0022	1.00	
p/m-Xylene	ND	0.0087	1.00	
Xylenes (total)	ND	0.0022	1.00	
Styrene	ND	0.0064	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0084	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.015	1.00	
Tetrachloroethene	ND	0.0034	1.00	
Toluene	ND	0.019	1.00	
Trichloroethene	ND	0.0027	1.00	
Trichlorofluoromethane	ND	0.0056	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.011	1.00	
1,1,1-Trichloroethane	ND	0.0027	1.00	
1,1,2-Trichloroethane	ND	0.0027	1.00	
1,3,5-Trimethylbenzene	ND	0.0025	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0069	1.00	
1,2,4-Trimethylbenzene	ND	0.0074	1.00	
1,2,4-Trichlorobenzene	ND	0.015	1.00	
Vinyl Acetate	ND	0.0070	1.00	
Vinyl Chloride	ND	0.0013	1.00	
Surrogate	<u>Rec. (%)</u>	Control Limits	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	95	57-129		
1,2-Dichloroethane-d4	109	47-137		
Toluene-d8	96	<b>78-1</b> 56		

Calscience

Cardno ERI	Date Received:	08/20/14
601 North McDowell Blvd.	Work Order:	14-08-1447
Petaluma, CA 94954-2312	Preparation:	N/A
	Method:	EPA TO-15M
	Units:	mg/m3
Project: ExxonMobil 99105/022783C		Page 9 of 10

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-981-4660	N/A	Air	GC/MS KKK	N/A	08/21/14 02:55	140820L01
Parameter		Result	<u></u>		DF	Qua	lifiers
Acetone		ND		0.12	1.00		
Benzene		ND		0.0016	1.00		
Benzyl Chloride		ND		0.0078	1.00		
Bromodichloromethane		ND		0.0034	1.00		
Bromoform		ND		0.0052	1.00		
Bromomethane		ND		0.0019	1.00		
2-Butanone		ND		0.0044	1.00		
Carbon Disulfide		ND		0.031	1.00		
Carbon Tetrachloride		ND		0.0031	1.00		
Chlorobenzene		ND		0.0023	1.00		
Chloroethane		ND		0.0013	1.00		
Chloroform		ND		0.0024	1.00		
Chloromethane		ND		0.0010	1.00		
Dibromochloromethane		ND		0.0043	1.00		
Dichlorodifluoromethane		ND		0.0025	1.00		
Diisopropyl Ether (DIPE)		ND		0.0084	1.00		
1,1-Dichloroethane		ND		0.0020	1.00		
1,1-Dichloroethene		ND		0.0020	1.00		
1,2-Dibromoethane		ND		0.0038	1.00		
Dichlorotetrafluoroethane		ND		0.014	1.00		
1,2-Dichlorobenzene		ND		0.0030	1.00		
1,2-Dichloroethane		ND		0.0020	1.00		
1,2-Dichloropropane		ND		0.0023	1.00		
1,3-Dichlorobenzene		ND		0.0030	1.00		
1,4-Dichlorobenzene		ND		0.0030	1.00		
c-1,3-Dichloropropene		ND		0.0023	1.00		
c-1,2-Dichloroethene		ND		0.0020	1.00		
t-1,2-Dichloroethene		ND		0.0020	1.00		
t-1,3-Dichloropropene		ND		0.0045	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND		0.0084	1.00		
Ethylbenzene		ND		0.0022	1.00		
4-Ethyltoluene		ND		0.0025	1.00		
Hexachloro-1,3-Butadiene		ND		0.016	1.00		
2-Hexanone		ND		0.0061	1.00		
Methyl-t-Butyl Ether (MTBE)		ND		0.0072	1.00		

Calscience

Cardno ERI	Dat	e Received:		08/20/14
601 North McDowell Blvd.				14-08-1447
				N/A
Petaluma, CA 94954-2312		paration:		
		thod:		EPA TO-15M
	Uni	ts:		mg/m3
Project: ExxonMobil 99105/022783C				Page 10 of 10
Parameter	Result	RL	DF	Qualifiers
Methylene Chloride	ND	0.017	1.00	
4-Methyl-2-Pentanone	ND	0.0061	1.00	
Naphthalene	ND	0.026	1.00	
o-Xylene	ND	0.0022	1.00	
p/m-Xylene	ND	0.0087	1.00	
Xylenes (total)	ND	0.0022	1.00	
Styrene	ND	0.0064	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0084	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.015	1.00	
Tetrachloroethene	ND	0.0034	1.00	
Toluene	ND	0.019	1.00	
Trichloroethene	ND	0.0027	1.00	
Trichlorofluoromethane	ND	0.0056	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.011	1.00	
1,1,1-Trichloroethane	ND	0.0027	1.00	
1,1,2-Trichloroethane	ND	0.0027	1.00	
1,3,5-Trimethylbenzene	ND	0.0025	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0069	1.00	
1,2,4-Trimethylbenzene	ND	0.0074	1.00	
1,2,4-Trichlorobenzene	ND	0.015	1.00	
Vinyl Acetate	ND	0.0070	1.00	
Vinyl Chloride	ND	0.0013	1.00	
Surrogate	<u>Rec. (%)</u>	Control Limits	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	99	57-129		
1,2-Dichloroethane-d4	104	47-137		
Toluene-d8	101	78-156		

Calscience

## **Analytical Report**

Cardno ERI	Date Received:						08/20/14
601 North McDowell Blvd.				er:			14-08-1447
Petaluma, CA 94954-2312			Preparatio	on:			N/A
			Method:				EPA TO-3N
			Units:				mg/m3
Project: ExxonMobil 99105/022	783C					Pa	age 1 of 1
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V-INF-MW6-2	14-08-1447-1-A	08/18/14 19:35	Air	GC 60	N/A	08/20/14 13:49	140820L01
Parameter		Result	E	<u>RL</u>	DF	Qui	alifiers
TPH as Gasoline		2000	1	7	2.50		
V-INF-COMP-1	14-08-1447-2-A	08/18/14 20:35	Air	GC 60	N/A	08/20/14 12:18	140820L01
Parameter		<u>Result</u>	Ē	<u>RL</u>	DE	Qualifiers	
TPH as Gasoline		250	7	7.0	1.00		
V-EFF-1	14-08-1447-3-A	08/18/14 20:30	Air	GC 60	N/A	08/20/14 11:43	140820L01
Parameter		Result	Ē	<u>RL</u>	DF	Qui	alifiers
TPH as Gasoline		22	7	7.0	1.00		
Method Blank	098-01-005-5749	N/A	Air	GC 60	N/A	08/20/14 09:50	140820L01
Parameter		Result	E	<u> </u>	DF	Qu	alifiers
TPH as Gasoline		ND	7	7.0	1.00		

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## **Quality Control - Sample Duplicate**

Cardno ERI		Date Received		08/20/14		
601 North McDowell Blvd. Work Order:						14-08-1447
Petaluma, CA 94954-231	2		Preparation:		N/A	
			Method:			EPA TO-3M
Project: ExxonMobil 99105/022783C						Page 1 of 1
Quality Control Sample ID	Туре	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
V-INE-MW6-2	Sample	Air	GC 60	N/A	08/20/14 13:49	140820D01

V-114F-141440-2	Sample	Au	00.00	IN/A	00/20/14 13.45 1	40020001	1000
V-INF-MW6-2 Sample Duplicate		Air	GC 60	N/A	08/20/14 14:01 1	40820D01	
Parameter		Sample Conc.	DUP Conc.	RPD	RPD_CL	<u>Qualifiers</u>	
TPH as Gasoline		1987	1969	1	0-20		

RPD: Relative Percent Difference. CL: Control Limits

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Cardno ERI	Date Received:	08/20/14
601 North McDowell Blvd.	Work Order:	14-08-1447
Petaluma, CA 94954-2312	Preparation:	N/A
	Method:	EPA TO-15M
Project: ExxonMobil 99105/022783C		Page 1 of 5

#### Project: ExxonMobil 99105/022783C

Quality Control Sample ID	Туре		Matrix	Instru	ument	Date Prepare	ed Date A	nalyzed	LCS/LCSD Batch Number		
099-12-981-4659	LCS	700 x // " *	Air	GC/N	AS II	N/A	08/20/	14 14:12	140820L01	201 - 7 IV	
099-12-981-4659	LCSD		Air	GC/N	AS II	N/A	08/20/	14 15:03	140820L01		
Parameter	<u>Spike</u> Added	LCS Conc.	LCS %Rec.	LCSD Conc.	<u>LCSD</u> <u>%Rec.</u>	<u>%Rec. CL</u>	ME CL	<u>RPD</u>	RPD CL	Qualifiers	
Acetone	0.05939	0.05961	100	0.05601	94	50-150	33-167	6	0-35		
Benzene	0.07987	0.08996	113	0.09041	113	60-156	44-172	0	0-40		
Benzyl Chloride	0.1294	0.1644	127	0.1618	125	50-150	33-167	2	0-35		
Bromodichloromethane	0.1675	0.1800	107	0.1815	108	50-150	33-167	1	0-35		
Bromoform	0.2584	0.3138	121	0.3074	119	50-150	33-167	2	0-38		
Bromomethane	0.09708	0.09476	98	0.09222	95	50-150	33-167	3	0-35		
2-Butanone	0.07373	0.07814	106	0.07874	107	50-150	33-167	1	0-35		
Carbon Disulfide	0.07785	0.07688	99	0.07715	99	50-150	33-167	0	0-35		
Carbon Tetrachloride	0.1573	0.1650	105	0.1671	106	64-154	49-169	1	0-32		
Chlorobenzene	0.1151	0.1370	119	0.1338	116	50-150	33-167	2	0-35		
Chloroethane	0.06596	0.06484	98	0.06254	95	50-150	33-167	4	0-35		
Chloroform	0.1221	0.1192	98	0.1202	98	50-150	33-167	1	0-35		
Chloromethane	0.05163	0.05052	98	0.04976	96	50-150	33-167	2	0-35		
Dibromochloromethane	0.2130	0.2577	121	0.2533	119	50-150	33-167	2	0-35		
Dichlorodifluoromethane	0.1236	0.1182	96	0.1206	98	50-150	33-167	2	0-35		
Diisopropyl Ether (DIPE)	0.1045	0.1034	99	0.1050	100	60-140	47-153	1	0-30		
1,1-Dichloroethane	0.1012	0.1020	101	0.1019	101	50-150	33-167	0	0-35		
1,1-Dichloroethene	0.09912	0.09955	100	0.09399	95	50-150	33-167	6	0-35		
1,2-Dibromoethane	0.1921	0.2415	126	0.2365	123	54-144	39-159	2	0-36		
Dichlorotetrafluoroethane	0.1748	0.1689	97	0.1659	95	50-150	33-167	2	0-35		
1,2-Dichlorobenzene	0.1503	0.1798	120	0.1770	118	34-160	13-181	2	0-47		
1,2-Dichloroethane	0.1012	0.1034	102	0.1039	103	69-153	55-167	0	0-35		
1,2-Dichloropropane	0.1155	0.1264	109	0.1274	110	67-157	52-172	1	0-35		
1,3-Dichlorobenzene	0.1503	0.1857	124	0.1823	121	50-150	33-167	2	0-35		
1,4-Dichlorobenzene	0.1503	0.1894	126	0.1856	124	36-156	16-176	2	0-47		
c-1,3-Dichloropropene	0.1135	0.1392	123	0.1397	123	61-157	45-173	0	0-35		
c-1,2-Dichloroethene	0.09912	0.1074	108	0.1080	109	50-150	33-167	1	0-35		
t-1,2-Dichloroethene	0.09912	0.1046	106	0.1044	105	50-150	33-167	0	0-35		
t-1,3-Dichloropropene	0.1135	0.1464	129	0.1465	129	50-150	33-167	0	0-35		
Ethyl-t-Butyl Ether (ETBE)	0.1045	0.1091	104	0.1099	105	60-140	47-153	1	0-30		
Ethylbenzene	0.1086	0.1435	132	0.1404	129	52-154	35-171	2	0-38		
4-Ethyltoluene	0.1229	0.1603	130	0.1572	128	50-150	33-167	2	0-35		
Hexachloro-1,3-Butadiene	0.2666	0.2723	102	0.2662	100	50-150	33-167	2	0-35		
2-Hexanone	0.1024	0.1208	118	0.1177	115	50-150	33-167	3	0-35		
Methyl-t-Butyl Ether (MTBE)	0.09013	0.09479	105	0.09483	105	50-150	33-167	0	0-35		
Methylene Chloride	0.08684	0.08019	92	0.07730	89	50-150	33-167	4	0-35		

RPD: Relative Percent Difference. **CL: Control Limits** 

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				- Della	Dession	12				00/20/44			
Cardno ERI					Receive	d:				08/20/14			
601 North McDowell Blvd.				Work	Order:				14-08-1447				
Petaluma, CA 94954-2312		Preparation:											
				Meth	od:				EP	A TO-15M			
Project: ExxonMobil 99105/								Page	2 of 5				
<u>Parameter</u>	<u>Spike</u> Added	LCS Conc.	<u>LCS</u> %Rec.	LCSD Conc.	LCSD %Rec.	<u>%Rec. CL</u>	ME CL	RPD	RPD CL	Qualifiers			
4-Methyl-2-Pentanone	0.1024	0.1109	108	0.1113	109	50-150	33-167	0	0-35				
Naphthalene	0.1311	0.1455	111	0.1452	111	40-190	15-215	0	0-30				
o-Xylene	0.1086	0.1357	125	0.1337	123	52-148	36-164	1	0-38				
p/m-Xylene	0.2171	0.2771	128	0.2697	124	42-156	23-175	3	0-41				
Styrene	0.1065	0.1355	127	0.1326	124	50-150	33-167	2	0-35				
Tert-Amyl-Methyl Ether (TAME)	0.1045	0.1167	112	0.1170	112	60-140	47-153	0	0-30				
Tert-Butyl Alcohol (TBA)	0.1516	0.1607	106	0.1339	88	60-140	47-153	18	0-30				
Tetrachloroethene	0.1696	0.2028	120	0.1999	118	56-152	40-168	1	0-40				
Toluene	0.09421	0.1164	124	0.1143	121	56-146	41-161	2	0-43				
Trichloroethene	0.1343	0.1517	113	0.1527	114	63-159	47-175	1	0-34				
Trichlorofluoromethane	0.1405	0.1400	100	0.1270	90	50-150	33-167	10	0-35				
1,1,2-Trichloro-1,2,2- Trifluoroethane	0.1916	0.1928	101	0.1942	101	50-150	33-167	1	0-35				
1,1,1-Trichloroethane	0.1364	0.1373	101	0.1379	101	50-150	33-167	0	0-35				
1,1,2-Trichloroethane	0.1364	0.1494	110	0.1493	109	65-149	51-163	0	0-37				
1,3,5-Trimethylbenzene	0.1229	0.1528	124	0.1506	123	50-150	33-167	1	0-35				
1,1,2,2-Tetrachloroethane	0.1716	0.2017	118	0.1996	116	50-150	33-167	1	0-35				
1,2,4-Trimethylbenzene	0.1229	0.1448	118	0.1417	<b>1</b> 15	50-150	33-167	2	0-35				
1,2,4-Trichlorobenzene	0.1855	0.2220	120	0.2197	<b>1</b> 18	50-150	33-167	1	0-35				
Vinyl Acetate	0.08803	0.09447	107	0.09465	108	50-150	33-167	0	0-35				
Vinyl Chloride	0.06391	0.06243	98	0.06181	97	45-177	23-199	1	0-36				

Total number of LCS compounds: 56

Total number of ME compounds: 0 Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

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Cardno ERI	Date Received:	08/20/14
601 North McDowell Blvd.	Work Order:	14-08-1447
Petaluma, CA 94954-2312	Preparation:	N/A
	Method:	EPA TO-15M
Project: ExxonMobil 99105/022783C		Page 3 of 5

#### 01 99105/0227630 TOJE

Quality Control Sample ID	Туре		Matrix	Instru	ument	Date Prepare	d Date A	nalyzed	LCS/LCSD Batch Number		
099-12-981-4660	LCS	Contraction of	Air	GC/M	IS KKK	N/A	08/20/	14 23:33	140820L01		
099-12-981-4660	LCSD		Air	GC/M	NS KKK	N/A	08/21/	14 00:24	140820L01	<u>, 1981 - 3</u>	
Parameter	<u>Spike</u> Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	<u>%Rec. CL</u>	ME CL	<u>RPD</u>	RPD CL	<u>Qualifiers</u>	
Acetone	0.05939	0.05859	99	0.05417	91	50-150	33-167	8	0-35		
Benzene	0.07987	0.08406	105	0.07616	95	60-156	44-172	10	0-40		
Benzyl Chloride	0.1294	0.1203	93	0.1107	86	50-150	33-167	8	0-35		
Bromodichloromethane	0.1675	0.1742	104	0.1604	96	50-150	33-167	8	0-35		
Bromoform	0.2584	0.2995	116	0.2780	108	50-150	33-167	7	0-38		
Bromomethane	0.09708	0.08950	92	0.08553	88	50-150	33-167	5	0-35		
2-Butanone	0.07373	0.07471	101	0.06927	94	50-150	33-167	8	0-35		
Carbon Disulfide	0.07785	0.08085	104	0.07556	97	50-150	33-167	7	0-35		
Carbon Tetrachloride	0.1573	0.1658	105	0.1505	96	64-154	49-169	10	0-32		
Chlorobenzene	0.1151	0.1157	101	0.1071	93	50-150	33-167	8	0-35		
Chloroethane	0.06596	0.05819	88	0.05481	83	50-150	33-167	6	0-35		
Chloroform	0.1221	0.1170	96	0.1097	90	50-150	33-167	6	0-35		
Chloromethane	0.05163	0.04598	89	0.05076	98	50-150	33-167	10	0-35		
Dibromochloromethane	0.2130	0.2283	107	0.2101	99	50-150	33-167	8	0-35		
Dichlorodifluoromethane	0.1236	0.1095	89	0.1047	85	50-150	33-167	4	0-35		
Diisopropyl Ether (DIPE)	0.1045	0.09254	89	0.08813	84	60-140	47-153	5	0-30		
1,1-Dichloroethane	0.1012	0.1014	100	0.09299	92	50-150	33-167	9	0-35		
1,1-Dichloroethene	0.09912	0.1006	101	0.09290	94	50-150	33-167	8	0-35		
1,2-Dibromoethane	0.1921	0.2023	105	0.1858	97	54-144	39-159	8	0-36		
Dichlorotetrafluoroethane	0.1748	0.1251	72	0.1240	71	50-150	33-167	1	0-35		
1,2-Dichlorobenzene	0.1503	0.1311	87	0.1194	79	34-160	13-181	9	0-47		
1,2-Dichloroethane	0.1012	0.09815	97	0.09143	90	69-153	55-167	7	0-35		
1,2-Dichloropropane	0.1155	0.1195	103	0.1088	94	67-157	52-172	9	0-35		
1,3-Dichlorobenzene	0.1503	0.1453	97	0.1331	89	50-150	33-167	9	0-35		
1,4-Dichlorobenzene	0.1503	0.1420	94	0.1301	87	36-156	<b>16-1</b> 76	9	0-47		
c-1,3-Dichloropropene	0.1135	0.1225	108	0.1117	98	61-157	45-173	9	0-35		
c-1,2-Dichloroethene	0.09912	0.09857	99	0.09007	91	50-150	33-167	9	0-35		
t-1,2-Dichloroethene	0.09912	0.09543	96	0.08682	88	50-150	33-167	9	0-35		
t-1,3-Dichloropropene	0.1135	0.1326	117	0.1214	107	50-150	33-167	9	0-35		
Ethyl-t-Butyl Ether (ETBE)	0.1045	0.09477	91	0.08833	85	60-140	47-153	7	0-30		
Ethylbenzene	0.1086	0.1126	104	0.1039	96	52-154	35-171	8	0-38		
4-Ethyltoluene	0.1229	0.1245	101	0.1155	94	50-150	33-167	7	0-35		
Hexachloro-1,3-Butadiene	0.2666	0.3379	127	0.2970	111	50-150	33-167	13	0-35		
2-Hexanone	0.1024	0.1073	105	0.09935	97	50-150	33-167	8	0-35		
Methyl-t-Butyl Ether (MTBE)	0.09013	0.08936	99	0.08258	92	50-150	33-167	8	0-35		
Methylene Chloride	0.08684	0.08078	93	0.07426	86	50-150	33-167	8	0-35		

RPD: Relative Percent Difference. CL: Control Limits

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In														
Cardno ERI				Date	Receive	d:				08/20/14				
601 North McDowell Blvd.				Work	Order:				1	4-08-1447				
Petaluma, CA 94954-2312				Prep	aration:					N/A				
				Meth	od:				EPA TO-15M					
Project: ExxonMobil 99105/	022783C								Page	4 of 5				
								_						
Parameter	<u>Spike</u> Added	LCS Conc.	LCS %Rec.	<u>LCSD</u> Conc.	<u>LCSD</u> %Rec.	<u>%Rec. CL</u>	ME CL	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>				
4-Methyl-2-Pentanone	0.1024	0.1072	105	0.09930	97	50-150	33-167	8	0-35					
Naphthalene	0.1311	0.1416	108	0.1201	92	40-190	15-215	16	0-30					
o-Xylene	0.1086	0.1109	102	0.1040	96	52-148	36-164	6	0-38					
p/m-Xylene	0.2171	0.2326	107	0.2186	101	42-156	23-175	6	0-41					
Styrene	0.1065	0.1013	95	0.09327	88	50-150	33-167	8	0-35					
Tert-Amyl-Methyl Ether (TAME)	0.1045	0.09557	91	0.08730	84	60-140	47-153	9	0-30					
Tert-Butyl Alcohol (TBA)	0.1516	0.1519	100	0.1410	93	60-140	47-153	7	0-30					
Tetrachloroethene	0.1696	0.1847	109	0.1685	99	56-152	40-168	9	0-40					
Toluene	0.09421	0.09847	105	0.09071	96	56-146	41-161	8	0-43					
Trichloroethene	0.1343	0.1365	102	0.1260	94	63-159	47-175	8	0-34					
Trichlorofluoromethane	0.1405	0.1332	95	0.1234	88	50-150	33-167	8	0-35					
1,1,2-Trichloro-1,2,2- Trifluoroethane	0.1916	0.2004	105	0.1875	98	50-150	33-167	7	0-35					
1,1,1-Trichloroethane	0.1364	0.1271	93	0.1184	87	50-150	33-167	7	0-35					
1,1,2-Trichloroethane	0.1364	0.1437	105	0.1322	97	65-149	51-163	8	0-37					
1,3,5-Trimethylbenzene	0.1229	0.1180	96	0.1090	89	50-150	33-167	8	0-35					
1,1,2,2-Tetrachloroethane	0.1716	0.1670	97	0.1562	91	50-150	33-167	7	0-35					
1,2,4-Trimethylbenzene	0.1229	0.1212	99	0.1129	92	50-150	33-167	7	0-35					
1,2,4-Trichlorobenzene	0.1855	0.2145	116	0.1802	97	50-150	33-167	17	0-35					
Vinyl Acetate	0.08803	0.08061	92	0.07479	85	50-150	33-167	7	0-35					
Vinyl Chloride	0.06391	0.05671	89	0.05517	86	45-177	23-199	3	0-36					

Total number of LCS compounds: 56

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

Qualifiers

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Parameter

**TPH** as Gasoline

Cardno ERI			Date Recei	ved:		08/20/14		
601 North McDowell Blvd.			Work Order	r:		14-08-1447		
Petaluma, CA 94954-2312	2		Preparation	1:		N/A		
	EPA TO-3N							
Project: ExxonMobil 9910	5/022783C					Page 5 of 5		
Quality Control Sample ID	Туре	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number		
098-01-005-5749	LCS	Air	GC 60	N/A	28 140820L01			

Spike Added

932.5

Conc. Recovered

949.0

LCS %Rec.

102

%Rec. CL

80-120

RPD: Relative Percent Difference. CL: Control Limits

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## Work Order: 14-08-1447

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<u>Qualifiers</u>	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.
В	Analyte was present in the associated method blank.
BA	The MS/MSD RPD was out of control due to suspected matrix interference.
BB	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
DF	Reporting limits elevated due to matrix interferences.
Е	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
GE	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
HD	Chromat. profile inconsistent with pattern(s) of ref. fuel stnds.
HO	High concentration matrix spike recovery out of limits
HŤ	Analytical value calculated using results from associated tests.
HX	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS was in control.
IL	Relative percent difference out of control.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
LD	Analyte presence was not confirmed by second column or GC/MS analysis.
LP	The LCS and/or LCSD recoveries for this analyte were above the upper control limit. The associated sample was non-detected. Therefore, the sample data was reported without further clarification.
LQ	LCS recovery above method control limits.
LR	LCS recovery below method control limits.
ND	Parameter not detected at the indicated reporting limit.
QO	Compound did not meet method-described identification guidelines. Identification was based on additional GC/MS characteristics.
RU	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
SG	A silica gel cleanup procedure was performed.
SN	See applicable analysis comment.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

**Glossary of Terms and Qualifiers** 

																									1	4-0	8-1	4	4	7		
Eurofins	7440	Linco	ln W	ay							Ph	ion	a: 7	14-	895	5-54	194								F	Xo	nl	M	0	h	il	
Calscience, Inc.	Gard	en Gr	ove,	CA	92	.84	1				Fa	ix:	714	-89	4-7	501										X	/					
Consultant Nar	e: Cardno El	રા									_					Ac	col	int #	: <u>N/</u>	·				P	<b>0#</b> :		Dire	:t Bil	I Ca	dno	ER	
Consultant Addre	s: 601 N Mcl	Dowell			_								_			Inv	/oic	e To	: Di	ect Bill	Car	ino E	RI									
Consultant City/State/Z	p: Petaluma,	CA 94954												_		Re	epo	rt To	: Gr	eg Gur	ss										_	
ExxonMobil Project M	r: Jennifer S	Sedlachek				_	-				_				P	oje	ct N	ame	: <u>02</u>	2783 (	x	_	_									
Consuitant Project M	r: Greg Gur	85						_				_	_	Exx	onN	lobi	il Si	te #	_		9	910	5			Major	Project	(AFE	#):	_		
Consultant Telephone Numb	er: <u>(707) 766</u>	-2000				Fax	No.:	_		_					_ s	ite /	Add	ress	: 63	01 San	Pab	lo A	/eni	10								
Sampler Name (Pri	t):	Greg Brus	ski							-	-		+	Site	Cit	y, S	tate	, Zip	: 08	kland,	CA			_					_			
Sampler Signatu	0:	1	2	*	+	OF	4	6	+	1	K,	14	1	Ov	ersi	ight	Age	ency	r: Ala	ameda	Cou	nty E	nvir	onn	enta	I Health						
		/						_	Pres	serva	ative	9	Ļ	L	1	vlatr	ix				-	-	- e	Ana	lyze i	For:		-				
Sample ID	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Methanol Sodium Bisulfate	HCI	NaOH	H <sub>2</sub> SO <sub>4</sub> Plastic H <sub>2</sub> SO <sub>4</sub> Glass	HNO3	Ice	Other None	Groundwater	Wastewater	Drinking Water	Sludge	Soll	Air Other (specify): Distilled Water			1 PHg 10-3	Ovidenator 8260B		Motor Oil by 8015B		Karosene bv 8015B		RUSH TAT (Pre-Schedule	5-day TAT	Standard 10-day TAT	Due Date of Report
V-INF-MW6-2 EVENT-IN	8/18/14	1935	1										1						1			x )	$\langle  $								X	
V-INF-COMP-1 EVENT-IN	8/18/14	2035	1										1						1			x )	<								X	
V-EFF-1 EVENT-EF	F 8/18/14	2030	1										1						1			x )	<								x	
Comments/Special Instructions: TO-15 to include Full Scan VOCs, including BT GLOBAL ID # T0600101855 Relinquished by: Greg Bruskt Relinquished by:	8/19	enates, 1,2 ate		e (	Rece	ived b	y, Jr	ne		ley		n	T		os(0 )ate 9/	Deri	-us T //		n Q Le Le	borato Temp Samp VOC: Delive vel 2 vel 3 vel 4 e Spec	erati le C Fre rable	ure ( ontai e of <u>s (pl</u> i	iner Hea Base	n Re s Inl idsp e circ	act? ace? <u>le on</u>		schules wit	Caler	Y Y	<b>b</b>	NN	
- Tor mally 7065	0 0/ 19	//4	730	2	$\mathcal{O}$	Y	the	re		-	Ē	a		0/0	-0	14		4S								c instructio						

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	<b>VebShip</b> 800-322-5555 www	
Ship From: ALAN KEMP CAL SCIENCE- CONCORD 2063 COMMERCIAL CIRCLE #H	Tracking #: 525423352	NPS
Soncord, CA 94520	ORC	Δ
SAMPLE RECEIVING		
CEL 7440 LINCOLN WAY GARDEN GROVE, CA 92841	GARDEN GROVE	
COD: \$0.00	D92845A	
Reference: CARDNO ERI, CRA, STANTEC		
Delivery instructions:		
signature Type: SIGNATURE REQUIRED		
	مده محمد «ا» » و «» ره «۱» رمم» ر» «موم» روسه ومعدم زرزم» «ر.».» «» و مرزز «» و سه استگذر و «سه مند »	Print Date : 08/19/14 14:52 PM Package 1 of 1

#### 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:

Ey giving us your shipment to deliver, you agree to all the service terms and conditions described in this section. Our lianlity 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 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		ORK ORDER		08-□	44(
	LE REC	EIPT FOR	RM	Вох	of
CLIENT: Cardno ERI			DATE:	08 /20	0/14
TEMPERATURE: Thermometer ID: SC1 (	Criteria: 0.0 °C	: – 6.0 ℃, not froze	n except se	diment/tiss	ue)
Temperature°C - 0.3°C	(CF) =	°C [	🗆 Blank	🗌 Samp	le
Sample(s) outside temperature criteria (F	M/APM contac	ted by:)			
Sample(s) outside temperature criteria but	ut received on id	ce/chilled on same d	lay of sampl	ing.	
□ Received at ambient temperature, pla	ced on ice fo	or transport by Co	ourier.		
Ambient Temperature: Air D Filte	r			Checked	by: <u>300</u>
CUSTODY SEALS INTACT:	(Net Intent)	Not Proport	□ N/A	Checked	by: <u>300</u>
	(Not Intact)	□ Not Present		Checked	
□ Sample □ □ No	(Not Intact)			Спескеа	by: <u>200</u>
SAMPLE CONDITION:			Yes	No	N/A
Chain-Of-Custody (COC) document(s) rece	eived with san	nples	.E		
COC document(s) received complete			. 🗹		
□ Collection date/time, matrix, and/or # of contain					
No analysis requested.     Not relinquished.		me relinquished.	-/	_	_
Sampler's name indicated on COC					
Sample container label(s) consistent with C					
Sample container(s) intact and good condit			/		
Proper containers and sufficient volume for					
Analyses received within holding time Aqueous samples received within 15-m			<u>م</u>		
□ pH □ Residual Chlorine □ Dissolved Su Proper preservation noted on COC or sam					Ţ.
Unpreserved vials received for Volatiles a			. –		÷
Volatile analysis container(s) free of heads	-		. 🗆		
Tedlar bag(s) free of condensation					
Solid:	J ⊡Sleeve (	) □EnCore	s® ⊡Terra	Cores® 🗆	
□500AGB □500AGJ □500AGJs □25	0AGB □250	CGB □250CGBs	s ⊡1PB	⊡1PBna	□500PB
□250PB □250PBn □125PB □125PBz	nna ⊡100PJ	□100PJ <b>na₂</b> □		[	]
Air: DTedlar <sup>®</sup> Canister Other: C Container: C: Clear A: Amber P: Plastic G: Glass J: Jar 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	Trip Blank B: Bottle Z: Ziplo	<b>c/Resealable Bag</b> E: Er	Labeled	Reviewed by	1 <u>81</u>

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# Calscience

# WORK ORDER NUMBER: 14-08-1448

## The difference is service

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AIR SOIL WATER MARINE CHEMISTRY

Analytical Report For Client: Cardno ERI Client Project Name: ExxonMobil 99105/022783C Attention: Greg Gurss 601 North McDowell Blvd. Petaluma, CA 94954-2312

Centra L. in Dung

Approved for release on 09/03/2014 by: Cecile deGuia Project Manager



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

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NELAP ID: 03220CA | ACLASS 0oD-ELAP ID: ADE-1864 (ISO/IEC 17025 2005) | CSDLAC ID: 10109 | SCAGMD ID: 93(A0830

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Client Pro Work Ord		
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4	Quality Control Sample Data	14 14 15
5	Blossary of Terms and Qualifiers	18
6	Chain-of-Custody/Sample Receipt Form.	19

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#### Work Order Narrative

#### Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 08/20/14. They were assigned to Work Order 14-08-1448.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

#### Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

#### **Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

#### Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

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

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

#### Subcontractor Information:

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

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#### Sample Summary

Client	Cardno ERI	Work Order:	14-08-1448
	601 North McDowell Blvd.	Project Name:	ExxonMobil 99105/022783C
	Petaluma, CA 94954-2312	PO Number:	022783C
		Date/Time Received:	08/20/14 09:50
		Number of Containers:	3
Attn:	Greg Gurss		

#### Number of Containers Matrix Lab Number **Collection Date and Time** Sample Identification 08/18/14 15:30 1 Air V-INF-MW5-1 14-08-1448-1 08/18/14 17:30 1 Air V-INF-MW5-2 14-08-1448-2 V-INF-MW6-1 14-08-1448-3 08/18/14 17:35 1 Air

Return to Contents

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#### **Analytical Report**

V-INF-MW5-1	14-08-1448-1-A	08/18/14 15:30	Air	GC/MS KKK	N/A	08/21/14 11:08	140820L01		
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID		
Project: ExxonMobil 99105/022	783C					Pa	ge 1 of 8		
		Units:				mg/m3			
	Method:				EPA TO-15				
601 North McDowell Blvd. Petaluma, CA 94954-2312			Preparation:				N/A		
			Work Ord	er:			14-08-1448		
Cardno ERI			Date Received:				08/20/14		

Comment(s): - The method has been modified to use Tedlar Bags instead of Summa canisters and is not NY NELAC accredited.

Comment(s): - The method has been modified to use T	Fedlar Bags instead of Su	mma canisters and is	not NY NELAC accre	dited.
Parameter	<u>Result</u>	<u>RL</u>	DF	<u>Qualifiers</u>
Acetone	ND	4.8	40.0	
Benzene	1.5	0.064	40.0	
Benzyl Chloride	ND	0.31	40.0	
Bromodichloromethane	ND	0.13	40.0	
Bromoform	ND	0.21	40.0	
Bromomethane	ND	0.078	40,0	
2-Butanone	ND	0.18	40.0	
Carbon Disulfide	ND	1.2	40.0	
Carbon Tetrachloride	ND	0.13	40.0	
Chlorobenzene	ND	0.092	40.0	
Chloroethane	ND	0.053	40.0	
Chloroform	ND	0.098	40.0	
Chloromethane	ND	0.041	40.0	
Dibromochloromethane	ND	0.17	40.0	
Dichlorodifluoromethane	ND	0,099	40.0	
Diisopropyl Ether (DIPE)	ND	0.33	40.0	
1,1-Dichloroethane	ND	0.081	40.0	
1,1-Dichloroethene	ND	0.079	40.0	
1,2-Dibromoethane	ND	0.15	40.0	
Dichlorotetrafluoroethane	ND	0.56	40.0	
1,2-Dichlorobenzene	ND	0.12	40.0	
1,2-Dichloroethane	ND	0.081	40.0	
1,2-Dichloropropane	ND	0.092	40.0	
1,3-Dichlorobenzene	ND	0.12	40.0	
1,4-Dichlorobenzene	ND	0.12	40.0	
c-1,3-Dichloropropene	ND	0.091	40.0	
c-1,2-Dichloroethene	ND	0.079	40.0	
t-1,2-Dichloroethene	ND	0.079	40.0	
t-1,3-Dichloropropene	ND	0.18	40.0	
Ethyl-t-Butyl Ether (ETBE)	ND	0.33	40.0	
Ethylbenzene	0.21	0.087	40.0	
4-Ethyltoluene	ND	0.098	40.0	
Hexachloro-1,3-Butadiene	ND	0.64	40.0	
2-Hexanone	ND	0.25	40.0	

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#### **Analytical Report**

Cardno ERI	Da	te Received:		08/20/14
601 North McDowell Blvd.	Wo	ork Order:		14-08-1448
Petaluma, CA 94954-2312	Pre	eparation:		N/A
		thod:		EPA TO-15M
	Un			mg/m3
Drainath EnvironMahil 00105/022782C	UII			Page 2 of 8
Project: ExxonMobil 99105/022783C				1 age 2 01 0
Parameter	Result	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Methyl-t-Butyl Ether (MTBE)	ND	0.29	40.0	
Methylene Chloride	ND	0.69	40.0	
4-Methyl-2-Pentanone	ND	0.25	40.0	
Naphthalene	ND	1.0	40.0	
o-Xylene	ND	0.087	40.0	
p/m-Xylene	ND	0.35	40.0	
Xylenes (total)	ND	0.087	1.00	
Styrene	ND	0.26	40.0	
Tert-Amyl-Methyl Ether (TAME)	ND	0.33	40.0	
Tert-Butyl Alcohol (TBA)	ND	0.61	40.0	
Tetrachloroethene	ND	0.14	40.0	
Toluene	ND	0.75	40.0	
Trichloroethene	ND	0.11	40.0	
Trichlorofluoromethane	ND	0.22	40.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.46	40.0	
1,1,1-Trichloroethane	ND	0.11	40.0	
1,1,2-Trichloroethane	ND	0.11	40.0	
1,3,5-Trimethylbenzene	ND	0.098	40.0	
1,1,2,2-Tetrachloroethane	ND	0.27	40.0	
1,2,4-Trimethylbenzene	ND	0.29	40.0	
1,2,4-Trichlorobenzene	ND	0.59	40.0	
Vinyl Acetate	ND	0.28	40.0	
Vinyl Chloride	ND	0.051	40.0	
Surrogate	<u>Rec. (%)</u>	Control Limits	Qualifiers	
1,4-Bromofluorobenzene	112	57-129		
1,2-Dichloroethane-d4	99	47-137		
Toluene-d8	100	78-156		

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#### **Analytical Report**

Cardno ERI		Date Received:				08/20/14		
601 North McDowell Blvd.	Work Order: Preparation:				14-08-1448 N/A			
Petaluma, CA 94954-2312								
			Method:				EPA TO-15M	
			Units:				mg/m3	
Project: ExxonMobil 99105/0	)22783C					Pa	ge 3 of 8	
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID	

	Number	Collected		Prepared	Analyzed	
V-INF-MW5-2	14-08-1448-2-A	08/18/14 17:30	Air GC/MS KK	K N/A	08/21/14 11:56	140820L01
Comment(s): - The method has been	n modified to use Tedlar		of Summa canisters and is n	ot NY NELAC ac	credited.	
<u>Parameter</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qu</u>	alifiers
Acetone		ND	4.8	40.0		
Benzene		2.3	0.064	40.0		
Benzyl Chloride		ND	0.31	40.0		
Bromodichloromethane		ND	0.13	40.0		
Bromoform		ND	0.21	40,0		
Bromomethane		ND	0.078	40.0		
2-Butanone		ND	0.18	40.0		
Carbon Disulfide		ND	1.2	40.0		
Carbon Tetrachloride		ND	0.13	40.0		
Chlorobenzene		ND	0.092	40,0		
Chloroethane		ND	0.053	40.0		
Chloroform		ND	0.098	40.0		
Chloromethane		ND	0.041	40.0		
Dibromochloromethane		ND	0.17	40.0		
Dichlorodifluoromethane		ND	0.099	40.0		
Diisopropyl Ether (DIPE)		ND	0.33	40.0		
1,1-Dichloroethane		ND	0.081	40.0		
1,1-Dichloroethene		ND	0.079	40.0		
1,2-Dibromoethane		ND	0.15	40.0		
Dichlorotetrafluoroethane		ND	0.56	40.0		
1,2-Dichlorobenzene		ND	0.12	40.0		
1,2-Dichloroethane		ND	0.081	40.0		
1,2-Dichloropropane		ND	0.092	40.0		
1,3-Dichlorobenzene		ND	0.12	40.0		
1,4-Dichlorobenzene		ND	0.12	40.0		
c-1,3-Dichloropropene		ND	0.091	40.0		
c-1,2-Dichloroethene		ND	0.079	40.0		
t-1,2-Dichloroethene		ND	0.079	40.0		
t-1,3-Dichloropropene		ND	0.18	40.0		
Ethyl-t-Butyl Ether (ETBE)		NÐ	0.33	40.0		
Ethylbenzene		0.33	0.087	40.0		
4-Ethyltoluene		ND	0.098	40.0		
Hexachloro-1,3-Butadiene		ND	0.64	40.0		
2-Hexanone		ND	0.25	40.0		

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#### **Analytical Report**

Cardno ERI	Da	te Received:		08/20/14
601 North McDowell Blvd.	Wo	ork Order:		14-08-1448
Petaluma, CA 94954-2312		eparation:		N/A
		thod:		EPA TO-15M
	Uni			mg/m3
	Un	ns.		-
Project: ExxonMobil 99105/022783C				Page 4 of 8
Parameter	<u>Result</u>	<u>RL</u>	<u>DF</u>	Qualifiers
Methyl-t-Butyl Ether (MTBE)	ND	0.29	40.0	
Methylene Chloride	ND	0.69	40.0	
4-Methyl-2-Pentanone	ND	0.25	40.0	
Naphthalene	ND	1.0	40.0	
o-Xylene	ND	0.087	40.0	
p/m-Xylene	ND	0.35	40.0	
Xylenes (total)	ND	0.087	1.00	
Styrene	ND	0.26	40.0	
Tert-Amyl-Methyl Ether (TAME)	ND	0.33	40.0	
Tert-Butyl Alcohol (TBA)	ND	0.61	40.0	
Tetrachloroethene	ND	0.14	40.0	
Toluene	ND	0.75	40.0	
Trichloroethene	ND	0.11	40.0	
Trichlorofluoromethane	ND	0.22	40.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.46	40.0	
1,1,1-Trichloroethane	ND	0.11	40.0	
1,1,2-Trichloroethane	ND	0.11	40.0	
1,3,5-Trimethylbenzene	ND	0.098	40.0	
1,1,2,2-Tetrachloroethane	ND	0.27	40.0	
1,2,4-Trimethylbenzene	ND	0.29	40.0	
1,2,4-Trichlorobenzene	ND	0.59	40.0	
Vinyl Acetate	ND	0.28	40.0	
Vinyl Chloride	ND	0.051	40.0	
Surrogate	<u>Rec. (%)</u>	Control Limits	Qualifiers	
1,4-Bromofluorobenzene	108	57-129		
1,2-Dichloroethane-d4	98	47-137		
Toluene-d8	99	78-156		

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## **Analytical Report**

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID	
Project: ExxonMobil 99105/02	2783C					Pa	ge 5 of 8	
		Units:				mg/m3		
	Preparation: Method:				N// EPA TO-15N			
Petaluma, CA 94954-2312								
601 North McDowell Blvd.		Work Ord	14-08-1448					
Cardno ERI		Date Rece	08/20/14					

	Number	Collected			Prepared	Analyzed	
V-INF-MW6-1	14-08-1448-3-A	08/18/14 17:35	Air	GC/MS KKK	N/A	08/21/14 12:47	140820L01
Comment(s): - The method has been	n modified to use Tedlar	Bags instead o	of Summa	canisters and is not	NY NELAC ac	credited.	
<u>Parameter</u>		<u>Result</u>		<u>RL</u>	DF	Qu	alifiers
Acetone		ND		4.8	40.0		
Benzene		0.20		0.064	40.0		
Benzyl Chloride		ND		0.31	40.0		
Bromodichloromethane		ND		0.13	40.0		
Bromoform		ND		0.21	40.0		
Bromomethane		ND		0.078	40.0		
2-Butanone		ND		0.18	40.0		
Carbon Disulfide		ND		1.2	40.0		
Carbon Tetrachloride		ND		0.13	40.0		
Chlorobenzene		ND		0.092	40.0		
Chloroethane		ND		0.053	40.0		
Chloroform		ND		0.098	40.0		
Chloromethane		ND		0.041	40.0		
Dibromochloromethane		ND		0.17	40.0		
Dichlorodifluoromethane		ND		0.099	40.0		
Diisopropyl Ether (DIPE)		ND		0.33	40.0		
1,1-Dichloroethane		ND		0.081	40.0		
1,1-Dichloroethene		ND		0.079	40.0		
1,2-Dibromoethane		ND		0.15	40.0		
Dichlorotetrafluoroethane		ND		0.56	40.0		
1,2-Dichlorobenzene		ND		0.12	40.0		
1,2-Dichloroethane		ND		0.081	40.0		
1,2-Dichloropropane		ND		0.092	40.0		
1,3-Dichlorobenzene		ND		0.12	40.0		
1,4-Dichlorobenzene		ND		0.12	40.0		
c-1,3-Dichloropropene		ND		0.091	40.0		
c-1,2-Dichloroethene		ND		0.079	40.0		
t-1,2-Dichloroethene		ND		0.079	40.0		
t-1,3-Dichloropropene		ND		0.18	40.0		
Ethyl-t-Butyl Ether (ETBE)		ND		0.33	40.0		
Ethylbenzene		0.97		0.087	40.0		
4-Ethyltoluene		0.26		0.098	40.0		
Hexachloro-1,3-Butadiene		ND		0.64	40.0		
2-Hexanone		ND		0.25	40.0		

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#### **Analytical Report**

Cardno ERI	Dat	te Received:		08/20/14		
601 North McDowell Blvd.	Wo	rk Order:		14-08-144		
Petaluma, CA 94954-2312	Pre	paration:		N/		
		thod:		EPA TO-15M		
	Uni			mg/m3		
Project: ExxonMobil 99105/022783C				Page 6 of 8		
Parameter	Result	<u></u>	DE	Qualifiers		
Methyl-t-Butyl Ether (MTBE)	ND	0.29	40.0			
Methylene Chloride	ND	0.69	40.0			
4-Methyl-2-Pentanone	0.57	0.25	40.0			
Naphthalene	ND	1.0	40.0			
o-Xylene	0.89	0.087	40.0			
p/m-Xylene	2.3	0.35	40.0			
Xylenes (total)	3.2	0.087	1.00			
Styrene	ND	0.26	40.0			
Tert-Amyl-Methyl Ether (TAME)	ND	0.33	40.0			
Tert-Butyl Alcohol (TBA)	ND	0.61	40.0			
Tetrachloroethene	ND	0.14	40.0			
Toluene	ND	0.75	40.0			
Trichloroethene	ND	0.11	40.0			
Trichlorofluoromethane	ND	0.22	40.0			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.46	40.0			
1,1,1-Trichloroethane	ND	0.11	40.0			
1,1,2-Trichloroethane	ND	0.11	40.0			
1,3,5-Trimethylbenzene	0.26	0.098	40.0			
1,1,2,2-Tetrachioroethane	ND	0.27	40.0			
1,2,4-Trimethylbenzene	0.72	0.29	40.0			
1,2,4-Trichlorobenzene	ND	0.59	40.0			
Vinyl Acetate	ND	0.28	40.0			
Vinyl Chloride	ND	0.051	40.0			
Surrogate	<u>Rec. (%)</u>	Control Limits	<u>Qualifiers</u>			
1,4-Bromofluorobenzene	126	57-129				
1,2-Dichloroethane-d4	103	47-137				
Toluene-d8	76	78-156	AZ			

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#### **Analytical Report**

Cardno ERI	Date Received:	08/20/14
601 North McDowell Blvd.	Work Order:	14-08-1448
Petaluma, CA 94954-2312	Preparation:	N/A
	Method:	EPA TO-15M
	Units:	mg/m3
Project: ExxonMobil 99105/022783C		Page 7 of 8

#### 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	099-12-981-4660	N/A	Air	GC/MS KKK	N/A	08/21/14 02:55	140820L01
Parameter		Result		RL	DF	Qua	alifiers
Acetone		ND		0.12	1.00		
Benzene		ND		0.0016	1.00		
Benzyl Chloride		ND		0.0078	1.00		
Bromodichloromethane		ND		0.0034	1.00		
Bromoform		ND		0.0052	1.00		
Bromomethane		ND		0.0019	1,00		
2-Butanone		ND		0.0044	1,00		
Carbon Disulfide		ND		0.031	1.00		
Carbon Tetrachloride		ND		0.0031	1.00		
Chlorobenzene		ND		0.0023	1.00		
Chloroethane		ND		0.0013	1.00		
Chloroform		ND		0.0024	1.00		
Chloromethane		ND		0.0010	1.00		
Dibromochloromethane		ND		0.0043	1.00		
Dichlorodifluoromethane		ND		0.0025	1.00		
Diisopropyl Ether (DIPE)		ND		0.0084	1.00		
1,1-Dichloroethane		ND		0.0020	1.00		
1,1-Dichloroethene		ND		0.0020	1.00		
1,2-Dibromoethane		ND		0.0038	1.00		
Dichlorotetrafluoroethane		ND		0.014	1.00		
1,2-Dichlorobenzene		ND		0.0030	1.00		
1,2-Dichloroethane		ND		0.0020	1.00		
1,2-Dichloropropane		ND		0,0023	1.00		
1,3-Dichlorobenzene		ND		0.0030	1.00		
1,4-Dichlorobenzene		ND		0.0030	1.00		
c-1,3-Dichloropropene		ND		0,0023	1.00		
c-1,2-Dichloroethene		ND		0.0020	1.00		
t-1,2-Dichloroethene		ND		0.0020	1.00		
t-1,3-Dichloropropene		ND		0.0045	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND		0.0084	1.00		
Ethylbenzene		ND		0.0022	1.00		
4-Ethyltoluene		ND		0.0025	1.00		
Hexachloro-1,3-Butadiene		ND		0.016	1.00		
2-Hexanone		ND		0.0061	1.00		
Methyl-t-Butyl Ether (MTBE)		ND		0.0072	1.00		

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#### **Analytical Report**

Cardno ERI	Dat	te Received:		08/20/14
601 North McDowell Blvd.	Wa	rk Order:		14-08-1448
Petaluma, CA 94954-2312	Pre	paration:		N/A
		thod:		EPA TO-15M
	Uni			mg/m3
D	UII	15.		-
Project: ExxonMobil 99105/022783C				Page 8 of 8
Parameter	Result	<u>RL</u>	DF	<u>Qualifiers</u>
Methylene Chloride	ND	0.017	1.00	
4-Methyl-2-Pentanone	ND	0.0061	1.00	
Naphthalene	ND	0.026	1.00	
o-Xylene	ND	0.0022	1.00	
p/m-Xylene	ND	0.0087	1.00	
Xylenes (total)	ND	0.0022	1.00	
Styrene	ND	0.0064	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0084	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.015	1.00	
Tetrachloroethene	ND	0.0034	1.00	
Toluene	ND	0.019	1.00	
Trichloroethene	ND	0.0027	1.00	
Trichlorofluoromethane	ND	0.0056	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.011	1.00	
1,1,1-Trichloroethane	ND	0.0027	1.00	
1,1,2-Trichloroethane	ND	0.0027	1.00	
1,3,5-Trimethylbenzene	ND	0.0025	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0069	1.00	
1,2,4-Trimethylbenzene	ND	0.0074	1.00	
1,2,4-Trichlorobenzene	ND	0.015	1.00	
Vinyl Acetate	ND	0.0070	1.00	
Vinyl Chloride	ND	0.0013	1.00	
Surrogate	<u>Rec. (%)</u>	Control Limits	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	99	57-129		
1,2-Dichloroethane-d4	104	47-137		
Toluene-d8	101	78-156		

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#### **Analytical Report**

Cardno ERI			Date Re	ceiv	ed:			08/20/14
601 North McDowell Blvd.			Work Or	der:				14-08-1448
Petaluma, CA 94954-2312			Preparat	tion:				N/A
			Method:		EPA TO-3M			
			Units:					mg/m:
Project: ExxonMobil 99105/022	783C						Pa	ige 1 of 1
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix		Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V-INF-MW5-1	14-08-1448-1-A	08/18/14 15:30	Air		GC 60	N/A	08/20/14 14:34	140820L01
Parameter		Result		<u>RL</u>		DF	Qua	alifiers
TPH as Gasoline		5000		35		5.00		
V-INF-MW5-2	14-08-1448-2-A	08/18/14 17:30	Air		GC 60	N/A	08/20/14 14:24	140820L01
Parameter		Result		RL		DF	Qua	alifiers
TPH as Gasoline		3000		17		2.50		
V-INF-MW6-1	14-08-1448-3-A	08/18/14 17:35	Air		GC 60	N/A	08/20/14 14:15	140820L01
Parameter		Result		RL		DF	Qua	alifiers
TPH as Gasoline		3000		17		2.50		
Method Blank	098-01-005-5749	N/A	Air	98	GC 60	N/A	08/20/14 09:50	140820L01
Parameter		Result		RL		DF	Qua	alifiers
TPH as Gasoline		ND		7.0		1.00		

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## **Quality Control - Sample Duplicate**

Cardno ERI			Date Received		08/20/14	
601 North McDowell Blvd			Work Order:		14-08-1448	
Petaluma, CA 94954-231	2		Preparation:		N/A	
			Method:			EPA TO-3M
Project: ExxonMobil 9910	05/022783C					Page 1 of 1
Quality Control Sample ID	Туре	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
14-08-1447-1	Sample	Air	GC 60	N/A	08/20/14 13:49	140820D01
14-08-1447-1	Sample Duplicate	Air	GC 60	N/A	08/20/14 14:01	140820D01
Parameter		Sample Conc.	DUP Conc.	<u>RPD</u>	RPD CL	Qualifiers
TPH as Gasoline		1987	1969	1	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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## **Quality Control - LCS/LCSD**

Cardno ERI	Date Received:	08/20/14
601 North McDowell Blvd.	Work Order:	14-08-1448
Petaluma, CA 94954-2312	Preparation:	N/A
	Method:	EPA TO-15M
Project: ExxonMobil 99105/022783C		Page 1 of 3

Quality Control Sample ID	Туре		Matrix		ument	Date Prepare		LCS/LCSD Ba	tch Number		
099-12-981-4660	LCS		Air	GC/	IS KKK	N/A	08/20/	14 23:33	140820L01		
099-12-981-4660	LCSD	Berly S.S.	Air	GC/I	IS KKK	N/A	08/21/	14 00:24	140820L01		
<u>Parameter</u>	<u>Spike</u> Added	LCS Conc.	LCS <u>%Rec.</u>	LCSD Conc.	LCSD %Rec.	<u>%Rec. CL</u>	ME CL	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>	
Acetone	0.05939	0.05859	99	0.05417	91	50-150	33-167	8	0-35		
Benzene	0.07987	0.08406	105	0.07616	95	60-156	44-172	10	0-40		
Benzyl Chloride	0.1294	0.1203	93	0.1107 8		50-150	33-167	8	0-35		
Bromodichloromethane	0.1675	0.1742	104	0.1604	96	50-150	33-167	8	0-35		
Bromoform	0.2584	0.2995	116	0.2780	108	50-150	33-167	7	0-38		
Bromomethane	0.09708	0.08950	92	0.08553	88	50-150	33-167	5	0-35		
2-Butanone	0.07373	0.07471	101	0.06927	94	50-150	33-167	8	0-35		
Carbon Disulfide	0.07785	0.08085	104	0.07556	97	50-150	33-167	7	0-35		
Carbon Tetrachloride	0.1573	0.1658	105	0.1505	96	64-154	49-169	10	0-32		
Chlorobenzene	0.1151	0.1157	101	0.1071	93	50-150	33-167	8	0-35		
Chloroethane	0.06596	0.05819	88	0,05481	83	50-150	33-167	6	0-35		
Chloroform	0,1221	0.1170	96	0,1097	90	50-150	33-167	6	0-35		
Chloromethane	0.05163	0.04598	89	0.05076	98	50-150	33-167	10	0-35		
Dibromochloromethane	0.2130	0.2283	107	0.2101	99	50-150	33-167	8	0-35		
Dichlorodifluoromethane	0.1236	0.1095	89	0.1047	85	50-150	33-167	4	0-35		
Diisopropyl Ether (DIPE)	0.1045	0.09254	89	0.08813	84	60-140	47-153 5		0-30		
1,1-Dichloroethane	0.1012	0.1014	100	0,09299	92	50-150	33-167	9	0-35		
1,1-Dichloroethene	0.09912	0,1006	101	0.09290	94	50-150	33-167 8		0-35		
1,2-Dibromoethane	0.1921	0.2023	105	0.1858	97	54-144	39-159	8	0-36		
Dichlorotetrafluoroethane	0.1748	0.1251	72	0.1240	71	50-150	33-167	1	0-35		
1,2-Dichlorobenzene	0.1503	0,1311	87	0.1194	79	34-160	13-181	9	0-47		
1,2-Dichloroethane	0.1012	0.09815	97	0.09143	90	69-153	55-167	7	0-35		
1,2-Dichloropropane	0.1155	0.1195	103	0.1088	94	67-157	52-172	9	0-35		
1,3-Dichlorobenzene	0.1503	0.1453	97	0.1331	89	50-150	33-167	9	0-35		
1,4-Dichlorobenzene	0.1503	0.1420	94	0.1301	87	36-156	16-176	9	0-47		
c-1,3-Dichloropropene	0.1135	0.1225	108	0.1117	98	61-157	45-173	9	0-35		
c-1,2-Dichloroethene	0.09912	0.09857	99	0.09007	91	50-150	33-167	9	0-35		
t-1,2-Dichloroethene	0.09912	0.09543	96	0.08682	88	50-150	33-167	9	0-35		
t-1,3-Dichloropropene	0.1135	0.1326	117	0.1214	107	50-150	33-167	9	0-35		
Ethyl-t-Butyl Ether (ETBE)	0.1045	0.09477	91	0.08833	85	60-140	47-153	7	0-30		
Ethylbenzene	0.1086	0.1126	104	0.1039	96	52-154	35-171	8	0-38		
4-Ethyltoluene	0.1229	0.1245	101	0.1155	94	50-150	33-167	7	0-35		
Hexachloro-1,3-Butadiene	0.2666	0.3379	127	0.2970	111	50-150	33-167	13	0-35		
2-Hexanone	0.1024	0.1073	105	0.09935	97	50-150	33-167	8	0-35		
Methyl-t-Butyl Ether (MTBE)	0.09013	0.08936	99	0.08258	92	50-150	33-167	8	0-35		
Methylene Chloride	0.08684	0.08078	93	0.07426	86	50-150	33-167	8	0-35		

RPD: Relative Percent Difference. CL: Control Limits

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#### **Quality Control - LCS/LCSD**

Cardno ERI				Date	Receive	d:				08/20/14
601 North McDowell Blvd.				Worl	c Order:				1	4-08-1448
Petaluma, CA 94954-2312				Pren	aration:					N/A
1 etalulila, CA 94934-2312				Meth					FD	A TO-15M
Dreisett EuropMabil 0010E	0007020			Meti	100.				Page	
Project: ExxonMobil 99105	/022/830								Faye	2013
Parameter	Spike Added	LCS Conc.	. <u>LCS</u> <u>%Rec.</u>	LCSD Conc.	LCSD %Rec.	<u>%Rec. CL</u>	ME CL	RPD	RPD CL	Qualifiers
4-Methyl-2-Pentanone	0.1024	0.1072	105	0.09930	97	50-150	33-167	8	0-35	
Naphthalene	0.1311	0.1416	108	0.1201	92	40-190	15-215	16	0-30	
o-Xylene	0.1086	0.1109	102	0.1040	96	52-148	36-164	6	0-38	
p/m-Xylene	0.2171	0.2326	107	0.2186	101	42-156	23-175	6	0-41	
Styrene	0.1065	0.1013	95	0.09327	88	50-150	33-167	8	0-35	
Tert-Amyl-Methyl Ether (TAME)	0.1045	0.09557	91	0.08730	84	60-140	47-153	9	0-30	
Tert-Butyl Alcohol (TBA)	0.1516	0.151 <del>9</del>	100	0.1410	93	60-140	47-153	7	0-30	
Tetrachloroethene	0.1696	0.1847	109	0.1685	99	56-152	40-168	9	0-40	
Toluene	0.09421	0.09847	105	0.09071	96	56-146	41-161	8	0-43	
Trichloroethene	0.1343	0.1365	102	0.1260	94	63-159	47-175	8	0-34	
Trichlorofluoromethane	0.1405	0.1332	95	0.1234	88	50-150	33-167	8	0-35	
1,1,2-Trichloro-1,2,2- Trifluoroethane	0.1916	0.2004	105	0.1875	98	50-150	33-167	7	0-35	
1,1,1-Trichloroethane	0.1364	0.1271	93	0.1184	87	50-150	33-167	7	0-35	
1,1,2-Trichloroethane	0.1364	0.1437	105	0.1322	97	65-149	51-163	8	0-37	
1,3,5-Trimethylbenzene	0.1229	0.1180	96	0.1090	89	50-150	33-167	8	0-35	
1,1,2,2-Tetrachloroethane	0.1716	0.1670	97	0.1562	91	50-150	33-167	7	0-35	
1,2,4-Trimethylbenzene	0.1229	0.1212	99	0.1129	92	50-150	33-167	7	0-35	
1,2,4-Trichlorobenzene	0.1855	0.2145	116	0.1802	97	50-150	33-167	17	0-35	
Vinyl Acetate	0.08803	0.08061	92	0.07479	85	50-150	33-167	7	0-35	
Vinyl Chloride	0.06391	0.05671	89	0.05517	86	45-177	23-199	3	0-36	

Total number of LCS compounds: 56

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

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#### **Quality Control - LCS**

Cardno ERI			Date Receive			08/20/1		
601 North McDowell Blvd.			Work Order:					14-08-144
Petaluma, CA 94954-231	2		Preparation:					N/.
			Method:					EPA TO-3
Project: ExxonMobil 99105/022783C							Page	e 3 of 3
Quality Control Sample ID	Туре	Matrix	Instrument	Date Prepar	ed Date	Analyzed	LCS Batch	Number
098-01-005-5749	LCS	Air	GC 60	N/A	08/20	/14 09:28	140820L01	
Parameter		Spike Added	Conc. Recove	red LCS %	Rec.	%Rec	. CL	Qualifiers
TPH as Gasoline		932.5	949.0	102		80-120	0	

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RPD: Relative Percent Difference. CL: Control Limits

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## **Glossary of Terms and Qualifiers**

Work Order: 14 09 1449	
Work Order: 14-08-1448	

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<u>Qualifiers</u>	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.
В	Analyte was present in the associated method blank.
BA	The MS/MSD RPD was out of control due to suspected matrix interference.
BB	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
DF	Reporting limits elevated due to matrix interferences.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
GE	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
HD	Chromat. profile inconsistent with pattern(s) of ref. fuel stnds.
НО	High concentration matrix spike recovery out of limits
HT	Analytical value calculated using results from associated tests.
нх	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS was in control.
۱L	Relative percent difference out of control.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
LD	Analyte presence was not confirmed by second column or GC/MS analysis.
LP	The LCS and/or LCSD recoveries for this analyte were above the upper control limit. The associated sample was non-detected. Therefore, the sample data was reported without further clarification.
LQ	LCS recovery above method control limits.
LR	LCS recovery below method control limits.
ND	Parameter not detected at the indicated reporting limit.
QO	Compound did not meet method-described identification guidelines. Identification was based on additional GC/MS characteristics.
RU	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
SG	A silica gel cleanup procedure was performed.
SN	See applicable analysis comment.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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		iełd Point Name	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Methanol	Sodium Bisulfate	NaOH	H <sub>2</sub> SO <sub>4</sub> Plastic	H <sub>2</sub> SO <sub>4</sub> Glass	HNO <sub>3</sub>	Other	None	Groundwater Wastewater	Drinking Water	Sludge	Soil	Arr Other (specify): Distilled Water	100 PDD4		Full List VOCs TO-15	Oxygenates 8260B		Motor Oil by 8015B		Cerosene by 80155	RUSH TAT. (Pre-Schedule)	5-day TAT	Standard 10-day TAT	Due Date of Report	
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Package 1 of 1

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SAMPLE CONDITION:	and the particular sector		Yes	No	N/A
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COC document(s) received complete				_	
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Sampler's name indicated on COC					
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🗆 pH 🛛 Residual Chlorine 🗖 Dissolved Su	ulfides 🛛 Disso	lved Oxygen			
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Air: DTedlar <sup>®</sup> Canister Other: C Container: C: Clear A: Amber P: Plastic G: Glass J: Jan Preservative: h: HCL n: HNO3 na2:Na2S2O3 na: NaOH p:	B: Bottle Z: Ziplor	:/Resealable Bag E: Er	ivelope	Reviewed by	:

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SOP T100\_090 (06/02/14)

# Calscience

# WORK ORDER NUMBER: 14-08-1569

## The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For Client: Cardno ERI Client Project Name: ExxonMobil 99105/022783C Attention: Greg Gurss 601 North McDowell Blvd. Petaluma, CA 94954-2312

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Email your PM >

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Approved for release on 09/03/2014 by: Cecile deGuia Project Manager



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

7440 Lincoln Way, Garden Grove, CA 92841-1432 + TEL: (714) 895-5494 + FAX: (714) 894-7501 + www.calscience.com

NELAP ID: 03220CA | ACLASS DoD-ELAP ID: ADE-1864 (ISO/IEC 17025:2005) | CSDLAC ID: 10109 | SCAQMD ID: 93LA0830

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# Contents

	ject Name: ExxonMobil 99105 er Number: 14-08-1569	5/022783C																		
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2	Sample Summary			69 E 4				* *		• •	<b>.</b> .	a 2	<b>1</b> 221 <b>1</b> 3	-	• •		12 2	1 10	1.51 <b>.</b>	4
3	Client Sample Data 3.1 EPA TO-15 (M) F 3.2 EPA TO-3 (M) TP	ull List (Air).		1000 A		· · ·	e eo	cə a	* •0	69 R	* •		* *		- 82	• •	0.000	• •		5 5 17
4	Quality Control Sampl 4.1 Sample Duplicate 4.2 LCS/LCSD							ж. е	•23523		•	8• 18				e 163			1.9	18 18 19
5	Glossary of Terms and	d Qualifiers.	• • • •			8.8	•••	ž ž	• • •			(i i)	• •	••	• •	•••	•••	•	• •	24
6	Chain-of-Custody/San	nple Receipt	Form.			• • •	• • •		: 00	00 B		• •		• •		• •			8	25

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#### **Work Order Narrative**

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#### Condition Upon Receipt:

Work Order: 14-08-1569

Samples were received under Chain-of-Custody (COC) on 08/21/14. They were assigned to Work Order 14-08-1569.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

#### Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

#### Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

#### Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

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

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

#### Subcontractor Information:

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

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#### Sample Summary

Client:	Cardno ERI	Work Order:	14-08-1569
	601 North McDowell Blvd.	Project Name:	ExxonMobil 99105/022783C
	Petaluma, CA 94954-2312	PO Number:	022783C
		Date/Time Received:	08/21/14 10:10
		Number of Containers:	4
Attn:	Greg Gurss		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
V-INF-COMP-1	14-08-1569-1	08/19/14 04:30	1	Air
V-INF-COMP-2	14-08-1569-2	08/19/14 12:30	1	Air
V-INF-COMP-3	14-08-1569-3	08/19/14 20:35	1	Air
V-INF-COMP-4	14-08-1569-4	08/20/14 04:30	1	Air

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## **Analytical Report**

Cardno ERI			Date Rece	eived:		08/21/14			
601 North McDowell Blvd.	North McDowell Blvd. Work Order:					14-08-1569			
Petaluma, CA 94954-2312			Preparatio	on:		Ν			
			Method:				EPA TO-15M		
			Units:				mg/m3		
Project: ExxonMobil 99105	/022783C					Pa	ge 1 of 12		
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID		

	Number	Collected	Mathx		Prepared	Analyzed	QO BUIGHTE
V-INF-COMP-1	14-08-1569-1-A	08/19/14 04:30	Air	GC/MS II	N/A	08/22/14 06:05	140821L03
Comment(s): - The method has been	modified to use Tedlar	Bags instead o	f Summa	canisters and is no	t NY NELAC ac	credited.	
Parameter		<u>Result</u>		<u>RL</u>	DF	<u>Qua</u>	alifiers
Acetone		ND		3.0	25.0		
Benzene		7.1		0.040	25.0		
Benzyl Chloride		ND		0.19	25.0		
Bromodichloromethane		ND		0.084	25.0		
Bromoform		ND		0.13	25.0		
Bromomethane		ND		0.049	25.0		
2-Butanone		ND		0.11	25.0		
Carbon Disulfide		ND		0.78	25.0		
Carbon Tetrachloride		ND		0.079	25.0		
Chlorobenzene		ND		0.058	25.0		
Chloroethane		ND		0.033	25.0		
Chloroform		ND		0.061	25.0		
Chloromethane		ND		0.026	25.0	œ.,	
Dibromochloromethane		ND		0.11	25,0		
Dichlorodifluoromethane		ND		0.062	25.0		
Diisopropyl Ether (DIPE)		ND		0.21	25.0		
1,1-Dichloroethane		ND		0.051	25.0		
1,1-Dichloroethene		ND		0.050	25.0		
1,2-Dibromoethane		ND		0.096	25.0		
Dichlorotetrafluoroethane		ND		0.35	25.0		
1,2-Dichlorobenzene		ND		0.075	25.0		
1,2-Dichloroethane		ND		0.051	25.0		
1,2-Dichloropropane		ND		0.058	25.0		
1,3-Dichlorobenzene		ND		0.075	25.0		
1,4-Dichlorobenzene		ND		0.075	25.0		
c-1,3-Dichloropropene		ND		0.057	25.0		
c-1,2-Dichloroethene		ND		0.050	25.0		
t-1,2-Dichloroethene		ND		0.050	25.0		
t-1,3-Dichloropropene		ND		0.11	25.0		
Ethyl-t-Butyl Ether (ETBE)		ND		0.21	25.0		
Ethylbenzene		3.0		0.054	25.0		
4-Ethyltoluene		ND		0.061	25.0		
Hexachloro-1,3-Butadiene		ND		0.40	25.0		
2-Hexanone		ND		0.15	25.0		

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## **Analytical Report**

Cardno ERI	Dat	te Received;		08/21/14		
601 North McDowell Blvd.	Wo	rk Order:		14-08-1569		
Petaluma, CA 94954-2312	Pre	paration:		N/A		
		thod:		EPA TO-15M		
	Uni			mg/m3		
Project: ExxonMobil 99105/022783C			Page 2 of 12			
Parameter	Result	<u></u>	DF	Qualifiers		
Methyl-t-Butyl Ether (MTBE)	ND	0.18	25.0			
Methylene Chloride	ND	0.43	25.0			
4-Methyl-2-Pentanone	ND	0.15	25.0			
Naphthalene	ND	0.66	25.0			
o-Xylene	ND	0.054	25.0			
p/m-Xylene	0.24	0.22	25.0			
Xylenes (total)	0.24	0.054	1.00			
Styrene	ND	0.16	25.0			
Tert-Amyl-Methyl Ether (TAME)	ND	0.21	25.0			
Tert-Butyl Alcohol (TBA)	ND	0.38	25.0			
Tetrachloroethene	ND	0.085	25.0			
Toluene	ND	0.47	25.0			
Trichloroethene	ND	0.067	25.0			
Trichlorofluoromethane	ND	0.14	25.0			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.29	25.0			
1,1,1-Trichloroethane	ND	0.068	25.0			
1,1,2-Trichloroethane	ND	0.068	25.0			
1,3,5-Trimethylbenzene	ND	0.061	25.0			
1,1,2,2-Tetrachloroethane	ND	0.17	25.0			
1,2,4-Trimethylbenzene	ND	0.18	25.0			
1,2,4-Trichlorobenzene	ND	0.37	25.0			
Vinyl Acetate	ND	0.18	25.0			
Vinyl Chloride	ND	0.032	25.0			
Surrogate	<u>Rec. (%)</u>	Control Limits	<u>Qualifiers</u>			
1,4-Bromofluorobenzene	99	57-129				
1,2-Dichloroethane-d4	78	47-137				
Toluene-d8	79	78-156				

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#### **Analytical Report**

Cardno ERI			Date Rec	eived:			08/21/14
601 North McDowell Blvd.			Work Ord	er:			14-08-1569
Petaluma, CA 94954-2312			Preparatio	on:			N/A
			Method:				EPA TO-15M
			Units:				mg/m3
Project: ExxonMobil 99105/0	)22783C					Pa	ge 3 of 12
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID

	Number		Collected		Prepared	Analyzed	
V-INF-COMP-2	14-08-1569-2-A	08/19/14 12:30	Air	GC/MS II	N/A	08/22/14 19:44	140822L02
Comment(s): - The method has been n	nodified to use Tedlar	Bags instead o	f Summa o	canisters and is no	t NY NELAC ac	credited.	
<u>Parameter</u>		<u>Result</u>		<u>RL</u>	DF	<u>Qu</u>	alifiers
Acetone		ND		3.0	25.0		
Benzene		6.2		0.040	25.0		
Benzyl Chloride		ND		0.19	25.0		
Bromodichloromethane		ND		0.084	25.0		
Bromoform		ND		0.13	25.0		
Bromomethane		ND		0.049	25.0		
2-Butanone		ND		0.11	25.0		
Carbon Disulfide		ND		0.78	25.0		
Carbon Tetrachloride		ND		0.079	25.0		
Chlorobenzene		ND		0.058	25.0		
Chloroethane		ND		0.033	25.0		
Chloroform		ND		0.061	25.0		
Chloromethane		ND		0.026	25.0		
Dibromochloromethane		ND		0.11	25.0		
Dichlorodifluoromethane		ND		0.062	25.0		
Diisopropyl Ether (DIPE)		ND		0.21	25.0		
1,1-Dichloroethane		ND		0.051	25.0		
1,1-Dichloroethene		ND		0.050	25.0		
1,2-Dibromoethane		ND		0.096	25.0		
Dichlorotetrafluoroethane		ND		0.35	25.0		
1,2-Dichlorobenzene		ND		0.075	25.0		
1,2-Dichloroethane		ND		0.051	25.0		
1,2-Dichloropropane		ND		0.058	25.0		
1,3-Dichlorobenzene		ND		0.075	25.0		
1,4-Dichlorobenzene		ND		0.075	25.0		
c-1,3-Dichloropropene		ND		0.057	25.0		
c-1,2-Dichloroethene		ND		0.050	25.0		
t-1,2-Dichloroethene		ND		0.050	25.0		
t-1,3-Dichloropropene		ND		0.11	25.0		
Ethyl-t-Butyl Ether (ETBE)		ND		0.21	25.0		
Ethylbenzene		3.4		0.054	25.0		
4-Ethyltoluene		0.062		0.061	25.0		
Hexachloro-1,3-Butadiene		ND		0.40	25.0		
2-Hexanone		ND		0.15	25.0		

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#### **Analytical Report**

Cardno ERI	Dat	te Received:		08/21/14		
601 North McDowell Blvd.	Wa	ork Order:		14-08-1569		
Petaluma, CA 94954-2312	Pre	eparation:		N/A		
		thod:		EPA TO-15M		
	Uni		mg/m3			
Project: ExxonMobil 99105/022783C	U.I.		Page 4 of 12			
	Desult			Qualificare		
Parameter Mathed t Butted Ether (MTRE)	<u>Result</u> ND	<u>RL</u> 0.18	<u>DF</u> 25.0	Qualifiers		
Methyl-t-Butyl Ether (MTBE)	ND	0.43	25.0			
Methylene Chloride	ND	0.43	25.0			
4-Methyl-2-Pentanone		0.66				
Naphthalene	ND 0.093	0.054	25.0 25.0			
o-Xylene	0.38	0.034	25.0			
p/m-Xylene	0.38	0.22	1.00			
Xylenes (total)						
	ND	0.16	25.0			
Tert-Amyl-Methyl Ether (TAME)	ND	0.21	25.0			
Tert-Butyl Alcohol (TBA)	ND	0.38	25.0			
Tetrachloroethene	ND	0.085	25.0			
Toluene	ND	0.47	25.0			
Trichloroethene	ND	0.067	25.0			
Trichlorofluoromethane	ND	0.14	25.0			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.29	25.0			
1,1,1-Trichloroethane	ND	0.068	25.0			
1,1,2-Trichloroethane	ND	0.068	25.0			
1,3,5-Trimethylbenzene	ND	0.061	25.0			
1,1,2,2-Tetrachloroethane	ND	0.17	25.0			
1,2,4-Trimethylbenzene	ND	0.18	25.0			
1,2,4-Trichlorobenzene	ND	0.37	25.0			
Vinyl Acetate	ND	0.18	25.0			
Vinyl Chloride	ND	0.032	25.0			
Surrogate	<u>Rec. (%)</u>	Control Limits	Qualifiers			
1,4-Bromofluorobenzene	102	57-129				
1,2-Dichloroethane-d4	82	47-137				
Toluene-d8	79	78-156				

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#### **Analytical Report**

Cardno ERI			Date Received:				08/21/14
601 North McDowell Blvd.			Work Ord	er:			14-08-1569
Petaluma, CA 94954-2312			Preparatio	on:			N/A
			Method:				EPA TO-15M
			Units:				mg/m3
Project: ExxonMobil 99105/	022783C					Pa	age 5 of 12
Client Sample Number	Lab Sample	Date/Time	Matrix	Instrument	Date	Date/Time	QC Batch ID

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V-INF-COMP-3	14-08-1569-3-A	08/19/14 20:35	Air	GC/MS II	N/A	08/22/14 20:34	140822L02
Comment(s): - The method has t	peen modified to use Tedlar	Bags instead o	f Summa ca	nisters and is no		credited.	
<u>Parameter</u>		<u>Result</u>		<u> </u>	DF	Qua	alifiers
Acetone		ND	1	2	100		
Benzene		8.3	0	.16	100		
Benzyl Chloride		ND	0	.78	100		
Bromodichloromethane		ND	0	.34	100		
Bromoform		ND	0	0.52	100		
Bromomethane		ND	0	.19	100		
2-Butanone		ND	0	.44	100		
Carbon Disulfide		ND	3	6.1	100		
Carbon Tetrachloride		ND	0	).31	100		
Chlorobenzene		ND	0	.23	100		
Chloroethane		ND	0	.13	100		
Chloroform		ND	0	.24	100		
Chloromethane		ND	0	.10	100		
Dibromochloromethane		ND	0	.43	100		
Dichlorodifluoromethane		ND	0	.25	100		
Diisopropyl Ether (DIPE)		ND	0	.84	100		
1,1-Dichloroethane		ND	0	.20	100		
1,1-Dichloroethene		ND	0	.20	100		
1,2-Dibromoethane		ND	0	.38	100		
Dichlorotetrafluoroethane		ND	1	.4	100		
1,2-Dichlorobenzene		ND	0	.30	100		
1,2-Dichloroethane		ND	0	0.20	100		
1,2-Dichloropropane		ND	0	.23	100		
1,3-Dichlorobenzene		ND	0	.30	100		
1,4-Dichlorobenzene		ND	0	.30	100		
c-1,3-Dichloropropene		ND	0	.23	100		
c-1,2-Dichloroethene		ND	0	.20	100		
t-1,2-Dichloroethene		ND		0.20	100		
t-1,3-Dichloropropene		ND		).45	100		
Ethyl-t-Butyl Ether (ETBE)		ND		0.84	100		
Ethylbenzene		5.1		.22	100		
4-Ethyltoluene		ND		0.25	100		
Hexachloro-1,3-Butadiene		ND		.6	100		
2-Hexanone		ND		.61	100		

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#### **Analytical Report**

Cardno ERI	Da	te Received:		08/21/14	
601 North McDowell Blvd.	Wa	ork Order:		14-08-1569	
Petaluma, CA 94954-2312	Pre	eparation:	12	N/A	
		ethod:		EPA TO-15M	
		lits:		mg/m3	
Project: ExxonMobil 99105/022783C	01			Page 6 of 12	
Parameter	<u>Result</u>	RL	DF	Qualifiers	
Methyl-t-Butyl Ether (MTBE)	ND	0.72	100		
Methylene Chloride	ND	1.7	100		
4-Methyl-2-Pentanone	ND	0.61	100		
Naphthalene	ND	2.6	100		
o-Xylene	ND	0.22	100		
p/m-Xylene	ND	0.87	100		
Xylenes (total)	ND	0.22	1.00		
Styrene	ND	0.64	100		
Tert-Amyl-Methyl Ether (TAME)	ND	0.84	100		
Tert-Butyl Alcohol (TBA)	ND	1.5	100		
Tetrachloroethene	ND	0.34	100		
Toluene	ND	1,9	100		
Trichloroethene	ND	0.27	100		
Trichlorofluoromethane	ND	0.56	100		
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.1	100		
1,1,1-Trichloroethane	ND	0.27	100		
1,1,2-Trichloroethane	ND	0.27	100		
1,3,5-Trimethylbenzene	ND	0.25	100		
1,1,2,2-Tetrachloroethane	ND	0.69	100		
1,2,4-Trimethylbenzene	ND	0.74	100		
1,2,4-Trichlorobenzene	ND	1.5	100		
Vinyl Acetate	ND	0.70	100		
Vinyl Chloride	ND	0.13	100		
Surrogate	<u>Rec. (%)</u>	Control Limits	Qualifiers		
1,4-Bromofluorobenzene	93	57-129			
1,2-Dichloroethane-d4	79	47-137			
Toluene-d8	85	78-156			

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#### **Analytical Report**

Cardno ERI			Date Rec	eived:			08/21/14
601 North McDowell Blvd.			Work Ord	er:			14-08-1569
Petaluma, CA 94954-2312			Preparatio	on:			N/A
			Method:				EPA TO-15M
			Units:				mg/m3
Project: ExxonMobil 99105/	/022783C					Pa	ige 7 of 12
Client Sample Number	Lab Sample	Date/Time	Matrix	Instrument	Date	Date/Time	QC Batch ID

V-INF-COMP-4 Comment(s): - The method has been n Parameter Acetone Benzene Benzyl Chloride Bromodichloromethane Bromoform Bromomethane	14-08-1569-4-A	00/00/44					
Parameter Acetone Benzene Benzyl Chloride Bromodichloromethane Bromoform		08/20/14 04:30	Air	GC/MS II	N/A	08/23/14 01:18	140822L02
Acetone Benzene Benzyl Chloride Bromodichloromethane Bromoform	nodified to use Tedlar	Bags instead of	f Summa ca	anisters and is not		credited.	
Benzene Benzyl Chloride Bromodichloromethane Bromoform		<u>Result</u>		RL	DF	Qua	alifiers
Benzyl Chloride Bromodichloromethane Bromoform		ND		12	100		
Bromodichloromethane Bromoform		8.0		0.16	100		
Bromoform		ND		0.78	100		
		ND		0.34	100		
Bromomethane		ND		0.52	100		
		ND		0.19	100		
2-Butanone		ND		0.44	100		
Carbon Disulfide		ND		3.1	100		
Carbon Tetrachloride		ND		0.31	100		
Chlorobenzene		ND		0.23	100		
Chloroethane		ND		0.13	100		
Chloroform		ND	1	0.24	100		
Chloromethane		ND		0.10	100		
Dibromochloromethane		ND		0.43	100		
Dichlorodifluoromethane		ND	1	0.25	100		
Diisopropyl Ether (DIPE)		ND	1	0.84	100		
1,1-Dichloroethane		ND		0.20	100		
1,1-Dichloroethene		ND	1	0.20	100		
1,2-Dibromoethane		ND	1	0.38	100		
Dichlorotetrafluoroethane		ND		1.4	100		
1,2-Dichlorobenzene		ND		0.30	100		
1,2-Dichloroethane		ND		0.20	100		
1,2-Dichloropropane		ND		0.23	100		
1,3-Dichlorobenzene		ND	1	0.30	100		
1,4-Dichlorobenzene		ND		0.30	100		
c-1,3-Dichloropropene		ND		0.23	100		
c-1,2-Dichloroethene		ND		0.20	100		
t-1,2-Dichloroethene		ND		0.20	100		
t-1,3-Dichloropropene		ND		0.45	100		
Ethyl-t-Butyl Ether (ETBE)		ND		0.84	100		
Ethylbenzene		4.8		0.22	100		
4-Ethyltoluene		ND		0.25	100		
Hexachloro-1,3-Butadiene		ND		1.6	100		
2-Hexanone		ND		0.61	100		

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## **Analytical Report**

Cardno ERI	Da	te Received:		08/21/14		
601 North McDowell Blvd.	Wo	Work Order: Preparation:				
Petaluma, CA 94954-2312	Pre					
		thod:		N/A EPA TO-15M		
	Un			mg/m3		
Project: ExxonMobil 99105/022783C	UI			Page 8 of 12		
Parameter	Result	<u>RL</u>	DF	<u>Qualifiers</u>		
Methyl-t-Butyl Ether (MTBE)	ND	0,72	100			
Methylene Chloride	ND	1.7	100			
4-Methyl-2-Pentanone	ND	0.61	100			
Naphthalene	ND	2.6	100			
o-Xylene	ND	0.22	100			
p/m-Xylene	ND	0.87	100			
Xylenes (total)	ND	0.22	1.00			
Styrene	ND	0.64	100			
Tert-Amyl-Methyl Ether (TAME)	ND	0.84	100			
Tert-Butyl Alcohol (TBA)	ND	1.5	100			
Tetrachloroethene	ND	0.34	100			
Toluene	ND	1.9	100			
Trichloroethene	ND	0.27	100			
Trichlorofluoromethane	ND	0.56	100			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.1	100			
1,1,1-Trichloroethane	ND	0.27	100			
1,1,2-Trichloroethane	ND	0.27	100			
1,3,5-Trimethylbenzene	ND	0.25	100			
1,1,2,2-Tetrachloroethane	ND	0.69	100			
1,2,4-Trimethylbenzene	ND	0.74	100			
1,2,4-Trichlorobenzene	ND	1.5	100			
Vinyl Acetate	ND	0.70	100			
Vinyl Chloride	ND	0.13	100			
Surrogate	<u>Rec. (%)</u>	Control Limits	Qualifiers			
1,4-Bromofluorobenzene	89	57-129				
1,2-Dichloroethane-d4	97	47-137				
Toluene-d8	97	78-156				

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## **Analytical Report**

Cardno ERI	Date Received:	08/21/14
601 North McDowell Blvd.	Work Order:	14-08-1569
Petaluma, CA 94954-2312	Preparation:	N/A
	Method:	EPA TO-15M
	Units:	mg/m3
Project: ExxonMobil 99105/022783C		Page 9 of 12

Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
099-12-981-4678	N/A	Air	GC/MS II	N/A	08/21/14 17:49	140821L03
	Result		RL	DF	Qua	lifiers
	ND		0.12	1.00		
	ND		0.0016	1.00		
	ND		0.0078	1.00		
	ND		0.0034	1.00		
	ND		0.0052	1.00		
	ND		0.0019	1.00		
	ND		0.0044	1.00		
	ND		0.031	1.00		
	ND		0.0031	1.00		
	ND		0.0023	1.00		
	ND		0.0013	1.00		
	ND		0.0024	1.00		
	ND		0.0010	1.00		
	ND		0.0043	1.00		
	ND		0.0025	1.00		
	ND		0.0084	1.00		
	ND		0.0020	1.00		
	ND		0.0020	1.00		
	ND		0.0038	1.00		
	ND		0.014	1.00		
	ND		0.0030	1.00		
	ND		0.0020	1.00		
	ND		0.0023	1.00		
	ND		0.0030	1.00		
	ND		0.0030	1.00		
	ND		0.0023	1.00		
	ND		0.0020	1.00		
	ND		0.0020	1.00		
	ND		0.0045	1.00		
	ND		0.0084	1.00		
	ND		0.0022	1.00		
				1.00		
	Number	Number         Collected           099-12-981-4678         N/A           Result         ND           ND         ND      N	Number         Collected           099-12-981-4678         N/A         Air           Result         ND         ND           ND         ND <t< td=""><td>Number         Collected           099-12-981-4678         N/A         Air         GC/MS II           Result         RL         ND         0.12           ND         0.0016         ND         0.0078           ND         0.0034         ND         0.0052           ND         0.0019         ND         0.0014           ND         0.0019         ND         0.0031           ND         0.0031         ND         0.0023           ND         0.0013         ND         0.0024           ND         0.0024         ND         0.0024           ND         0.0025         ND         0.0020           ND         0.0020         ND         0.0020           ND         0.0020         ND         0.0020           ND         0.0020         ND         0.0020           ND         0.0020         ND         0.0023           ND         0.0023         ND         0.0023           ND         0.0023         ND         0.0023           ND         0.0023         ND         0.0023           ND         0.0023         ND         0.0023           ND</td><td>Number         Collected         Prepared           099-12-981-4678         N/A         Air         CC/MS II         N/A           Result         RL         DE         NO         1.00           ND         0.0016         1.00         NO         1.00           ND         0.0078         1.00         NO         1.00           ND         0.0034         1.00         NO         1.00           ND         0.0019         1.00         NO         1.00           ND         0.0031         1.00         NO         1.00           ND         0.0019         1.00         NO         1.00           ND         0.0031         1.00         NO         1.00           ND         0.0013         1.00         NO         1.00           ND         0.0024         1.00         NO         1.00           ND         0.0025         1.00         NO         1.00           ND         0.0021         1.00         NO         1.00           ND         0.0022         1.00         NO         1.00           ND         0.0020         1.00         NO         1.00           ND</td><td>Number         Collected         Prepared         Analyzed           099-12-931-4678         N/A         Air         GC/MS II         N/A         08/21/14/17.49           ND         0.12         1.00         0.0016         1.00         0.0016         1.00           ND         0.0016         1.00         0.0078         1.00         0.0078         0.007           ND         0.0034         1.00         0.0019         1.00         0.0019         0.001           ND         0.0019         1.00         0.0011         1.00         0.001         0.001           ND         0.0013         1.00         0.001         1.00         0.001         0.001           ND         0.0023         1.00         0.001         1.00         0.001         0.001           ND         0.0024         1.00         0.002         1.00         0.002         0.00           ND         0.0025         1.00         ND         0.0023         1.00         0.002           ND         0.0020         1.00         ND         0.0020         1.00         0.002           ND         0.0020         1.00         ND         0.0020         1.00         0.002</td></t<>	Number         Collected           099-12-981-4678         N/A         Air         GC/MS II           Result         RL         ND         0.12           ND         0.0016         ND         0.0078           ND         0.0034         ND         0.0052           ND         0.0019         ND         0.0014           ND         0.0019         ND         0.0031           ND         0.0031         ND         0.0023           ND         0.0013         ND         0.0024           ND         0.0024         ND         0.0024           ND         0.0025         ND         0.0020           ND         0.0020         ND         0.0020           ND         0.0020         ND         0.0020           ND         0.0020         ND         0.0020           ND         0.0020         ND         0.0023           ND         0.0023         ND         0.0023           ND         0.0023         ND         0.0023           ND         0.0023         ND         0.0023           ND         0.0023         ND         0.0023           ND	Number         Collected         Prepared           099-12-981-4678         N/A         Air         CC/MS II         N/A           Result         RL         DE         NO         1.00           ND         0.0016         1.00         NO         1.00           ND         0.0078         1.00         NO         1.00           ND         0.0034         1.00         NO         1.00           ND         0.0019         1.00         NO         1.00           ND         0.0031         1.00         NO         1.00           ND         0.0019         1.00         NO         1.00           ND         0.0031         1.00         NO         1.00           ND         0.0013         1.00         NO         1.00           ND         0.0024         1.00         NO         1.00           ND         0.0025         1.00         NO         1.00           ND         0.0021         1.00         NO         1.00           ND         0.0022         1.00         NO         1.00           ND         0.0020         1.00         NO         1.00           ND	Number         Collected         Prepared         Analyzed           099-12-931-4678         N/A         Air         GC/MS II         N/A         08/21/14/17.49           ND         0.12         1.00         0.0016         1.00         0.0016         1.00           ND         0.0016         1.00         0.0078         1.00         0.0078         0.007           ND         0.0034         1.00         0.0019         1.00         0.0019         0.001           ND         0.0019         1.00         0.0011         1.00         0.001         0.001           ND         0.0013         1.00         0.001         1.00         0.001         0.001           ND         0.0023         1.00         0.001         1.00         0.001         0.001           ND         0.0024         1.00         0.002         1.00         0.002         0.00           ND         0.0025         1.00         ND         0.0023         1.00         0.002           ND         0.0020         1.00         ND         0.0020         1.00         0.002           ND         0.0020         1.00         ND         0.0020         1.00         0.002

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

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#### **Analytical Report**

Cardno ERI	Dat	te Received:		08/21/14		
601 North McDowell Blvd.	Wo	ork Order:		14-08-1569		
Petaluma, CA 94954-2312	Pre	Preparation:				
		thod:		N/A EPA TO-15M		
	Uni			mg/m3		
Designet: Evene Mahil 00405/0007020	UI			•		
Project: ExxonMobil 99105/022783C				Page 10 of 12		
Parameter	Result	<u>RL</u>	DF	Qualifiers		
Methylene Chloride	ND	0.017	1.00			
4-Methyl-2-Pentanone	ND	0.0061	1.00			
Naphthalene	ND	0.026	1.00			
o-Xylene	ND	0.0022	1.00			
p/m-Xylene	ND	0.0087	1.00			
Xylenes (total)	ND	0.0022	1.00			
Styrene	ND	0.0064	1.00			
Tert-Amyl-Methyl Ether (TAME)	ND	0.0084	1.00			
Tert-Butyl Alcohol (TBA)	ND	0.015	1.00			
Tetrachloroethene	ND	0.0034	1.00			
Toluene	ND	0.019	1.00			
Trichloroethene	ND	0.0027	1.00			
Trichlorofluoromethane	ND	0.0056	1.00			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.011	1.00			
1,1,1-Trichloroethane	ND	0.0027	1.00			
1,1,2-Trichloroethane	ND	0,0027	1.00			
1,3,5-Trimethylbenzene	ND	0.0025	1.00			
1,1,2,2-Tetrachloroethane	ND	0.0069	1.00			
1,2,4-Trimethylbenzene	ND	0.0074	1.00			
1,2,4-Trichlorobenzene	ND	0.015	1.00			
Vinyl Acetate	ND	0.0070	1.00			
Vinyl Chloride	ND	0.0013	1.00			
Surrogate	<u>Rec. (%)</u>	Control Limits	<b>Qualifiers</b>			
1,4-Bromofluorobenzene	90	57-129				
1,2-Dichloroethane-d4	102	47-137				
Toluene-d8	97	78-156				

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## **Analytical Report**

Cardno ERI	Date Received:	08/21/14
601 North McDowell Blvd.	Work Order:	14-08-1569
Petaluma, CA 94954-2312	Preparation:	N/A
	Method:	EPA TO-15M
	Units:	mg/m3
Project: ExxonMobil 99105/022783C		Page 11 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-981-4694	N/A	Air	GC/MS II	N/A	08/22/14 17:25	140822L02
Parameter		Result		RL	DF	Qua	lifiers
Acetone		ND	i	0.12	1.00		
Benzene		ND	i	0.0016	1.00		
Benzyl Chloride		ND	1	0.0078	1.00		
Bromodichloromethane		ND	i	0.0034	1.00		
Bromoform		ND		0.0052	1.00		
Bromomethane		ND		0.0019	1.00		
2-Butanone		NÐ		0.0044	1.00		
Carbon Disulfide		ND		0.031	1.00		
Carbon Tetrachloride		ND	1	0.0031	1.00		
Chlorobenzene		ND	1	0.0023	1.00		
Chloroethane		ND	1	0.0013	1.00		
Chloroform		ND		0.0024	1.00		
Chloromethane		ND		0.0010	1.00		
Dibromochloromethane		ND		0.0043	1.00		
Dichlorodifluoromethane		ND		0.0025	1.00		
Diisopropyl Ether (DIPE)		ND		0.0084	1.00		
1,1-Dichloroethane		ND		0.0020	1.00		
1,1-Dichloroethene		ND		0.0020	1.00		
1,2-Dibromoethane		ND		0.0038	1.00		
Dichlorotetrafluoroethane		ND		0.014	1.00		
1,2-Dichlorobenzene		ND		0.0030	1.00		
1,2-Dichloroethane		ND		0.0020	1.00		
1,2-Dichloropropane		ND		0.0023	1.00		
1,3-Dichlorobenzene		ND		0.0030	1.00		
1,4-Dichlorobenzene		ND		0.0030	1.00		
c-1,3-Dichloropropene		ND		0.0023	1.00		
c-1,2-Dichloroethene		ND		0.0020	1.00		
t-1,2-Dichloroethene		ND		0.0020	1.00		
t-1,3-Dichloropropene		ND		0.0045	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND		0.0084	1.00		
Ethylbenzene		ND		0.0022	1.00		
4-Ethyltoluene		ND		0.0025	1.00		
Hexachloro-1,3-Butadiene		ND		0.016	1.00		
2-Hexanone		ND		0.0061	1.00		
Methyl-t-Butyl Ether (MTBE)		ND		0.0072	1.00		

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#### **Analytical Report**

Cardno ERI	Da	te Received:		08/21/14			
601 North McDowell Blvd.	Wo	ork Order:		14-08 <b>-</b> 1569			
Petaluma, CA 94954-2312	Pre	Preparation:					
		thod:		EPA TO-15M			
	Un			mg/m3			
Project: ExxonMobil 99105/022783C				Page 12 of 12			
Parameter	<u>Result</u>	<u>RL</u>	DF	Qualifiers			
Methylene Chloride	ND	0.017	1.00				
4-Methyl-2-Pentanone	ND	0.0061	1.00				
Naphthalene	ND	0.026	1.00				
o-Xylene	ND	0.0022	1.00				
p/m-Xylene	ND	0.0087	1.00				
Xylenes (total)	ND	0.0022	1.00				
Styrene	ND	0.0064	1.00				
Tert-Amyl-Methyl Ether (TAME)	ND	0.0084	1.00				
Tert-Butyl Alcohol (TBA)	ND	0.015	1.00				
Tetrachloroethene	ND	0.0034	1.00				
Toluene	ND	0.019	1.00				
Trichloroethene	ND	0.0027	1.00				
Trichlorofluoromethane	ND	0.0056	1.00				
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.011	1.00				
1,1,1-Trichloroethane	ND	0.0027	1.00				
1,1,2-Trichloroethane	ND	0.0027	1.00				
1,3,5-Trimethylbenzene	ND	0.0025	1.00				
1,1,2,2-Tetrachloroethane	ND	0.0069	1.00				
1,2,4-Trimethylbenzene	ND	0.0074	1.00				
1,2,4-Trichlorobenzene	ND	0.015	1.00				
Vinyl Acetate	ND	0.0070	1.00				
Vinyl Chloride	ND	0.0013	1.00				
Surrogate	<u>Rec. (%)</u>	Control Limits	Qualifiers				
1,4-Bromofluorobenzene	94	57-129					
1,2-Dichloroethane-d4	93	47-137					
Toluene-d8	99	78-156					

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#### **Analytical Report**

Cardno ERI			Date Re	ceiv	ved:			08/21/14
601 North McDowell Blvd.			Work O	der	:			14-08-1569
Petaluma, CA 94954-2312			Prepara	tion	:			N/A
			Method:					EPA TO-3N
			Units:					mg/m3
Project: ExxonMobil 99105/022	783C						Pa	ige 1 of 1
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix		Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V-INF-COMP-1	14-08-1569-1-A	08/19/14 04:30	Air	1	GC 60	N/A	08/21/14 14:18	140821L01
Parameter		Result		RL		DF	Qua	alifiers
TPH as Gasoline		5200		35		5.00		
V-INF-COMP-2	14-08-1569-2-A	08/19/14 12:30	Air	3	GC 60	N/A	08/21/14 14:07	140821L01
Parameter		Result		RL		DF	Qua	alifiers
TPH as Gasoline		4400		35		5.00		
V-INF-COMP-3	14-08-1569-3-A	08/19/14 20:35	Air	y.	GC 60	N/A	08/21/14 14:28	140821L01
Parameter		Result		RL		DF	Qua	alifiers
TPH as Gasoline		5200		35		5.00		
V-INF-COMP-4	14-08-1569-4-A	08/20/14 04:30	Air		GC 60	N/A	08/21/14 14:37	140821L01
Parameter		Result		RL		DF	Qua	alifiers
TPH as Gasoline		4800		35		5.00		
Method Blank	098-01-005-5746	N/A	Air		GC 60	N/A	08/21/14 13:31	140821L01
Parameter		Result		RL		DF	Qua	alifiers
TPH as Gasoline		ND		7.0		1.00		

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## **Quality Control - Sample Duplicate**

Cardno ERI			Date Receive	08/21/1						
601 North McDowell Blvd			Work Order:		14-08-1					
Petaluma, CA 94954-231	2		Preparation:			N/A				
			Method:			EPA TO-3M				
Project: ExxonMobil 9910	05/022783C					Page 1 of 1				
Quality Control Sample ID	Туре	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number				
V-INF-COMP-4	Sample	Air	GC 60	N/A	08/21/14 14:37	140821D01				
V-INF-COMP-4	Sample Duplicate	Air	GC 60	N/A	08/21/14 15:28	140821D01				
Parameter		Sample Conc.	DUP Conc.	<u>RPD</u>	RPD CL	<u>Qualifiers</u>				
TPH as Gasoline		4841	4818	0	0-20					

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## Quality Control - LCS/LCSD

Cardno ERI	Date Received:	08/21/14
601 North McDowell Blvd.	Work Order:	14-08-1569
Petaluma, CA 94954-2312	Preparation:	N/A
	Method:	EPA TO-15M
Project: ExxonMobil 99105/022783C		Page 1 of 5

Quality Control Sample ID	Туре		Matrix	Instru	ument	Date Prepare	ed Date A	Analyzed	LCS/LCSD Ba	itch Number
099-12-981-4678	LCS	A STATE AND	Air	GC/I	NS II	N/A	08/21/	14 15:18	140821L03	
099-12-981-4678	LCSD		Air	GC/I	NS II	N/A	08/21/	14 16:09	140821L03	
Parameter	<u>Spike</u> Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	<u>%Rec. CL</u>	ME CL	<u>RPD</u>	RPD CL	<u>Qualifiers</u>
Acetone	0.05939	0.05188	87	0.05402	91	50-150	33-167	4	0-35	
Benzene	0.07987	0.09187	115	0.09259	116	60-156	44-172	1	0-40	
Benzyl Chloride	0.1294	0.1328	103	0.1390	107	50-150	33-167	5	0-35	
Bromodichloromethane	0.1675	0,1597	95	0.1693	101	50-150	33-167	6	0-35	
Bromoform	0.2584	0.2451	95	0.2607	101	50-150	33-167	6	0-38	
Bromomethane	0.09708	0.08525	88	0.09132	94	50-150	33-167	7	0-35	
2-Butanone	0.07373	0.07872	107	0.08082	110	50-150	33-167	3	0-35	
Carbon Disulfide	0.07785	0.07889	101	0.08210	105	50-150	33-167	4	0-35	
Carbon Tetrachloride	0,1573	0.1352	86	0.1459	93	64-154	49-169	8	0-32	
Chlorobenzene	0.1151	0,1232	107	0.1251	109	50-150	33-167	1	0-35	
Chloroethane	0.06596	0.05753	87	0.05919	90	50-150	33-167	3	0-35	
Chloroform	0.1221	0.1083	89	0.1149	94	50-150	33-167	6	0-35	
Chloromethane	0.05163	0.04688	91	0.05066	98	50-150	33-167	8	0-35	
Dibromochloromethane	0,2130	0.2061	97	0.2170	102	50-150	33-167	5	0-35	
Dichlorodifluoromethane	0.1236	0.1002	81	0.1127	91	50-150	33-167	12	0-35	
Diisopropyl Ether (DIPE)	0.1045	0.09547	91	0.09933	95	60-140	47-153	4	0-30	
1,1-Dichloroethane	0.1012	0.1016	100	0.1043	103	50-150	33-167	3	0-35	
1,1-Dichloroethene	0.09912	0.08537	86	0.09390	95	50-150	33-167	10	0-35	
1,2-Dibromoethane	0.1921	0,2048	107	0.2127	111	54-144	39-159	4	0-36	
Dichlorotetrafluoroethane	0.1748	0.1171	67	0.1304	75	50-150	33-167	11	0-35	
1,2-Dichlorobenzene	0.1503	0.1471	98	0.1526	102	34-160	13-181	4	0-47	
1,2-Dichloroethane	0.1012	0.09028	89	0.09753	96	69-153	55-167	8	0-35	
1,2-Dichloropropane	0.1155	0.1259	109	0.1277	110	67-157	52-172	1	0-35	
1,3-Dichlorobenzene	0.1503	0.1516	101	0.1579	105	50-150	33-167	4	0-35	
1,4-Dichlorobenzene	0.1503	0.1575	105	0.1626	108	36- <b>156</b>	16-176	3	0-47	
c-1,3-Dichloropropene	0.1135	0.1331	117	0.1375	121	61-157	45-173	3	0-35	
c-1,2-Dichloroethene	0.09912	0.1105	111	0.1113	112	50-150	33-167	1	0-35	
t-1,2-Dichloroethene	0.09912	0.1049	106	0.1065	107	50-150	33-167	2	0-35	
t-1,3-Dichloropropene	0.1135	0.1430	126	0.1503	132	50-150	33-167	5	0-35	
Ethyl-t-Butyl Ether (ETBE)	0.1045	0.1024	98	0.1055	101	60-140	47-153	3	0-30	
Ethylbenzene	0.1086	0.1257	116	0.1291	1 <b>19</b>	52-154	35-171	3	0-38	
4-Ethyltoluene	0.1229	0.1360	111	0.1416	115	50-150	33-167	4	0-35	
Hexachloro-1,3-Butadiene	0.2666	0.2035	76	0.2185	82	50-150	33-167	7	0-35	
2-Hexanone	0.1024	0.1078	105	0.1101	107	50-150	33-167	2	0-35	
Methyl-t-Butyl Ether (MTBE)	0.09013	0.09859	109	0,1014	113	50-150	33-167	3	0-35	
Methylene Chloride	0,08684	0.08046	93	0.08152	94	50-150	33-167	1	0-35	

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#### **Quality Control - LCS/LCSD**

Cardno ERI				Date	Receive	d:				08/21/14
601 North McDowell Blvd.				Wor	c Order:				1	4-08-1569
Petaluma, CA 94954-2312						N/A				
				Prep Meth	FP	A TO-15M				
Project: ExxonMobil 99105	/022783C			Wet	100.				Page	
							_			
<u>Parameter</u>	<u>Spike</u> Added	LCS Conc	<u>. LCS</u> <u>%Rec.</u>	LCSD Conc.	<u>LCSD</u> <u>%Rec.</u>	<u>%Rec. CL</u>	ME CL	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
4-Methyl-2-Pentanone	0.1024	0.1066	104	0.1100	107	50-150	33-167	3	0-35	
Naphthalene	0.1311	0.1166	89	0.1179	90	40-190	15-215	1	0-30	
o-Xylene	0.1086	0.1132	104	0.1175	108	52-148	36-164	4	0-38	
p/m-Xylene	0.2171	0.2287	105	0.2398	110	42-156	23-175	5	0-41	
Styrene	0.1065	0.1105	104	0.1124	106	50-150	33-167	2	0-35	
Tert-Amyl-Methyl Ether (TAME)	0.1045	0.1077	103	0.1091	104	60-140	47-153	1	0-30	
Tert-Butyl Alcohol (TBA)	0.1516	0.1430	94	0.1460	96	60-140	47-153	2	0-30	
Tetrachloroethene	0.1696	0.1787	105	0.1833	108	56-152	40-168	3	0-40	
Toluene	0.09421	0.1093	116	0.1120	119	56-146	41-161	2	0-43	
Trichloroethene	0.1343	0.1403	104	0.1465	109	63-159	47-175	4	0-34	
Trichlorofluoromethane	0.1405	0.1111	79	0.1212	86	50-150	33-167	9	0-35	
1,1,2-Trichloro-1,2,2- Trifluoroethane	0.1916	0.1813	95	0.1917	100	50-150	33-167	6	0-35	
1,1,1-Trichloroethane	0.1364	0.1175	86	0.1270	93	50-150	33-167	8	0-35	
1,1,2-Trichloroethane	0.1364	0,1384	101	0.1442	106	65-149	51-163	4	0-37	
1,3,5-Trimethylbenzene	0.1229	0.1249	102	0.1308	106	50-150	33-167	5	0-35	
1,1,2,2-Tetrachloroethane	0.1716	0.1661	97	0.1713	100	50-150	33-167	3	0-35	
1,2,4-Trimethylbenzene	0.1229	0.1155	94	0.1220	99	50-150	33-167	5	0-35	
1,2,4-Trichlorobenzene	0.1855	0.1740	94	0.1790	96	50-150	33-167	3	0-35	
Vinyl Acetate	0.08803	0.08602	98	0.08854	101	50-150	33-167	3	0-35	
Vinyl Chloride	0.06391	0.05584	87	0.06069	95	45-177	23-199	8	0-36	

Total number of LCS compounds: 56

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

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### **Quality Control - LCS/LCSD**

Cardno ERI	Date Received:	08/21/14
601 North McDowell Blvd.	Work Order:	14-08-1569
Petaluma, CA 94954-2312	Preparation:	N/A
	Method:	EPA TO-15M
Project: ExxonMobil 99105/022783C		Page 3 of 5

Quality Control Sample ID	Туре		Matrix		ument	Date Prepare			LCS/LCSD Ba	tch Number
099-12-981-4694	LCS		Air	GC/I	AS II	N/A	08/22/	14 13:19	140822L02	
099-12-981-4694	LCSD	Sec. Sec. 18	Air	GC/I	AS II	N/A		14 14:10	140822L02	W)
Parameter	<u>Spike</u> Added	LCS Conc.	LCS <u>%Rec.</u>	LCSD Conc.	LCSD %Rec.	<u>%Rec. CL</u>	ME CL	<u>RPD</u>	RPD CL	<u>Qualifiers</u>
Acetone	0.05939	0.05086	86	0.05108	86	50-150	33-167	0	0-35	
Benzene	0.07987	0.08440	106	0.08480	106	60-156	44-172	0	0-40	
Benzyl Chloride	0.1294	0.1265	98	0.1303	101	50-150	33-167	3	0-35	
Bromodichloromethane	0.1675	0.1489	89	0.1540	92	50-150	33-167	3	0-35	
Bromoform	0.2584	0.2287	88	0.2391	93	50-150	33-167	4	0-38	
Bromomethane	0.09708	0.08218	85	0.08295	85	50-150	33-167	1	0-35	
2-Butanone	0.07373	0.07010	95	0.07095	96	50-150	33-167	1	0-35	
Carbon Disulfide	0.07785	0.07021	90	0.07121	91	50-150	33-167	1	0-35	
Carbon Tetrachloride	0.1573	0.1281	81	0.1328	84	64-154	49-169	4	0-32	
Chlorobenzene	0.1151	0.1112	97	0.1137	99	50-150	33-167	2	0-35	
Chloroethane	0.06596	0.05693	86	0.05752	87	50-150	33-167	1	0-35	
Chloroform	0.1221	0.1021	84	0.1044	86	50-150	33-167	2	0-35	
Chloromethane	0.05163	0.04610	89	0.04570	89	50-150	33-167	1	0-35	
Dibromochloromethane	0,2130	0.1900	89	0.1977	93	50-150	33-167	4	0-35	
Dichlorodifluoromethane	0.1236	0,09998	81	0,1014	82	50-150	33-167	1	0-35	
Diisopropyl Ether (DIPE)	0.1045	0.09381	90	0.09490	91	60-140	47-153	1	0-30	
1,1-Dichloroethane	0.1012	0.09423	93	0.09454	93	50-150	33-167	0	0-35	
1,1-Dichloroethene	0.09912	0.08421	85	0.08506	86	50-150	33-167	1	0-35	
1,2-Dibromoethane	0.1921	0.1874	98	0.1936	101	54-144	39-159	3	0-36	
Dichlorotetrafluoroethane	0.1748	0.1452	83	0.1468	84	50-150	33-167	1	0-35	
1,2-Dichlorobenzene	0.1503	0.1389	92	0.1440	96	34-160	13-181	4	0-47	
1,2-Dichloroethane	0.1012	0.08660	86	0.08953	88	69-153	55-167	3	0-35	
1,2-Dichloropropane	0.1155	0.1156	100	0.1157	100	67-157	52-172	0	0-35	
1,3-Dichlorobenzene	0.1503	0.1417	94	0.1453	97	50-150	33-167	3	0-35	
1,4-Dichlorobenzene	0.1503	0.1459	97	0.1507	100	36-156	16-176	3	0-47	
c-1,3-Dichloropropene	0,1135	0.1226	108	0.1246	110	61-157	45-173	2	0-35	
c-1,2-Dichloroethene	0.09912	0.1022	103	0.1024	103	50-150	33-167	0	0-35	
t-1,2-Dichloroethene	0.09912	0.1000	101	0.1005	101	50-150	33-167	0	0-35	
t-1,3-Dichloropropene	0.1135	0.1220	108	0.1251	110	50-150	33-167	2	0-35	
Ethyl-t-Butyl Ether (ETBE)	0,1045	0.1022	98	0.1015	97	60-140	47-153	1	0-30	
Ethylbenzene	0.1086	0.1148	106	0.1176	108	52-154	35-171	2	0-38	
4-Ethyltoluene	0.1229	0.1237	101	0.1272	104	50-150	33-167	3	0-35	
Hexachloro-1,3-Butadiene	0.2666	0.1920	72	0.2052	77	50-150	33-167	7	0-35	
2-Hexanone	0.1024	0.09797	96	0.1015	99	50-150	33-167	3	0-35	
Methyl-t-Butyl Ether (MTBE)	0.09013	0.08942	99	0,08906	99	50-150	33-167	0	0-35	
Methylene Chloride	0.08684	0.07168	83	0.07274	84	50-150	33-167	1	0-35	

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### **Quality Control - LCS/LCSD**

Cardno ERI				Date	Receive	d:				08/21/14
601 North McDowell Blvd.				Worl	k Order:				1	4-08-1569
Petaluma, CA 94954-2312				Pren	aration:					N/A
					EPA TO-15					
Drojaat: ExwanMabil 00105	10222020			Meth	100.				Page	
Project: ExxonMobil 99105	/0227030								T age -	+010
Parameter	<u>Spike</u> Added	LCS Conc.	<u>LCS</u> <u>%Rec.</u>	LCSD Conc.	<u>LCSD</u> <u>%Rec.</u>	<u>%Rec. CL</u>	ME CL	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
4-Methyl-2-Pentanone	0.1024	0.09776	95	0.1007	98	50-150	33-167	3	0-35	
Naphthalene	0.1311	0.1141	87	0.1201	92	40-190	15-215	5	0-30	
o-Xylene	0.1086	0.1053	97	0.1085	100	52-148	36-164	3	0-38	
p/m-Xylene	0.2171	0.2129	98	0.2194	101	42-156	23-175	3	0-41	
Styrene	0.1065	0.1081	101	0.1098	103	50-150	33-167	2	0-35	
Tert-Amyl-Methyl Ether (TAME)	0.1045	0.1072	103	0.1069	102	60-140	47-153	0	0-30	
Tert-Butyl Alcohol (TBA)	0.1516	0.1353	89	0.1365	90	60-140	47-153	1	0-30	
Tetrachloroethene	0.1696	0.1620	96	0.1668	98	56-152	40-168	3	0-40	
Toluene	0.09421	0.09763	104	0.1002	106	56-146	41-161	3	0-43	
Trichloroethene	0.1343	0.1323	98	0.1347	100	63-159	47-175	2	0-34	
Trichlorofluoromethane	0.1405	0.1150	82	0.1186	84	50-150	33-167	3	0-35	
1,1,2-Trichloro-1,2,2- Trifluoroethane	0.1916	0.1664	87	0.1690	88	50-150	33-167	2	0-35	
1,1,1-Trichloroethane	0.1364	0.1156	85	0.1176	86	50-150	33-167	2	0-35	
1,1,2-Trichloroethane	0.1364	0.1300	95	0.1330	98	65-149	51-163	2	0-37	
1,3,5-Trimethylbenzene	0.1229	0.1173	95	0.1214	99	50-150	33-167	3	0-35	
1,1,2,2-Tetrachloroethane	0.1716	0.1564	91	0.1609	94	50-150	33-167	3	0-35	
1,2,4-Trimethylbenzene	0.1229	0.1088	89	0.1128	92	50-150	33-167	4	0-35	
1,2,4-Trichlorobenzene	0.1855	0.1701	92	0.1797	97	50-150	33-167	5	0-35	
Vinyl Acetate	0.08803	0.08722	99	0.08810	100	50-150	33-167	1	0-35	
Vinyl Chloride	0.06391	0.05625	88	0.05595	88	45-177	23-199	1	0-36	

Total number of LCS compounds: 56 Total number of ME compounds: 0 Total number of ME compounds allowed: 3 LCS ME CL validation result: Pass

**TPH** as Gasoline

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### **Quality Control - LCS**

Cardno ERI			Date Recei	ved:		08/21/14
601 North McDowell Blvd			Work Order	r:		14-08-1569
Petaluma, CA 94954-231	2		Preparation	1:		N/A
			Method:			EPA TO-3M
Project: ExxonMobil 9910	5/022783C					Page 5 of 5
Quality Control Sample ID	Туре	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
098-01-005-5746	LCS	Air	GC 60	N/A	08/21/14 13:12	140821L01
Parameter		Spike Added	Conc. Recov	vered LCS %R	ec. <u>%Rec</u>	CL Qualifiers

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80-120

932.5

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Calscience, Ir	IC.	Gar	den	Grov	e, C	CA	92	84	1		Fax: 714-894-7501									ike.	Xon 1	1-1	ň	ř	1	i69					
Cons	sultant Name:	Cardno	ERI						50.01								A	cco	unt #	: N	Ą			P	<b>O</b> #:	Dire	ect Bi	il Ca	rdine	ERI	
Consul	tant Address:	601 N M	icDowell														- In	voic	ce To	: Di	rect Bill Ca	ardno	ER								
Consultant (	City/State/Zip:	Petalum	a, CA 94	1954													_ R	epo	ert To	: G	reg Gurss										
ExxonMobi	I Project Mgr:	Jennife	r Sedlad	:hek												F		ect N	Vame	e: 02	2 2783 CX										
Consultan	t Project Mgr:	Greg G	urss												Exc	xon	Mob	oll Si	ite #:			991	05			Major Project	(AFI	E #):			
Consultant Teleph	none Number:	(707) 76	6-2000				Fa	x No	).:								Site	Add	iress	s: 63	301 San Pa	iblo /	Aven	ue							
Sampler	Name (Print):	Sco	it E	lder											Site	e Cl	ty, S	State	e, Zip	n: 0	akland, CA										
Samp	ler Signature:	110	4- 6	lt-											0	vers	sigh	t Ag	ency	r: Al	ameda Co	unty	Envi	ronm	ental	Health					
										Pre	serv	ative	9		Τ	-	Mat	rix			T			Ana	lyze l	For:		1			
	Field Point Name	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Methanol	Sodium Bisulfate HCI	NaOH	H <sub>2</sub> SO <sub>4</sub> Plastic	1204 Oldes		Other	None	orounowater Masteruster	Drinking Water	Sludge	ioil	Alr Other (specify): Distilled Water	d 8015 B	TPHg TO-3	Full List VOCs TO-15	Oxygenates 8260B	Motor Oil by 8015B			RUSH TAT (Pre-Schedule)	5-day TAT	Standard 10-day TAT	Due Date of Report
Sample ID				2		0	ш. —		ωI	Z	ΞI		2			2 2		ι»	v) <	< C	<u>                                     </u>				22		<u> </u>	1 R	ų,		Dr
	VENT-INE		-	<u> </u>	-	-		$\mathbb{H}$	+	F		+	$\mathbf{F}$	P	1	+	+	H	=	4		X	X	+	+		+	┢	$\vdash$	X	
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V-INF-COMP- <sup>1</sup> /	EVENT-INF	820,14	0430	1				Ц				$\downarrow$	╞	$\square$	1			Ц	_	1	ļ	X	X							X	4
V=INF-COMP-	VENT-INF						_	Ħ	+	Ħ	Ħ	+	t	$\square$	1		T	H		1		X	×	+	+		t			X	
V=INF-COMP	VENT-INE			1	-			H	+	$\pm$		+	+	H	1	+	+	H	-	1		X	X	+	+		+	$\pm$		X	
V-INF-COMP-	VENT-INF			1				Ħ	+			$\pm$		H	1	+	+	H		+		×	×	_	+		$\pm$	E		X	
V-EFF-1	VENT-EFF			1				H	+			$\pm$	t	H	1	+	$\pm$	H		+		×	×	-	-		+			X	
Comments/Special Instructions: TO-15 to Include Full Scan VOCs, inc GLOBAL ID # T0600101855	cluding BTEX,	fuel oxy	genate						naler	ne.		PL			alla	bs(	@er	i-us	ES TO	o m	aboratory Temper Sample VOCs F	ature Coni ree c	Upo taine of He	n Re rs Int adsp	act? ace?			Y Y		N N	
Relinquished by:		8/2	2/14		r .	10	ived I	SI	'n	al	U	γl	£	7	SJ		lir;	K	Time 35	Le	C Deliveral evel 2 evel 3	oles	(plea	se cir	cle or	ne)					
Ton mally To	650	8/20	ate 2/14	Tim 173		Rece	ived I	A		La	Return	4	_	-	. 1	Date			7ime 210	s						ch pre-schedule v ic instructions	// Cal:	scien	ce		

Page 25 of 27

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	Page 1 of 1 Page 26 of 27
CSSO .	<b><i>(WebShip)</i></b>
Ship From: ALAN KEMP CAL SCIENCE- CONCORD 5063 COMMERCIAL CIRCLE #H	Tracking #: 525436988 NPS
CONCORD, CA 94520 Ship Yo: SAMPLE RECEIVING CEL	ORC A
7440 LINCOLN WAY GARDEN GROVE, CA 92841	
COD: \$0.00	D92845A
Referen <b>ce:</b> CARDNO ERI, CRA, STANTEC Delivery Instructions:	27834403
Signature Type: SIGNATURE REQUIRED	Print Date : 08/20/14 15:48 PM:
	Package 1 of 1
Send Label To Printer. V Print All	Edit Shipment Finish
LABEL INSTRUCTIONS:	
STEP 5 - Use the "Send Label to Printer" button STEP 3 - Fold this page in half。 STEP 5 - Securely attach this label to your pack	skage, if you do not have scheduled daily pickup service or Drop-off your
ADDITIONAL OPTIONS:	5
Send Label Via Email Create I	Return Label
TERMS AND CONDITIONS:	
Our limitive for loss or damage to any package is and doctare a higher authorized value. If you de lasser of your declared value or the actual value whether direct, incidental, special or consequent knowledge that such damage might be incurred your acts or omissions, including but not limited we will not be liable if you or the recipient violate delay caused by events we cannot control, inclu public enemies, war, strikes, or civil commotion. Package is \$500. For other shipments the highest	to all the service terms and conditions described in this section. s limited to your actual damages or \$100 whichever is less, unless you pay for clare a higher value and pay the additional charge, our liability will be the e of your loss or damage. In any event, we will not be liable for any damage, tial, in excess of the declared value of a shipment whether or not we had including but not limited to loss of income or profit. We will not be liable for to improper or insufficient packaging, securing, marking or addressing. Also, as any of the terms of our agreement. We will not be liable for loss, damage or iding but not limited to acts of God, perils of the air, weather conditions, act of The highest declared value for our GSO Priority Letter or GSO Priority est declared value is \$10,000 unless your package contains items of declared value we allow is \$500. Items of "extraordinary value" include, but or etals, tickets, negotiable instruments and other items with intrinsic value.

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## Calscience

#### **Glossary of Terms and Qualifiers**

JIK Oluel.	14-08-1569 Page 1 of 1
Qualifiers	Definition
AZ	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound wa in control and, therefore, the sample data was reported without further clarification.
В	Analyte was present in the associated method blank.
BA	The MS/MSD RPD was out of control due to suspected matrix interference.
BB	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
DF	Reporting limits elevated due to matrix interferences.
Е	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
GE	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
HD	Chromat. profile inconsistent with pattern(s) of ref. fuel stnds.
НО	High concentration matrix spike recovery out of limits
HT	Analytical value calculated using results from associated tests.
ΗХ	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS was in control.
IL	Relative percent difference out of control.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
LD	Analyte presence was not confirmed by second column or GC/MS analysis.
LP	The LCS and/or LCSD recoveries for this analyte were above the upper control limit. The associated sample was non-detected. Therefore the sample data was reported without further clarification.
LQ	LCS recovery above method control limits.
LR	LCS recovery below method control limits.
ND	Parameter not detected at the indicated reporting limit.
QO	Compound did not meet method-described identification guidelines. Identification was based on additional GC/MS characteristics.
RU	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
SG	A silica gel cleanup procedure was performed.
SN	See applicable analysis comment.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

client: <u>Cardno ER</u>	<u> </u>	EIPT FOR	1212	08/21/	of <u> </u> ′14
TEMPERATURE: Thermometer Temperature °C Sample(s) outside temperature Sample(s) outside temperature Received at ambient temper	<b>c</b> - <b>0.3</b> ° <b>C</b> (CF) = e criteria (PM/APM contact e criteria but received on ic	ted by:) ce/chilled on same da	Blank	Sample	)
Ambient Temperature: 🖸 Air	□ Filter			Checked by	: <u>15</u>
CUSTODY SEALS INTACT:	□ No (Not Intact) □ No (Not Intact)	□ Not Present	□ N/A	Checked by: Checked by:	
SAMPLE CONDITION: Chain-Of-Custody (COC) docume COC document(s) received comp		nples	1	No □	N/A
Collection date/time, matrix, and/or	r # of containers logged in ba	sed on sample labels.	Z		
☐ Collection date/time, matrix, and/o ☐ No analysis requested. ☐ Not r Sampler's name indicated on CO	r # of containers logged in ba elinquíshed. □ No date/tir )C	sed on sample labels. ne relinquished.	Ø		
☐ Collection date/time, matrix, and/o ☐ No analysis requested. ☐ Not r Sampler's name indicated on CO Sample container label(s) consist	r # of containers logged in ba elinquished. □ No date/tir ℃ tent with COC	sed on sample labels. ne relinquished.	Ø Ø		
□ Collection date/time, matrix, and/or □ No analysis requested. □ Not r Sampler's name indicated on CO Sample container label(s) consist Sample container(s) intact and go	r # of containers logged in ba relinquished.	sed on sample labels. me relinquished.	d d		
□ Collection date/time, matrix, and/or □ No analysis requested. □ Not r Sampler's name indicated on CO Sample container label(s) consist Sample container(s) intact and go Proper containers and sufficient v	r # of containers logged in ba relinquished.	sed on sample labels. ne relinquished. uested	N N N		
□ Collection date/time, matrix, and/or □ No analysis requested. □ Not re Sampler's name indicated on CO Sample container label(s) consist Sample container(s) intact and go Proper containers and sufficient w Analyses received within holding	r # of containers logged in bar elinquished.	sed on sample labels. me relinquished. uested	N N N		
□ Collection date/time, matrix, and/or □ No analysis requested. □ Not r Sampler's name indicated on CO Sample container label(s) consist Sample container(s) intact and go Proper containers and sufficient v Analyses received within holding Aqueous samples received wi	r # of containers logged in ba elinquished.	sed on sample labels. ne relinquished. uested			
□ Collection date/time, matrix, and/or □ No analysis requested. □ Not r Sampler's name indicated on CO Sample container label(s) consist Sample container(s) intact and go Proper containers and sufficient v Analyses received within holding Aqueous samples received wi □ pH □ Residual Chlorine □ D	r # of containers logged in bar relinquished.	sed on sample labels. ne relinquished. uested ime Ived Oxygen			
□ Collection date/time, matrix, and/or □ No analysis requested. □ Not r Sampler's name indicated on CO Sample container label(s) consist Sample container(s) intact and go Proper containers and sufficient v Analyses received within holding Aqueous samples received wi □ pH □ Residual Chlorine □ D Proper preservation noted on CO	r # of containers logged in bar elinquished.	sed on sample labels. ne relinquished. uested ime Ived Oxygen			
□ Collection date/time, matrix, and/or □ No analysis requested. □ Not research Sampler's name indicated on CO Sample container label(s) consist Sample container(s) intact and go Proper containers and sufficient ve Analyses received within holding Aqueous samples received within holding □ pH □ Residual Chlorine □ D Proper preservation noted on CO □ Unpreserved vials received for	r # of containers logged in bar elinquished.	sed on sample labels. me relinquished. uested. ime Ived Oxygen.			
□ Collection date/time, matrix, and/or □ No analysis requested. □ Not research Sampler's name indicated on CO Sample container label(s) consist Sample container(s) intact and go Proper containers and sufficient ve Analyses received within holding Aqueous samples received within holding □ pH □ Residual Chlorine □ D Proper preservation noted on CO □ Unpreserved vials received for /olatile analysis container(s) free Fedlar bag(s) free of condensation	r # of containers logged in bar elinquished.	sed on sample labels. me relinquished. uested ime Ived Oxygen			
□ Collection date/time, matrix, and/or □ No analysis requested. □ Not re Sampler's name indicated on CO Sample container label(s) consist Sample container(s) intact and go Proper containers and sufficient w Analyses received within holding Aqueous samples received wi □ pH □ Residual Chlorine □ D Proper preservation noted on CO □ Unpreserved vials received for /olatile analysis container(s) free Fedlar bag(s) free of condensation CONTAINER TYPE:	r # of containers logged in bar elinquished.	sed on sample labels. me relinquished. uested ime Ived Oxygen			
□ Collection date/time, matrix, and/or □ No analysis requested. □ Not r Sampler's name indicated on CO Sample container label(s) consist Sample container(s) intact and go Proper containers and sufficient v Analyses received within holding Aqueous samples received wi □ pH □ Residual Chlorine □ D Proper preservation noted on CO	r # of containers logged in bar elinquished.	sed on sample labels. me relinquished. uested ime lved Oxygen			

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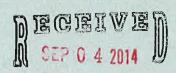
# WORK ORDER NUMBER: 14-08-1907

## The difference is service



AIR SOIL WATER MARINE CHEMISTRY

Analytical Report For Client: Cardno ERI Client Project Name: ExxonMobil 99105/022783C Attention: Greg Gurss 601 North McDowell Blvd. Petaluma, CA 94954-2312



BY: .....

ResultLink )

Email your PM >

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Approved for release on 09/03/2014 by: Cecile deGuia Project Manager



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Work Order: 14-08-1907			

#### Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 08/26/14. They were assigned to Work Order 14-08-1907.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

#### **Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

#### **Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

#### **Additional Comments:**

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

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

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

#### Subcontractor Information:

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

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## Sample Summary

Client:	Cardno ERI	Work Order:	14-08-1907
Onerre.			
	601 North McDowell Blvd.	Project Name:	ExxonMobil 99105/022783C
	Petaluma, CA 94954-2312	PO Number:	
		Date/Time Received:	08/26/14 10:10
		Number of Containers:	7
Attn:	Greg Gurss		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
V-INF-COMP-5	14-08-1907-1	08/20/14 12:30	1	Air
V-INF-COMP-6	14-08-1907-2	08/20/14 20:35	1	Air
V-INF-COMP-7	14-08-1907-3	08/21/14 04:30	1	Air
V-INF-COMP-8	14-08-1907-4	08/21/14 12:30	1	Air
V-INF-COMP-9	14-08-1907-5	08/21/14 20:30	1	Air
V-INF-COMP-10	14-08-1907-6	08/22/14 04:30	1	Air
V-INF-COMP-11	14-08-1907-7	08/22/14 12:05	21	Air

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#### **Analytical Report**

Cardno ERI	Date Received:	08/26/14
601 North McDowell Blvd.	Work Order:	14-08-1907
Petaluma, CA 94954-2312	Preparation:	N/A
	Method:	EPA TO-15M
	Units:	mg/m3
Project: ExxonMobil 99105/022783C		Page 1 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V-INF-COMP-5	14-08-1907-1-A	08/20/14 12:30	Air	GC/MS II	N/A	09/02/14 19:28	140902L02
Comment(s): - The method has been mo	dified to use Tedlar	Bags instead o	f Summa ca	inisters and is not	NY NELAC ac	credited.	
Parameter		Result	F	RL	DF	Qua	lifiers
Acetone		ND	4	1.8	40.0	BV,BU	
Benzene		5.6	(	0.064	40.0	BV,	BŲ
Benzyl Chloride		ND	(	0.31	40.0	BV,	BU
Bromodichloromethane		ND	(	).13	40.0	BV,	BU
Bromoform		ND	(	).21	40.0	BV,	BU
Bromomethane		ND	(	0.078	40.0	BV,	BU
2-Butanone		ND	(	0.18	40.0	BV,	BU
Carbon Disulfide		ND		1.2	40.0	BV,	BU
Carbon Tetrachloride		ND	(	0.13	40.0	BV,	BU
Chlorobenzene		ND	(	0.092	40.0	BV,	BU
Chloroethane		ND	(	0.053	40.0	BV,	BU
Chloroform		ND	(	0.098	40.0	BV,	BU
Chloromethane		ND	(	0.041	40.0	BV,	BU
Dibromochloromethane		ND	(	0.17	40.0	BV,	BU
Dichlorodifluoromethane		ND	(	0.099	40.0	BV,	BU
Diisopropyl Ether (DIPE)		ND	(	0.33	40.0	BV,	BU
1,1-Dichloroethane		ND	(	0.081	40.0	BV,	BU
1,1-Dichloroethene		ND	(	0.079	40.0	BV,	BU
1,2-Dibromoethane		ND	(	0.15	40.0	BV,	BU
Dichlorotetrafluoroethane		ND	(	).56	40.0	BV,	BU
1,2-Dichlorobenzene		ND	(	0.12	40.0	BV,	BU
1,2-Dichloroethane		ND	(	0.081	40.0	BV,	BU
1,2-Dichloropropane		ND	(	0.092	40.0	BV,	BU
1,3-Dichlorobenzene		ND	(	0.12	40.0	BV,	BU
1,4-Dichlorobenzene		ND	(	0.12	40.0	BV,	BU
c-1,3-Dichloropropene		ND	(	0.091	40.0	BV,	BU
c-1,2-Dichloroethene		ND	(	0.079	40.0	BV,	BU
t-1,2-Dichloroethene		ND	(	0.079	40.0	BV,	BU
t-1,3-Dichloropropene		ND	(	0.18	40.0	BV,	BU
Ethyl-t-Butyl Ether (ETBE)		ND	(	0.33	40.0	BV,	BU
Ethylbenzene		3.5	(	0.087	40.0	BV,	BU
4-Ethyltoluene		ND	(	0.098	40.0	BV,	BU
Hexachloro-1,3-Butadiene		ND	(	0.64	40.0	BV,	BU
2-Hexanone		ND	(	0.25	40.0	BV,	BU

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#### **Analytical Report**

Cardno ERI	Da	te Received:	08/26/14	
601 North McDowell Blvd.	Wo	ork Order:	14-08-1907	
Petaluma, CA 94954-2312	Pre	N/A		
	Ме		EPA TO-15M	
	Uni			mg/m3
Project: ExxonMobil 99105/022783C				Page 2 of 18
Parameter	Result	RL	DF	Qualifiers
Methyl-t-Butyl Ether (MTBE)	ND	0.29	40.0	BV,BU
Methylene Chloride	ND	0.69	40.0	BV,BU
4-Methyl-2-Pentanone	ND	0.25	40.0	BV,BU
Naphthalene	ND	1.0	40.0	BV,BU
o-Xylene	ND	0.087	40.0	BV,BU
p/m-Xylene	0.38	0.35	40.0	BV,BU
Xylenes (total)	0.38	0.087	1.00	BV,BU
Styrene	ND	0.26	40.0	BV,BU
Tert-Amyl-Methyl Ether (TAME)	ND	0.33	40.0	BV,BU
Tert-Butyl Alcohol (TBA)	ND	0.61	40.0	BV,BU
Tetrachloroethene	ND	0.14	40.0	BV,BU
Toluene	ND	0.75	40.0	BV,BU
Trichloroethene	ND	0.11	40.0	BV,BU
Trichlorofluoromethane	ND	0.22	40.0	BV,BU
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.46	40.0	BV,BU
1,1,1-Trichloroethane	ND	0.11	40.0	BV,BU
1,1,2-Trichloroethane	ND	0.11	40.0	BV,BU
1,3,5-Trimethylbenzene	ND	0.098	40.0	BV,BU
1,1,2,2-Tetrachloroethane	ND	0.27	40.0	BV,BU
1,2,4-Trimethylbenzene	ND	0.29	40.0	BV,BU
1,2,4-Trichlorobenzene	ND	0.59	40.0	BV,BU
Vinyl Acetate	ND	0.28	40.0	BV,BU
Vinyl Chloride	ND	0.051	40.0	BV,BU
Surrogate	<u>Rec. (%)</u>	Control Limits	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	116	57-129		
1,2-Dichloroethane-d4	80	47-137		
Toluene-d8	88	78-156		

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### **Analytical Report**

Date Received:	08/26/14
Work Order:	14-08-1907
Preparation:	N/A
Method:	EPA TO-15M
Units:	mg/m3
	Page 3 of 18
	Work Order: Preparation: Method:

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID	
V-INF-COMP-6	14-08-1907-2-A	08/20/14 20:35	Air	GC/MS II	N/A	09/01/14 02:50	140831L01	
Comment(s): - The method has been modified to use Tedlar Bags instead of Summa canisters and is not NY NELAC accredited.								
Parameter		<u>Result</u>	Ē	<u>રL</u>	DF	Qua	lifiers	
Acetone		ND	1	.9	16.0	BV,E	30	
Benzene		4.2	C	0.026	16.0	BV,E	30	
Benzyl Chloride		ND	C	.12	16.0	BV,E	3U	
Bromodichloromethane		ND	C	0.054	16.0	BV,E	30	
Bromoform		ND	C	0.083	16.0	BV,E	30	
Bromomethane		ND	C	0.031	16.0	BV,E	3U	
2-Butanone		ND	С	).071	16.0	BV,E	30	
Carbon Disulfide		ND	C	).50	16.0	BV,E	3U	
Carbon Tetrachloride		ND	C	0.050	16.0	BV,E	3U	
Chlorobenzene		ND	C	0.037	16.0	BV,E	3U	
Chloroethane		ND	C	0.021	16.0	BV,E	3U	
Chloroform		ND	C	0.039	16.0	BV,E	3U	
Chloromethane		ND	C	0.017	16.0	BV,E	3U	
Dibromochloromethane		ND	C	0.068	16.0	BV,E	3U	
Dichlorodifluoromethane		ND	C	0.040	16.0	BV,E	3U	
Diisopropyl Ether (DIPE)		ND	C	).13	16.0	BV,E	3U	
1,1-Dichloroethane		ND	C	0.032	16.0	BV,E	BU	
1,1-Dichloroethene		ND	C	0.032	16.0	BV,E	3U	
1,2-Dibromoethane		ND	C	0.061	16.0	BV,E	BU	
Dichlorotetrafluoroethane		ND	C	).22	16.0	BV,E	3U	
1,2-Dichlorobenzene		ND	C	).048	16.0	BV,E	3U	
1,2-Dichloroethane		ND	C	0.032	16.0	BV,E	3U	
1,2-Dichloropropane		ND	C	0.037	16.0	BV,E	BU	
1,3-Dichlorobenzene		ND	C	0.048	16.0	BV,E	3U	
1,4-Dichlorobenzene		ND	C	0.048	16.0	BV,E	зU	
c-1,3-Dichloropropene		ND	C	0.036	16.0	BV,E	3U	
c-1,2-Dichloroethene		ND	C	0.032	16.0	BV,E	3U	
t-1,2-Dichloroethene		ND	C	0.032	16.0	BV,	3U	
t-1,3-Dichloropropene		ND	C	0.073	16.0	BV,E	3U	
Ethyl-t-Butyl Ether (ETBE)		ND	C	0.13	16.0	BV,E	3U	
Ethylbenzene		3.2	C	0.035	16.0	BV,E	30	
4-Ethyltoluene		0.11	C	0.039	16.0	BV,E	зU	
Hexachloro-1,3-Butadiene		ND	C	).26	16.0	BV,E	зU	
2-Hexanone		ND	(	0.098	16.0	BV,E	3U	

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#### **Analytical Report**

Cardno ERI	Dat	te Received:		08/26/14		
601 North McDowell Blvd.	Wa	rk Order:	14-08-1907			
Petaluma, CA 94954-2312	Pre	Preparation:				
	Ме	EPA TO-15M				
	Uni		mg/m3			
Project: ExxonMobil 99105/022783C				Page 4 of 18		
Parameter	Result	RL	DF	Qualifiers		
Methyl-t-Butyl Ether (MTBE)	ND	0.12	16.0	BV,BU		
Methylene Chloride	ND	0.28	16.0	BV,BU		
4-Methyl-2-Pentanone	ND	0.098	16.0	BV,BU		
Naphthalene	ND	0.42	16.0	BV,BU		
o-Xylene	ND	0.035	16.0	BV,BU		
p/m-Xylene	0.39	0.14	16.0	BV,BU		
Xylenes (total)	0.39	0.035	1.00	BV,BU		
Styrene	ND	0.10	16.0	BV,BU		
Tert-Amyl-Methyl Ether (TAME)	ND	0.13	16.0	BV,BU		
Tert-Butyl Alcohol (TBA)	ND	0.24	16.0	BV,BU		
Tetrachloroethene	ND	0.054	16.0	BV,BU		
Toluene	ND	0.30	16.0	BV,BU		
Trichloroethene	ND	0.043	16.0	BV,BU		
Trichlorofluoromethane	ND	0.090	16.0	BV,BU		
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.18	16.0	BV,BU		
1,1,1-Trichloroethane	ND	0.044	16.0	BV,BU		
1,1,2-Trichloroethane	ND	0.044	16.0	BV,BU		
1,3,5-Trimethylbenzene	0.046	0.039	16.0	BV,BU		
1,1,2,2-Tetrachloroethane	ND	0.11	16.0	BV,BU		
1,2,4-Trimethylbenzene	ND	0.12	16.0	BV,BU		
1,2,4-Trichlorobenzene	ND	0.24	16.0	BV,BU		
Vinyl Acetate	ND	0.11	16.0	BV,BU		
Vinyl Chloride	ND	0.020	16.0	BV,BU		
Surrogate	<u>Rec. (%)</u>	Control Limits	<u>Qualifiers</u>			
1,4-Bromofluorobenzene	117	57-129				
1,2-Dichloroethane-d4	75	47-137				
Toluene-d8	78	78-156				

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#### **Analytical Report**

Cardno ERI	Date Received:	08/26/14
601 North McDowell Blvd.	Work Order:	14-08-1907
Petaluma, CA 94954-2312	Preparation:	N/A
	Method:	EPA TO-15M
	Units:	mg/m3
Project: ExxonMobil 99105/022783C		Page 5 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V-INF-COMP-7	14-08-1907-3-A	08/21/14 04:30	Air	GC/MS II	N/A	09/02/14 20:17	140902L02
Comment(s): - The method has been m	nodified to use Tedlar	Bags instead o	f Summa d	canisters and is no	t NY NELAC ac	credited.	
Parameter		<u>Result</u>		<u>RL</u>	DF	Qua	alifiers
Acetone		ND		4.8	40.0	BV,	BU
Benzene		6.0		0.064	40.0	BV,	BU
Benzyl Chloride		ND		0.31	40.0	BV,	BU
Bromodichloromethane		ND		0.13	40.0	BV,	BU
Bromoform		ND		0.21	40.0	BV,	BU
Bromomethane		ND		0.078	40.0	BV,	BU
2-Butanone		ND		0.18	40.0	BV,	BU
Carbon Disulfide		ND		1.2	40.0	BV,	BU
Carbon Tetrachloride		ND		0.13	40.0	BV,	BU
Chlorobenzene		ND		0.092	40.0	BV,	BU
Chloroethane		ND		0.053	40.0	BV,	BU
Chloroform		ND		0.098	40.0	BV,	BU
Chloromethane		ND		0.041	40.0	BV,	BU
Dibromochloromethane		ND		0.17	40.0	BV,	BU
Dichlorodifluoromethane		ND		0.099	40.0	BV,	BU
Diisopropyl Ether (DIPE)		ND		0.33	40.0	BV,	BU
1,1-Dichloroethane		ND		0.081	40.0	BV,	BU
1,1-Dichloroethene		ND		0.079	40.0	BV,	BU
1,2-Dibromoethane		ND		0.15	40.0	BV,	BU
Dichlorotetrafluoroethane		ND		0.56	40.0	BV,	BU
1,2-Dichlorobenzene		ND		0.12	40.0	BV,	BU
1,2-Dichloroethane		ND		0.081	40.0	BV,	BU
1,2-Dichloropropane		ND		0.092	40.0	BV,	BU
1,3-Dichlorobenzene		ND		0.12	40.0	BV,	BU
1,4-Dichlorobenzene		ND		0.12	40.0	BV,	BU
c-1,3-Dichloropropene		ND		0.091	40.0	BV,	BU
c-1,2-Dichloroethene		ND		0.079	40.0	BV,	BU
t-1,2-Dichloroethene		ND		0.079	40.0	BV,	BU
t-1,3-Dichloropropene		ND		0.18	40.0	BV,	BU
Ethyl-t-Butyl Ether (ETBE)		ND		0.33	40.0	BV,	BU
Ethylbenzene		4.4		0.087	40.0	BV,	BU
4-Ethyltoluene		0.13		0.098	40.0	BV,	BU
Hexachloro-1,3-Butadiene		ND		0.64	40.0	BV,	BU
2-Hexanone		ND		0.25	40.0	BV,	BU

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#### **Analytical Report**

Cardno ERI	Dat	te Received:		08/26/14
601 North McDowell Blvd.	Wo	rk Order:	14-08-1907	
Petaluma, CA 94954-2312	Pre	paration:		N/A
		thod:		EPA TO-15M
	Uni			mg/m3
Project: ExxonMobil 99105/022783C	On			Page 6 of 18
Parameter	<u>Result</u>	<u>RL</u>	DF	Qualifiers
Methyl-t-Butyl Ether (MTBE)	ND	0.29	40.0	BV,BU
Methylene Chloride	ND	0.69	40.0	BV,BU
4-Methyl-2-Pentanone	ND	0.25	40.0	BV,BU
Naphthalene	ND	1.0	40.0	BV,BU
o-Xylene	ND	0.087	40.0	BV,BU
p/m-Xylene	0.53	0.35	40.0	BV,BU
Xylenes (total)	0.53	0.087	1.00	BV,BU
Styrene	ND	0.26	40.0	BV,BU
Tert-Amyl-Methyl Ether (TAME)	ND	0.33	40.0	BV,BU
Tert-Butyl Alcohol (TBA)	ND	0.61	40.0	BV,BU
Tetrachloroethene	ND	0.14	40.0	BV,BU
Toluene	ND	0.75	40.0	BV,BU
Trichloroethene	ND	0.11	40.0	BV,BU
Trichlorofluoromethane	ND	0.22	40.0	BV,BU
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.46	40.0	BV,BU
1,1,1-Trichloroethane	ND	0.11	40.0	BV,BU
1,1,2-Trichloroethane	ND	0.11	40.0	BV,BU
1,3,5-Trimethylbenzene	ND	0.098	40.0	BV,BU
1,1,2,2-Tetrachloroethane	ND	0.27	40.0	BV,BU
1,2,4-Trimethylbenzene	ND	0.29	40.0	BV,BU
1,2,4-Trichlorobenzene	ND	0.59	40.0	BV,BU
Vinyl Acetate	ND	0.28	40.0	BV,BU
Vinyl Chloride	ND	0.051	40.0	BV,BU
Surrogate	Rec. (%)	Control Limits	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	118	57-129		
1,2-Dichloroethane-d4	79	47-137		
Toluene-d8	87	78-156		

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#### **Analytical Report**

Cardno ERI	D ERI Date Received:					08/26/1		
601 North McDowell Blvd.		Work Order:					14-08-1907	
Petaluma, CA 94954-2312			Preparatio	n:			N/A	
			Method:				EPA TO-15M	
			Units:				mg/m3	
Project: ExxonMobil 99105/	022783C					Pa	ge 7 of 18	
Client Sample Number	l ab Sample	Date/Time	Matrix	Instrument	Date	Date/Time	OC Batch ID	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V-INF-COMP-8	14-08-1907-4-A	08/21/14 12:30	Air	GC/MS II	N/A	09/01/14 04:30	140831L01
Comment(s): - The method has be	en modified to use Tedlar	Bags instead o	of Summa ca	nisters and is no	t NY NELAC ac	credited,	
Parameter		Result	E	<u>RL</u>	DF	Qua	lifiers
Acetone		ND	1	.9	16.0	BV,	BU
Benzene		3.4	0	026	16.0	BV,	BU
Benzyl Chloride		ND	0	.12	16.0	BV,	BU
Bromodichloromethane		ND	0	.054	16.0	BV,	BU
Bromoform		ND	0	.083	16.0	BV,	BU
Bromomethane		ND	0	.031	16.0	BV,	BU
2-Butanone		ND	0	.071	16.0	BV,	BU
Carbon Disulfide		ND	0	.50	16,0	BV,	BU
Carbon Tetrachloride		ND	0	.050	16.0	BV,	BU
Chlorobenzene		ND	0	.037	16.0	BV,	BU
Chloroethane		ND	0	.021	16.0	BV,	BU
Chloroform		ND	0	.039	16.0	BV,	BU
Chloromethane		ND	0	.017	16.0	BV,	BU
Dibromochloromethane		ND	0	.068	16.0	BV,	BU
Dichlorodifluoromethane		ND	0	.040	16.0	BV,	BU
Diisopropyl Ether (DIPE)		ND	0	.13	16.0	BV,	BU
1,1-Dichloroethane		ND	0	.032	16.0	BV,	BU
1,1-Dichloroethene		ND	0	.032	16.0	BV,	BU
1,2-Dibromoethane		ND	0	.061	16.0	BV,	BU
Dichlorotetrafluoroethane		ND	0	.22	16.0	BV,	BU
1,2-Dichlorobenzene		ND	0	.048	16.0	BV,	BU
1,2-Dichloroethane		ND	0	.032	16.0	BV,	BU
1,2-Dichloropropane		ND	0	.037	16.0	BV,	BU
1,3-Dichlorobenzene		ND	0	.048	16.0	BV,	BU
1,4-Dichlorobenzene		ND	0	.048	16.0	BV,	BU
c-1,3-Dichloropropene		ND	0	.036	16.0	BV,	BU
c-1,2-Dichloroethene		ND	0	.032	16.0	BV,	BU
t-1,2-Dichloroethene		ND	0	.032	16.0	BV,	BU
t-1,3-Dichloropropene		ND	0	.073	16.0	BV,	BU
Ethyl-t-Butyl Ether (ETBE)		ND	0	.13	16.0	BV,	BU
Ethylbenzene		2,5	0	.035	16.0	BV,	BU
4-Ethyltoluene		0.094	0	.039	16.0	BV,	BU
Hexachloro-1,3-Butadiene		ND	0	.26	16.0	BV,	BU
2-Hexanone		ND	0	.098	16.0	BV,	BU

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#### **Analytical Report**

Cardno ERI	Dat	e Received:		08/26/14	
601 North McDowell Blvd.	Wo	rk Order:	14-08-1907		
Petaluma, CA 94954-2312	Pre	paration:		N/A	
	Me		EPA TO-15M		
	Uni			mg/m3	
Project: ExxonMobil 99105/022783C	011	13.		Page 8 of 18	
Parameter	Result	<u>RL</u>	DF	Qualifiers	
Methyl-t-Butyl Ether (MTBE)	ND	0.12	16.0	BV,BU	
Methylene Chloride	ND	0.28	16.0	BV,BU	
4-Methyl-2-Pentanone	ND	0.098	16.0	BV,BU	
Naphthalene	ND	0.42	16.0	BV,BU	
o-Xylene	ND	0.035	16.0	BV,BU	
p/m-Xylene	0.37	0.14	16.0	BV,BU	
Xylenes (total)	0.37	0.035	1.00	BV,BU	
Styrene	ND	0.10	16.0	BV,BU	
Tert-Amyl-Methyl Ether (TAME)	ND	0.13	16.0	BV,BU	
Tert-Butyl Alcohol (TBA)	ND	0.24	16.0	BV,BU	
Tetrachloroethene	ND	0.054	16.0	BV,BU	
Toluene	ND	0.30	16.0	BV,BU	
Trichloroethene	ND	0.043	16.0	BV,BU	
Trichlorofluoromethane	ND	0.090	16.0	BV,BU	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.18	16.0	BV,BU	
1,1,1-Trichloroethane	ND	0.044	16.0	BV,BU	
1,1,2-Trichloroethane	ND	0.044	16.0	BV,BU	
1,3,5-Trimethylbenzene	0.047	0.039	16.0	BV,BU	
1,1,2,2-Tetrachloroethane	ND	0.11	16.0	BV,BU	
1,2,4-Trimethylbenzene	ND	0.12	16.0	BV,BU	
1,2,4-Trichlorobenzene	ND	0.24	16.0	BV,BU	
Vinyl Acetate	ND	0.11	16.0	BV,BU	
Vinyl Chloride	ND	0.020	16.0	BV,BU	
Surrogate	<u>Rec. (%)</u>	Control Limits	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	109	57-129			
1,2-Dichloroethane-d4	74	47-137			
Toluene-d8	82	78-156			

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### **Analytical Report**

Cardno ERI Date Receir							08/26/14
601 North McDowell Blvd.		Work Order: 14				14-08-1907	
Petaluma, CA 94954-2312	, CA 94954-2312 Preparation:					N/A	
		Method:		EPA TO-15			
			Units:				mg/m3
Project: ExxonMobil 99105/					Ра	ge 9 of 18	
Client Sample Number	Lab Sample	Date/Time	Matrix	Instrument	Date	Date/Time	QC Batch ID

Client Sample Number	Number	Date/Time Collected			Date Prepared	Date/Time Analyzed	QC Batch ID
V-INF-COMP-9	14-08-1907-5-A	08/21/14 20:30	Air	GC/MS II	N/A	09/02/14 22:58	140902L02
Comment(s): - The method has been r	modified to use Tedlar	Bags instead o	f Summa ca	anisters and is not	NY NELAC ac	credited.	
Parameter		<u>Result</u>	ļ	RL	DF	Qua	lifiers
Acetone		ND		4.8	40.0	BV,I	3U
Benzene		5.2	1	0.064	40.0	BV,I	ЗU
Benzyl Chloride		ND	I	D.31	40.0	BV,I	30
Bromodichloromethane		ND	I	0.13	40.0	BV,I	3U
Bromoform		ND	I	0.21	40.0	BV,I	ЗU
Bromomethane		ND	(	0.078	40.0	BV,I	3U
2-Butanone		ND	(	D <sub>+</sub> 18	40.0	BV,I	30
Carbon Disulfide		ND		1,2	40.0	BV,I	3U
Carbon Tetrachloride		ND	(	D.13	40.0	BV,I	ЗŲ
Chlorobenzene		ND		0.092	40.0	BV,	BU
Chloroethane		ND	(	0.053	40.0	BV,I	BU
Chloroform		ND		0.098	40.0	BV,I	BU
Chloromethane		ND		0,041	40.0	BV,I	зU
Dibromochloromethane		ND		0.17	40.0	BV,I	3U
Dichlorodifluoromethane		ND		0.099	40.0	BV,I	BU
Diisopropyl Ether (DIPE)		ND		0.33	40.0	BV,I	зU
1,1-Dichloroethane		ND		0.081	40.0	BV,I	зU
1,1-Dichloroethene		ND		0.079	40.0	BV,I	BU
1,2-Dibromoethane		ND		D.15	40.0	BV,I	зU
Dichlorotetrafluoroethane		ND		0.56	40.0	BV,	3U
1,2-Dichlorobenzene		ND		0.12	40.0	BV,	3U
1,2-Dichloroethane		ND		0.081	40.0	BV,I	3U
1,2-Dichloropropane		ND		0.092	40.0	BV,I	зU
1,3-Dichlorobenzene		ND		0.12	40.0	BV,I	BU
1,4-Dichlorobenzene		ND	I	0.12	40.0	BV,I	зU
c-1,3-Dichloropropene		ND	I	0.091	40.0	BV,I	ЗU
c-1,2-Dichloroethene		ND	1	0.079	40.0	BV,I	зU
t-1,2-Dichloroethene		ND		0.079	40.0	BV,I	зU
t-1,3-Dichloropropene		ND	I	D.18	40.0	BV,I	зU
Ethyl-t-Butyl Ether (ETBE)		ND	I	0.33	40.0	BV,I	зU
Ethylbenzene		3.4	1	0.087	40.0	BV,I	зU
4-Ethyltoluene		0.11	1	0.098	40.0	BV,I	3U
Hexachloro-1,3-Butadiene		ND	1	0.64	40.0	BV,I	3U
2-Hexanone		ND		0.25	40.0	BV,I	211

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#### **Analytical Report**

Cardno ERI	Dat	e Received:		08/26/14
601 North McDowell Blvd.	Wo	rk Order:	14-08-1907	
Petaluma, CA 94954-2312	Pre	paration:		N/A
		thod:		EPA TO-15M
	Uni			mg/m3
Designty EvyperMakil 00105/0227820	On	15.		Page 10 of 18
Project: ExxonMobil 99105/022783C				
Parameter	<u>Result</u>	<u>RL</u>	DF	<u>Qualifiers</u>
Methyl-t-Butyl Ether (MTBE)	ND	0.29	40.0	BV,BU
Methylene Chloride	ND	0.69	40.0	BV,BU
4-Methyl-2-Pentanone	ND	0.25	40.0	BV,BU
Naphthalene	ND	1.0	40.0	BV,BU
o-Xylene	ND	0.087	40.0	BV,BU
p/m-Xylene	0.47	0.35	40.0	BV,BU
Xylenes (total)	0.47	0.087	1.00	BV,BU
Styrene	ND	0.26	40.0	BV,BU
Tert-Amyl-Methyl Ether (TAME)	ND	0.33	40.0	BV,BU
Tert-Butyl Alcohol (TBA)	ND	0.61	40.0	BV,BU
Tetrachloroethene	ND	0.14	40.0	BV,BU
Toluene	ND	0.75	40.0	BV,BU
Trichloroethene	ND	0.11	40.0	BV,BU
Trichlorofluoromethane	ND	0.22	40.0	BV,BU
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.46	40.0	BV,BU
1,1,1-Trichloroethane	ND	0.11	40.0	BV,BU
1,1,2-Trichloroethane	ND	0.11	40.0	BV,BU
1,3,5-Trimethylbenzene	ND	0.098	40.0	BV,BU
1,1,2,2-Tetrachloroethane	ND	0.27	40.0	BV,BU
1,2,4-Trimethylbenzene	ND	0.29	40.0	BV,BU
1,2,4-Trichlorobenzene	ND	0.59	40.0	BV,BU
Vinyl Acetate	ND	0.28	40.0	BV,BU
Vinyl Chloride	ND	0.051	40.0	BV,BU
Surrogate	<u>Rec. (%)</u>	Control Limits	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	117	57-129		
1,2-Dichloroethane-d4	80	47-137		
Toluene-d8	87	78-156		

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#### **Analytical Report**

Cardno ERI	Date Received:	08/26/14
601 North McDowell Blvd.	Work Order:	14-08-1907
	Preparation:	N/A
Petaluma, CA 94954-2312	Method:	EPA TO-15M
	Units:	mg/m3
Project: ExxonMobil 99105/022783C		Page 11 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V-INF-COMP-10	14-08-1907-6-A	08/22/14 04:30	Air	GC/MS II	N/A	09/02/14 23:46	140902L02
Comment(s): - The method has be	een modified to use Tedlar	Bags instead of	of Summa ca	nisters and is not	t NY NELAC ac	credited.	
<u>Parameter</u>		Result	<u>F</u>	<u>RL</u>	DF	Qua	alifiers
Acetone		ND	4	.8	40.0	BV,	BU
Benzene		3.2	0	0.064	40.0	BV,	BU
Benzyl Chloride		ND	0	).31	40.0	BV,	BU
Bromodichloromethane		ND	0	).13	40.0	BV,	BU
Bromoform		ND	C	).21	40.0	BV,	BU
Bromomethane		ND	C	0.078	40.0	BV,	BU
2-Butanone		ND	C	).18	40.0	BV,	BU
Carbon Disulfide		ND	1	.2	40.0	BV,	BU
Carbon Tetrachloride		ND	C	).13	40.0	BV,	BU
Chlorobenzene		ND	C	0.092	40.0	BV,	BU
Chloroethane		ND	C	0.053	40.0	BV,	BU
Chloroform		ND	C	0.098	40.0	BV,	BU
Chloromethane		ND	С	0.041	40.0	BV,	BU
Dibromochloromethane		ND	0.17		40.0	BV,BU	
Dichlorodifluoromethane		ND	0.099		40.0	BV,BU	
Diisopropyl Ether (DIPE)		ND	C	.33	40.0	BV,	BU
1,1-Dichloroethane		ND	C	0.081	40.0	BV,	BU
1,1-Dichloroethene		ND	C	0.079	40.0	BV,	BU
1,2-Dibromoethane		ND	C	).15	40.0	BV,	BU
Dichlorotetrafluoroethane		ND	C	).56	40.0	BV,BU	
1,2-Dichlorobenzene		ND	C	).12	40.0	BV,	BU
1,2-Dichloroethane		ND	C	0.081	40.0	BV,	BU
1,2-Dichloropropane		ND	C	).092	40.0	BV,	вU
1,3-Dichlorobenzene		ND	C	0.12	40.0	BV,	BU
1,4-Dichlorobenzene		ND	C	).12	40.0	BV,	BU
c-1,3-Dichloropropene		ND	C	).091	40.0	BV,	BU
c-1,2-Dichloroethene		ND	C	0.079	40.0	BV,	BU
t-1,2-Dichloroethene		ND	C	0.079	40.0	BV,	BU
t-1,3-Dichloropropene		ND	C	0.18	40.0	BV,	BU
Ethyl-t-Butyl Ether (ETBE)		ND	C	).33	40.0	BV,	BU
Ethylbenzene		2.0	C	0.087	40.0	BV	BU
4-Ethyltoluene		ND	C	0.098	40.0	BV	BU
Hexachloro-1,3-Butadiene		ND	C	).64	40.0	BV	BU
2-Hexanone		ND		).25	40.0	BV	BU

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#### **Analytical Report**

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Cardno ERI	Dat	e Received:		08/26/14
601 North McDowell Blvd.	Wo	rk Order:		14-08-1907
Petaluma, CA 94954-2312	Pre	paration:		N/A
		thod:		EPA TO-15M
	Uni			mg/m3
Project: ExxonMobil 99105/022783C	On			Page 12 of 18
Parameter	<u>Result</u>	<u>RL</u>	DF	Qualifiers
Methyl-t-Butyl Ether (MTBE)	ND	0.29	40.0	BV,BU
Methylene Chloride	ND	0.69	40.0	BV,BU
4-Methyl-2-Pentanone	ND	0.25	40.0	BV,BU
Naphthalene	ND	1.0	40.0	BV,BU
o-Xylene	ND	0.087	40.0	BV,BU
p/m-Xylene	ND	0.35	40.0	BV,BU
Xylenes (total)	ND	0.087	1.00	BV,BU
Styrene	ND	0.26	40.0	BV,BU
Tert-Amyl-Methyl Ether (TAME)	ND	0.33	40.0	BV,BU
Tert-Butyl Alcohol (TBA)	ND	0.61	40.0	BV,BU
Tetrachloroethene	ND	0.14	40.0	BV,BU
Toluene	ND	0.75	40.0	BV,BU
Trichloroethene	ND	0.11	40.0	BV,BU
Trichlorofluoromethane	ND	0.22	40.0	BV,BU
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.46	40.0	BV,BU
1,1,1-Trichloroethane	ND	0.11	40.0	BV,BU
1,1,2-Trichloroethane	ND	0.11	40.0	BV,BU
1,3,5-Trimethylbenzene	ND	0.098	40.0	BV,BU
1,1,2,2-Tetrachloroethane	ND	0.27	40.0	BV,BU
1,2,4-Trimethylbenzene	ND	0.29	40.0	BV,BU
1.2.4-Trichlorobenzene	ND	0.59	40.0	BV,BU
Vinyl Acetate	ND	0.28	40.0	BV,BU
Vinyl Chloride	ND	0.051	40.0	BV,BU
Surrogate	<u>Rec. (%)</u>	Control Limits	<b>Qualifiers</b>	
1,4-Bromofluorobenzene	111	57-129		
1,2-Dichloroethane-d4	81	47-137		
Toluene-d8	92	78-156		

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#### **Analytical Report**

Cardno ERI	Date Received:	08/26/14
601 North McDowell Blvd.	Work Order:	14-08-1907
Petaluma, CA 94954-2312	Preparation:	N/A
	Method:	EPA TO-15M
	Units:	mg/m3
Project: ExxonMobil 99105/022783C		Page 13 of 18

V-INF-COMP-11         14-08-1907-7-A         282254         Air         GC/MS II         N/A         090114         140831L01           Comment(s):         - The method has been modified to use Tedlar Bags instead of Summa canisters and is not NY NELAC accredited.         Earander         Result         RL         DE         Qualifiers           Acetone         ND         1.9         16.0         BV/BU           Benzane         2.7         0.026         16.0         BV/BU           Benzane         ND         0.12         16.0         BV/BU           Bromodichtoromethane         ND         0.083         16.0         BV/BU           Bromodichtoromethane         ND         0.091         16.0         BV/BU           Bromodified         ND         0.091         16.0         BV/BU           Carbon Disulfide         ND         0.050         16.0         BV/BU           Carbon Disulfide         ND         0.050         16.0         BV/BU           Chiorobenzane         ND         0.021         16.0         BV/BU           Chiorobertane         ND         0.032         16.0         BV/BU           Dibromodihane         ND         0.032         16.0         BV/BU	Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
ParameterResultRIDEQualifiersAcetoneND1.916.0BV.BUBenzene2.70.0216.0BV.BUBenzel ChorideND0.1216.0BV.BUBromochinorenhaneND0.05416.0BV.BUBromochinorenhaneND0.03116.0BV.BUShomonethaneND0.07116.0BV.BUCarbon DisulificND0.07116.0BV.BUCarbon TistachlorideND0.03716.0BV.BUCarbon TistachlorideND0.03716.0BV.BUChiorobarzeneND0.02116.0BV.BUChiorobartaneND0.01716.0BV.BUChiorobartaneND0.01716.0BV.BUDistomochioromethaneND0.04016.0BV.BUDistomochioromethaneND0.03216.0BV.BUDistomochioromethaneND0.03216.0BV.BUDistomochioromethaneND0.03216.0BV.BU1.1-DichioroethaneND0.03216.0BV.BU1.2-DichioroethaneND0.03216.0BV.BU1.2-DichioroethaneND0.03216.0BV.BU1.2-DichioroethaneND0.03216.0BV.BU1.2-DichioroethaneND0.03216.0BV.BU1.2-DichioroethaneND0.03216.0BV.BU1.2-DichioroethaneND0.0321	V-INF-COMP-11	14-08-1907-7-A		Air	GC/MS II	N/A		140831L01
Actone         ND         1.9         16.0         BV,BU           Bonzene         2,7         0.026         16.0         BV,BU           Bonzyl Chloride         ND         0.12         16.0         BV,BU           Bromodichloromethane         ND         0.054         16.0         BV,BU           Bromodichloromethane         ND         0.083         16.0         BV,BU           Stomomethane         ND         0.031         16.0         BV,BU           Stomomethane         ND         0.050         16.0         BV,BU           Carbon Disulfide         ND         0.050         16.0         BV,BU           Carbon Tetrachloride         ND         0.050         16.0         BV,BU           Chloroberzene         ND         0.021         16.0         BV,BU           Chloroffam         ND         0.023         16.0         BV,BU           Dibromochloromethane         ND         0.041         16.0         BV,BU           Disporppi Ether (DIPE)         ND         0.032         16.0         BV,BU           Dichloroftane         ND         0.032         16.0         BV,BU           1.1-Dichloroethane         ND         0.032	Comment(s): - The method has bee	n modified to use Tedlar	Bags instead o	f Summa c	anisters and is no	t NY NELAC ad	credited.	
Banzene         2,7         0.026         16.0         BV,BU           Benzyl Chloride         ND         0.12         16.0         BV,BU           Bromodichloromethane         ND         0.054         16.0         BV,BU           Bromodichloromethane         ND         0.031         16.0         BV,BU           Bromodichloromethane         ND         0.031         16.0         BV,BU           2-Butanone         ND         0.050         16.0         BV,BU           Carbon Disulfide         ND         0.050         16.0         BV,BU           Carbon Tetrachloride         ND         0.050         16.0         BV,BU           Chlorobenzane         ND         0.021         16.0         BV,BU           Chlorobenzane         ND         0.017         16.0         BV,BU           Dibromothoromethane         ND         0.068         16.0         BV,BU           Dichorofitoromethane         ND         0.032         16.0         BV,BU           Dichorofitoromethane         ND         0.032         16.0         BV,BU           Dichorofitoromethane         ND         0.032         16.0         BV,BU           1.1-Dichoromethane         ND </td <td>Parameter</td> <td></td> <td><u>Result</u></td> <td></td> <td><u>RL</u></td> <td>DF</td> <td>Qua</td> <td>alifiers</td>	Parameter		<u>Result</u>		<u>RL</u>	DF	Qua	alifiers
Benzyl Chloride         ND         0.12         16.0         BV.BU           Bromadichloromethane         ND         0.054         16.0         BV.BU           Bromadichloromethane         ND         0.083         16.0         BV.BU           Bromanethane         ND         0.031         16.0         BV.BU           2-Butanone         ND         0.071         16.0         BV.BU           Carbon Disulfide         ND         0.050         16.0         BV.BU           Carbon Disulfide         ND         0.050         16.0         BV.BU           Carbon Tetrachloride         ND         0.037         16.0         BV.BU           Chlorobenzone         ND         0.021         16.0         BV.BU           Chloroberthane         ND         0.017         16.0         BV.BU           Dichorodiflucomethane         ND         0.017         16.0         BV.BU           Dichorodiflucomethane         ND         0.068         16.0         BV.BU           Dichorodiflucomethane         ND         0.032         16.0         BV.BU           1.1-Dichoroethane         ND         0.032         16.0         BV.BU           1.2-Dichoroethane         ND<	Acetone		ND		1.9	16.0	BV,	BU
Bromodicinformethane         ND         0.054         16.0         BV,BU           Bromodicinformethane         ND         0.083         16.0         BV,BU           Bromodicinformethane         ND         0.031         16.0         BV,BU           Carbon Disulfide         ND         0.071         16.0         BV,BU           Carbon Disulfide         ND         0.50         16.0         BV,BU           Carbon Tetrachloride         ND         0.037         16.0         BV,BU           Chlorobenzene         ND         0.037         16.0         BV,BU           Chlorobenzene         ND         0.037         16.0         BV,BU           Chlorobenzene         ND         0.039         16.0         BV,BU           Chlorobenzene         ND         0.039         16.0         BV,BU           Dichorobethane         ND         0.040         16.0         BV,BU           Dichorobethane         ND         0.040         16.0         BV,BU           Dichorobethane         ND         0.032         16.0         BV,BU           1.1-Dichorobethane         ND         0.032         16.0         BV,BU           1.2-Dichorobethane         ND	Benzene		2.7		0.026	16.0	BV,	BU
Bromodorm         ND         0.083         16.0         BV,BU           Bromodorm         ND         0.031         16.0         BV,BU           2-Butanone         ND         0.071         16.0         BV,BU           2-Butanone         ND         0.50         16.0         BV,BU           Carbon Disulide         ND         0.050         16.0         BV,BU           Carbon Tetrachloride         ND         0.037         16.0         BV,BU           Chlorobenzene         ND         0.037         16.0         BV,BU           Chlorotethane         ND         0.039         16.0         BV,BU           Chloromethane         ND         0.017         16.0         BV,BU           Dichoromethane         ND         0.068         16.0         BV,BU           Dichoromethane         ND         0.041         16.0         BV,BU           1.1-Dichoromethane         ND         0.032         16.0         BV,BU           1.1-Dichoroethane         ND         0.032         16.0         BV,BU           1.1-Dichoroethane         ND         0.032         16.0         BV,BU           1.2-Dichoroethane         ND         0.032         16.0	Benzyl Chloride		ND		0.12	16.0	BV,	BU
Brommethane         ND         0.031         16.0         BV,BU           2-Butanone         ND         0.711         16.0         BV,BU           Carbon Disulfide         ND         0.501         16.0         BV,BU           Carbon Tetrachloride         ND         0.501         16.0         BV,BU           Chlorobenzene         ND         0.037         16.0         BV,BU           Chlorobenzene         ND         0.039         16.0         BV,BU           Chlorobenzene         ND         0.039         16.0         BV,BU           Chlorobenzene         ND         0.039         16.0         BV,BU           Chloromethane         ND         0.040         16.0         BV,BU           Dibromochloromethane         ND         0.430         16.0         BV,BU           Distorophyl Ether (DIPE)         ND         0.332         16.0         BV,BU           1.1-Dichloroethane         ND         0.332         16.0         BV,BU           1.2-Dichloroethane         ND         0.322         16.0         BV,BU           1.2-Dichloroethane         ND         0.32         16.0         BV,BU           1.2-Dichloroethane         ND <t< td=""><td>Bromodichloromethane</td><td></td><td>ND</td><td></td><td>0.054</td><td>16.0</td><td>BV,</td><td>BU</td></t<>	Bromodichloromethane		ND		0.054	16.0	BV,	BU
2.Butanome         ND         0.071         16.0         BV.BU           Carbon Disulfide         ND         0.50         16.0         BV.BU           Carbon Disulfide         ND         0.037         16.0         BV.BU           Chorobenzene         ND         0.037         16.0         BV.BU           Chlorobenzene         ND         0.021         16.0         BV.BU           Chlorobenane         ND         0.021         16.0         BV.BU           Chlorobentane         ND         0.039         16.0         BV.BU           Chlorobentane         ND         0.017         16.0         BV.BU           Dibromochloromethane         ND         0.040         16.0         BV.BU           Dibromochloromethane         ND         0.040         16.0         BV.BU           Disopropyl Ether (DIPE)         ND         0.041         16.0         BV.BU           1.1-Dichlorobethane         ND         0.022         16.0         BV.BU           1.2-Dibromothane         ND         0.061         16.0         BV.BU           1.2-Dichorobetzene         ND         0.061         16.0         BV.BU           1.2-Dichorobetzene         ND         <	Bromoform		ND		0.083	16.0	BV,	BU
Carbon Disulfide         ND         0.50         16.0         BV.BU           Carbon Disulfide         ND         0.050         16.0         BV.BU           Chlorobenzene         ND         0.037         16.0         BV.BU           Chlorobenzene         ND         0.037         16.0         BV.BU           Chlorobenzene         ND         0.039         16.0         BV.BU           Chlorobenzene         ND         0.039         16.0         BV.BU           Chlorobenzene         ND         0.039         16.0         BV.BU           Chlorobethane         ND         0.017         16.0         BV.BU           Dibromochloromethane         ND         0.068         16.0         BV.BU           Dichlorothtane         ND         0.032         16.0         BV.BU           1.1-Dichlorothtane         ND         0.032         16.0         BV.BU           1.1-Dichlorothtane         ND         0.022         16.0         BV.BU           1.2-Dichlorothtane         ND         0.022         16.0         BV.BU           1.2-Dichlorothtane         ND         0.032         16.0         BV.BU           1.2-Dichlorothtane         ND         0.	Bromomethane		ND		0.031	16.0	BV,	BU
Carbon Tranchloride         ND         0.050         16.0         BV,BU           Chlorobenzene         ND         0.037         16.0         BV,BU           Chlorobenzene         ND         0.021         16.0         BV,BU           Chlorobenzene         ND         0.039         16.0         BV,BU           Chlorobethane         ND         0.017         16.0         BV,BU           Dibromochloromethane         ND         0.040         16.0         BV,BU           Dibromochloromethane         ND         0.040         16.0         BV,BU           Dibromochloromethane         ND         0.032         16.0         BV,BU           1.1-Dichlorobtane         ND         0.032         16.0         BV,BU           1.1-Dichlorobtane         ND         0.032         16.0         BV,BU           1.2-Dichlorobtane         ND         0.022         16.0         BV,BU           1.2-Dichlorobtane         ND         0.037         16.0         BV,BU           1.2-Dichlorobtane         ND         0.037         16.0         BV,BU           1.2-Dichloroptane         ND         0.048         16.0         BV,BU           1.2-Dichloroptane         ND <td>2-Butanone</td> <td></td> <td>ND</td> <td></td> <td>0,071</td> <td>16.0</td> <td>BV,</td> <td>BU</td>	2-Butanone		ND		0,071	16.0	BV,	BU
ND         0.037         16.0         BV,BU           Chlorobenzene         ND         0.021         16.0         BV,BU           Chlorobentane         ND         0.039         16.0         BV,BU           Chlorobentane         ND         0.039         16.0         BV,BU           Dibromochloromethane         ND         0.068         16.0         BV,BU           Dibromochloromethane         ND         0.040         16.0         BV,BU           Dibromochloromethane         ND         0.040         16.0         BV,BU           Disopropyl Ether (DIPE)         ND         0.13         16.0         BV,BU           1,1-Dichoroethane         ND         0.032         16.0         BV,BU           1,2-Dichoroethane         ND         0.022         16.0         BV,BU           1,2-Dichoroethane         ND         0.22         16.0         BV,BU           1,2-Dichoropetane         ND         0.048         16.0         BV,BU           1,2-Dichoropetane         ND         0.032         16.0         BV,BU           1,2-Dichoropetane         ND         0.032         16.0         BV,BU           1,2-Dichloropetane         ND         0.048	Carbon Disulfide		ND		0.50	16.0	BV,	BU
Chloroethane         ND         0.021         16.0         BV,BU           Chloroethane         ND         0.039         16.0         BV,BU           Chloroethane         ND         0.017         16.0         BV,BU           Dibromochloromethane         ND         0.068         16.0         BV,BU           Dichorodifluoromethane         ND         0.040         16.0         BV,BU           Disopropyl Ether (DIPE)         ND         0.33         16.0         BV,BU           1.1-Dichloroethane         ND         0.032         16.0         BV,BU           1.1-Dichloroethane         ND         0.032         16.0         BV,BU           1.2-Dibromoethane         ND         0.022         16.0         BV,BU           1.2-Dichloroethane         ND         0.022         16.0         BV,BU           1.2-Dichloroethane         ND         0.048         16.0         BV,BU           1.2-Dichloroethane         ND         0.032         16.0         BV,BU           1.3-Dichlorophopane         ND         0.048         16.0         BV,BU           1.3-Dichlorophopene         ND         0.032         16.0         BV,BU           1.3-Dichlorophopene	Carbon Tetrachloride		ND		0.050	16.0	BV,	BU
Chloroform         ND         0.039         16.0         BV,BU           Chloromethane         ND         0.017         16.0         BV,BU           Dibromochloromethane         ND         0.068         16.0         BV,BU           Dichlorofifluoromethane         ND         0.040         16.0         BV,BU           Disopropyl Ether (DIPE)         ND         0.13         16.0         BV,BU           1,1-Dichloroethane         ND         0.032         16.0         BV,BU           1,2-Dichloroethane         ND         0.032         16.0         BV,BU           1,2-Dichloroethane         ND         0.032         16.0         BV,BU           1,2-Dichloroethane         ND         0.022         16.0         BV,BU           1,2-Dichloroethane         ND         0.022         16.0         BV,BU           1,2-Dichloroethane         ND         0.032         16.0         BV,BU           1,2-Dichlorophane         ND         0.048         16.0         BV,BU           1,2-Dichlorophanene         ND         0.048         16.0         BV,BU           1,4-Dichlorophanene         ND         0.032         16.0         BV,BU           1,4-Dichlorophanene <td>Chlorobenzene</td> <td></td> <td>ND</td> <td></td> <td>0.037</td> <td>16.0</td> <td>BV,</td> <td>BU</td>	Chlorobenzene		ND		0.037	16.0	BV,	BU
ND         0.017         16.0         BV,BU           Dibromechlaren         ND         0.068         16.0         BV,BU           Dibromechlaren         ND         0.040         16.0         BV,BU           Disopropyl Ether (DIPE)         ND         0.13         16.0         BV,BU           1,1-Dichloroethane         ND         0.032         16.0         BV,BU           1,1-Dichloroethane         ND         0.032         16.0         BV,BU           1,2-Dichloroethane         ND         0.032         16.0         BV,BU           1,2-Dichloroethane         ND         0.022         16.0         BV,BU           1,2-Dichloroethane         ND         0.048         16.0         BV,BU           1,2-Dichloroethane         ND         0.032         16.0         BV,BU           1,2-Dichloroethane         ND         0.048         16.0         BV,BU           1,2-Dichloroptane         ND         0.048         16.0         BV,BU           1,2-Dichloroptane         ND         0.048         16.0         BV,BU           1,2-Dichloroptane         ND         0.032         16.0         BV,BU           1,3-Dichloroptopene         ND         0.032 </td <td>Chloroethane</td> <td></td> <td>ND</td> <td></td> <td>0.021</td> <td>16.0</td> <td>BV,</td> <td>BU</td>	Chloroethane		ND		0.021	16.0	BV,	BU
Dibromethane         ND         0.068         16.0         BV,BU           Dichlorodifluoromethane         ND         0.040         16.0         BV,BU           Disopropyl Ether (DIPE)         ND         0.13         16.0         BV,BU           1,1-Dichloroethane         ND         0.032         16.0         BV,BU           1,1-Dichloroethane         ND         0.032         16.0         BV,BU           1,1-Dichloroethane         ND         0.061         16.0         BV,BU           1,2-Dichloroethane         ND         0.022         16.0         BV,BU           1,2-Dichloroethane         ND         0.048         16.0         BV,BU           1,2-Dichloroethane         ND         0.048         16.0         BV,BU           1,2-Dichloroethane         ND         0.032         16.0         BV,BU           1,2-Dichloroptane         ND         0.048         16.0         BV,BU           1,2-Dichloroptane         ND         0.048         16.0         BV,BU           1,3-Dichloroptane         ND         0.048         16.0         BV,BU           1,4-Dichloroptane         ND         0.032         16.0         BV,BU           1,3-Dichloroptane	Chloroform		ND		0.039	16.0	BV,	BU
Dichlorodifluoromethane         ND         0.040         16.0         BV,BU           Diskopropyl Ether (DIPE)         ND         0.13         16.0         BV,BU           1,1-Dichloroethane         ND         0.032         16.0         BV,BU           1,1-Dichloroethane         ND         0.032         16.0         BV,BU           1,2-Dichloroethane         ND         0.061         16.0         BV,BU           1,2-Dichloroethane         ND         0.22         16.0         BV,BU           1,2-Dichloroethane         ND         0.22         16.0         BV,BU           1,2-Dichloroethane         ND         0.048         16.0         BV,BU           1,2-Dichloroethane         ND         0.032         16.0         BV,BU           1,2-Dichloropapae         ND         0.037         16.0         BV,BU           1,3-Dichloropapae         ND         0.048         16.0         BV,BU           1,4-Dichloropapae         ND         0.048         16.0         BV,BU           1,4-Dichloropapene         ND         0.032         16.0         BV,BU           c-1,3-Dichloroptopene         ND         0.032         16.0         BV,BU           t-1,2-Dichlor	Chloromethane		ND		0.017	16.0	BV,	BU
Disopropyl Ether (DIPE)         ND         0.13         16.0         BV,BU           1,1-Dichloroethane         ND         0.032         16.0         BV,BU           1,1-Dichloroethane         ND         0.032         16.0         BV,BU           1,2-Dichloroethane         ND         0.061         16.0         BV,BU           1,2-Dichloroethane         ND         0.22         16.0         BV,BU           1,2-Dichloroethane         ND         0.048         16.0         BV,BU           1,2-Dichloroethane         ND         0.032         16.0         BV,BU           1,2-Dichloroethane         ND         0.048         16.0         BV,BU           1,2-Dichloropropane         ND         0.037         16.0         BV,BU           1,2-Dichloropropane         ND         0.048         16.0         BV,BU           1,4-Dichloropropane         ND         0.032         16.0         BV,BU           1,4-Dichloropropene         ND         0.032         16.0         BV,BU           -1,3-Dichloropropene         ND         0.032         16.0         BV,BU           -1,2-Dichloroethene         ND         0.032         16.0         BV,BU           t-1,2-Dichl	Dibromochloromethane		ND		0.068	16.0	BV,	BU
Interpretation         ND         0.032         16.0         BV,BU           1,1-Dichloroethane         ND         0.032         16.0         BV,BU           1,2-Dichloroethane         ND         0.061         16.0         BV,BU           Dichloroethane         ND         0.22         16.0         BV,BU           1,2-Dichloroethane         ND         0.22         16.0         BV,BU           1,2-Dichloroethane         ND         0.032         16.0         BV,BU           1,2-Dichloroethane         ND         0.048         16.0         BV,BU           1,2-Dichloroethane         ND         0.032         16.0         BV,BU           1,2-Dichloroptopane         ND         0.037         16.0         BV,BU           1,3-Dichloroptopane         ND         0.048         16.0         BV,BU           1,4-Dichloroptopane         ND         0.048         16.0         BV,BU           c-1,3-Dichloroptopane         ND         0.032         16.0         BV,BU           c-1,2-Dichloroethene         ND         0.032         16.0         BV,BU           t-1,3-Dichloroptopane         ND         0.032         16.0         BV,BU           t-1,3-Dichloroptopan	Dichlorodifluoromethane		ND		0.040	16.0	BV,	BU
1,1-Dichloroethane         ND         0.032         16.0         BV,BU           1,2-Dibromoethane         ND         0.061         16.0         BV,BU           Dichloroethane         ND         0.22         16.0         BV,BU           1,2-Dichloroethane         ND         0.048         16.0         BV,BU           1,2-Dichloroethane         ND         0.032         16.0         BV,BU           1,2-Dichloroethane         ND         0.032         16.0         BV,BU           1,2-Dichloroethane         ND         0.032         16.0         BV,BU           1,2-Dichloroethane         ND         0.037         16.0         BV,BU           1,3-Dichloropropane         ND         0.048         16.0         BV,BU           1,4-Dichloroptenzene         ND         0.036         16.0         BV,BU           c-1,3-Dichloroptenzene         ND         0.032         16.0         BV,BU           c-1,2-Dichloroethene         ND         0.032         16.0         BV,BU           t-1,2-Dichloroethene         ND         0.032         16.0         BV,BU           t-1,3-Dichloropropene         ND         0.035         16.0         BV,BU           t-1,3-Dichlor	Diisopropyl Ether (DIPE)		ND		0.13	16.0	BV,	BU
1,2-Dibromoethane       ND       0.061       16.0       BV,BU         Dichlorotetrafluoroethane       ND       0.22       16.0       BV,BU         1,2-Dichlorobenzene       ND       0.048       16.0       BV,BU         1,2-Dichloroethane       ND       0.032       16.0       BV,BU         1,2-Dichloroethane       ND       0.032       16.0       BV,BU         1,2-Dichloroethane       ND       0.037       16.0       BV,BU         1,2-Dichloropropane       ND       0.048       16.0       BV,BU         1,3-Dichlorobenzene       ND       0.048       16.0       BV,BU         1,4-Dichlorophopene       ND       0.048       16.0       BV,BU         c-1,3-Dichlorophopene       ND       0.036       16.0       BV,BU         c-1,2-Dichloroethene       ND       0.032       16.0       BV,BU         t-1,2-Dichloroethene       ND       0.032       16.0       BV,BU         t-1,3-Dichloropropene       ND       0.032       16.0       BV,BU         t-1,3-Dichloropropene       ND       0.035       16.0       BV,BU         t-1,3-Dichloropropene       ND       0.035       16.0       BV,BU	1,1-Dichloroethane		ND		0.032	16.0	BV,	BU
Dichlorotetrafluoroethane         ND         0.22         16.0         BV,BU           1,2-Dichlorobenzene         ND         0.048         16.0         BV,BU           1,2-Dichloroethane         ND         0.032         16.0         BV,BU           1,2-Dichloroethane         ND         0.032         16.0         BV,BU           1,2-Dichloroethane         ND         0.037         16.0         BV,BU           1,2-Dichloroppane         ND         0.048         16.0         BV,BU           1,3-Dichlorobenzene         ND         0.048         16.0         BV,BU           1,4-Dichloropenzene         ND         0.048         16.0         BV,BU           c-1,3-Dichloropenzene         ND         0.048         16.0         BV,BU           c-1,2-Dichloroethene         ND         0.032         16.0         BV,BU           c-1,2-Dichloroethene         ND         0.032         16.0         BV,BU           t-1,2-Dichloroptene         ND         0.032         16.0         BV,BU           t-1,3-Dichloroptene         ND         0.032         16.0         BV,BU           t-1,3-Dichloroptene         ND         0.033         16.0         BV,BU           t-1	1,1-Dichloroethene		ND		0.032	16.0	BV,	BU
1,2-DichlorobenzeneND0.04816.0BV,BU1,2-DichloropthaneND0.03216.0BV,BU1,2-DichloropthaneND0.03716.0BV,BU1,3-DichlorobenzeneND0.04816.0BV,BU1,4-DichlorobenzeneND0.04816.0BV,BUc-1,3-DichloroptheneND0.03616.0BV,BUc-1,2-DichloroptheneND0.03216.0BV,BUc-1,2-DichloroptheneND0.03216.0BV,BUt-1,2-DichloroptheneND0.03216.0BV,BUt-1,2-DichloroptheneND0.03216.0BV,BUt-1,3-DichloroptheneND0.03216.0BV,BUt-1,3-DichloroptheneND0.03216.0BV,BUt-1,4-DichloroptheneND0.03516.0BV,BUt-1,3-Dichloropthene0.190.03916.0BV,BUt-1,3-Dichloropthene0.190.03916.0BV,BUt-1,3-Dichloropthene0.190.03916.0BV,BUt-1,3-Dichloropthene0.190.03916.0BV,BUt-1,3-Dichloropthene0.190.03916.0BV,BUt-1,3-Dichloropthene0.190.03916.0BV,BUt-1,3-Dichloropthene0.190.03916.0BV,BUt-1,3-Dichloropthene0.190.03916.0BV,BUt-1,3-Dichloropthene0.190.03916.0BV,BUt-1,3-Dichloropthene0.19<	1,2-Dibromoethane		ND		0.061	16.0	BV,	BU
1,2-DichloroethaneND0.03216.0BV,BU1,2-DichloropropaneND0.03716.0BV,BU1,3-DichlorobenzeneND0.04816.0BV,BU1,4-DichlorobenzeneND0.04816.0BV,BUc-1,3-DichloropropaneND0.03616.0BV,BUc-1,3-DichloropropeneND0.03216.0BV,BUc-1,2-DichloroetheneND0.03216.0BV,BUt-1,2-DichloroetheneND0.03216.0BV,BUt-1,3-DichloropropeneND0.03216.0BV,BUt-1,2-DichloroetheneND0.03216.0BV,BUt-1,3-DichloropropeneND0.03516.0BV,BUt-1,3-DichloropropeneND0.1316.0BV,BUt-1,4-DichloropropeneND0.03516.0BV,BUt-1,3-DichloropropeneND0.03516.0BV,BUt-1,3-DichloropropeneND0.03516.0BV,BUt-1,3-Dichloropropene2.90.03516.0BV,BUt-1,3-Bitadiene0.190.03916.0BV,BU	Dichlorotetrafluoroethane		ND		0.22	16.0	BV,	BU
1,2-DichloropropaneND0.03716.0BV,BU1,3-DichloropropaneND0.04816.0BV,BU1,4-DichlorobenzeneND0.04816.0BV,BUc-1,3-DichloropropeneND0.03616.0BV,BUc-1,2-DichloroptheneND0.03216.0BV,BUt-1,2-DichloroptheneND0.03216.0BV,BUt-1,2-DichloroptheneND0.03216.0BV,BUt-1,3-DichloroptopeneND0.07316.0BV,BUt-1,3-DichloroptopeneND0.07316.0BV,BUt-1,3-DichloroptopeneND0.1316.0BV,BUt-1,3-DichloroptopeneND0.1316.0BV,BUt-1,3-Dichloroptopene0.190.03916.0BV,BUEthylbenzene0.190.03916.0BV,BUHexachloro-1,3-ButadieneND0.26NDND	1,2-Dichlorobenzene		ND		0.048	16.0	BV,	BU
1,3-DichlorobenzeneND0.04816.0BV,BU1,4-DichlorobenzeneND0.04816.0BV,BUc-1,3-DichloropropeneND0.03616.0BV,BUc-1,2-DichloroetheneND0.03216.0BV,BUt-1,2-DichloroetheneND0.03216.0BV,BUt-1,3-DichloropropeneND0.03216.0BV,BUt-1,3-DichloroetheneND0.03216.0BV,BUt-1,3-DichloropropeneND0.07316.0BV,BUt-1,3-DichloropropeneND0.1316.0BV,BUEthyl-t-Butyl Ether (ETBE)ND0.03516.0BV,BUEthylbenzene2.90.03516.0BV,BU4-Ethyltoluene0.190.03916.0BV,BUHexachloro-1,3-ButadieneND0.26NDND	1,2-Dichloroethane		ND		0.032	16.0	BV,	BU
1,4-DichlorobenzeneND0.04816.0BV,BUc-1,3-DichloropropeneND0.03616.0BV,BUc-1,2-DichloroetheneND0.03216.0BV,BUt-1,2-DichloroetheneND0.03216.0BV,BUt-1,3-DichloropropeneND0.03216.0BV,BUt-1,3-DichloropropeneND0.07316.0BV,BUt-1,3-DichloropropeneND0.1316.0BV,BUEthyl-t-Butyl Ether (ETBE)ND0.1316.0BV,BUEthylbenzene2.90.03516.0BV,BU4-Ethyltoluene0.190.03916.0BV,BUHexachloro-1,3-ButadieneND0.26NDND	1,2-Dichloropropane		ND		0.037	16.0	BV,	BU
c-1,3-Dichloropropene         ND         0.036         16.0         BV,BU           c-1,2-Dichloroethene         ND         0.032         16.0         BV,BU           t-1,2-Dichloroethene         ND         0.032         16.0         BV,BU           t-1,3-Dichloroethene         ND         0.032         16.0         BV,BU           t-1,3-Dichloroethene         ND         0.073         16.0         BV,BU           t-1,3-Dichloropropene         ND         0.073         16.0         BV,BU           Ethyl-t-Butyl Ether (ETBE)         ND         0.13         16.0         BV,BU           Ethylbenzene         2.9         0.035         16.0         BV,BU           4-Ethyltoluene         0.19         0.039         16.0         BV,BU           Hexachloro-1,3-Butadiene         ND         0.26         16.0         BV,BU	1,3-Dichlorobenzene		ND		0.048	16.0	BV,	BU
c-1,2-Dichloroethene         ND         0.032         16.0         BV,BU           t-1,2-Dichloroethene         ND         0.032         16.0         BV,BU           t-1,3-Dichloropropene         ND         0.073         16.0         BV,BU           Ethyl-t-Butyl Ether (ETBE)         ND         0.13         16.0         BV,BU           Ethylbenzene         2.9         0.035         16.0         BV,BU           4-Ethyltoluene         0.19         0.039         16.0         BV,BU           Hexachloro-1,3-Butadiene         ND         0.26         10.0         BV,BU	1,4-Dichlorobenzene		ND		0.048	16.0	BV,	BU
t-1,2-Dichloroethene       ND       0.032       16.0       BV,BU         t-1,3-Dichloropropene       ND       0.073       16.0       BV,BU         Ethyl-t-Butyl Ether (ETBE)       ND       0.13       16.0       BV,BU         Ethylbenzene       2.9       0.035       16.0       BV,BU         4-Ethyltoluene       0.19       0.039       16.0       BV,BU         Hexachloro-1,3-Butadiene       ND       0.26       16.0       BV,BU	c-1,3-Dichloropropene		ND		0.036	16.0	BV,	BU
t-1,3-Dichloropropene       ND       0.073       16.0       BV,BU         Ethyl-t-Butyl Ether (ETBE)       ND       0.13       16.0       BV,BU         Ethylbenzene       2.9       0.035       16.0       BV,BU         4-Ethyltoluene       0.19       0.039       16.0       BV,BU         Hexachloro-1,3-Butadiene       ND       0.26       16.0       BV,BU	c-1,2-Dichloroethene		ND		0.032	16.0	BV,	BŲ
Ethyl-Ehutyl Ether (ETBE)         ND         0.13         16.0         BV,BU           Ethylbenzene         2.9         0.035         16.0         BV,BU           4-Ethyltoluene         0.19         0.039         16.0         BV,BU           Hexachloro-1,3-Butadiene         ND         0.26         16.0         BV,BU	t-1,2-Dichloroethene		ND		0.032	16.0	BV,	BU
Ethylbenzene         2.9         0.035         16.0         BV,BU           4-Ethyltoluene         0.19         0.039         16.0         BV,BU           Hexachloro-1,3-Butadiene         ND         0.26         16.0         BV,BU	t-1,3-Dichloropropene		ND		0.073	16.0	BV,	BU
4-Ethyltoluene         0.19         0.039         16.0         BV,BU           Hexachloro-1,3-Butadiene         ND         0.26         16.0         BV,BU	Ethyl-t-Butyl Ether (ETBE)		ND		0.13	16.0	BV,	вŲ
4-Ethyltoluene         0.19         0.039         16.0         BV,BU           Hexachloro-1,3-Butadiene         ND         0.26         16.0         BV,BU	Ethylbenzene		2.9		0.035	16.0	BV,	BU
Hexachloro-1,3-ButadieneND0.2616.0BV,BU	-		0.19		0.039	16.0	BV,	BU
2-Hexanone ND 0.098 16.0 BV,BU			ND		0.26	16.0	BV	BU
	2-Hexanone		ND		0.098	16.0	BV	BU

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#### **Analytical Report**

Cardno ERI	Dat	te Received:		08/26/14
601 North McDowell Blvd.	Wo	rk Order:		14-08-1907
Petaluma, CA 94954-2312	Pre	eparation:		N/A
		thod:		EPA TO-15M
	Uni			mg/m3
Project: ExxonMobil 99105/022783C				Page 14 of 18
Parameter	Result	RL	DF	Qualifiers
Methyl-t-Butyl Ether (MTBE)	ND	0.12	16.0	BV,BU
Methylene Chloride	ND	0.28	16.0	BV,BU
4-Methyl-2-Pentanone	ND	0.098	16.0	BV,BU
Naphthalene	ND	0.42	16.0	BV,BU
o-Xylene	ND	0.035	16.0	BV,BU
p/m-Xylene	0.55	0.14	16.0	BV,BU
Xylenes (total)	0.55	0.035	1.00	BV,BU
Styrene	ND	0.10	16.0	BV,BU
Tert-Amyl-Methyl Ether (TAME)	ND	0.13	16.0	BV,BU
Tert-Butyl Alcohol (TBA)	ND	0.24	16.0	BV,BU
Tetrachloroethene	ND	0.054	16.0	BV,BU
Toluene	ND	0.30	16.0	BV,BU
Trichloroethene	ND	0.043	16.0	BV,BU
Trichlorofluoromethane	ND	0.090	16.0	BV,BU
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.18	16.0	BV,BU
1,1,1-Trichloroethane	ND	0.044	16.0	BV,BU
1,1,2-Trichloroethane	ND	0.044	16.0	BV,BU
1,3,5-Trimethylbenzene	0.097	0.039	16.0	BV,BU
1,1,2,2-Tetrachloroethane	ND	0.11	16.0	BV,BU
1,2,4-Trimethylbenzene	ND	0.12	16.0	BV,BU
1,2,4-Trichlorobenzene	ND	0.24	16.0	BV,BU
Vinyl Acetate	ND	0.11	16.0	BV,BU
Vinyl Chloride	ND	0.020	16.0	BV,BU
Surrogate	<u>Rec. (%)</u>	Control Limits	Qualifiers	
1,4-Bromofluorobenzene	111	57-129		
1,2-Dichloroethane-d4	77	47-137		
Toluene-d8	84	78-156		

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#### **Analytical Report**

Cardno ERI         Date Received:         08/26/14           601 North McDowell Blvd.         Work Order:         14-08-1907           Petaluma, CA 94954-2312         Preparation:         N/A           Method:         EPA TO-15M           Units:         mg/m3           Project: ExxonMobil 99105/022783C         Page 15 of 18			
Petaluma, CA 94954-2312Preparation:N/AMethod:EPA TO-15MUnits:mg/m3	Cardno ERI	Date Received:	08/26/14
Method: EPA TO-15M Units: mg/m3	601 North McDowell Blvd.	Work Order:	14-08-1907
Units: mg/m3	Petaluma, CA 94954-2312	Preparation:	N/A
•		Method:	EPA TO-15M
Project: ExxonMobil 99105/022783C Page 15 of 18		Units:	mg/m3
	Project: ExxonMobil 99105/022783C		Page 15 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-981-4713	N/A	Air	GC/MS II	N/A	08/31/14 23:36	140831L01
Parameter		Result		RL	DF	Qua	lifiers
Acetone		ND		0.12	1.00		
Benzene		ND		0.0016	1.00		
Benzyl Chloride		ND		0.0078	1.00		
Bromodichloromethane		ND		0.0034	1.00		
Bromoform		ND		0.0052	1.00		
Bromomethane		ND		0.0019	1.00		
2-Butanone		ND		0.0044	1.00		
Carbon Disulfide		ND		0.031	1.00		
Carbon Tetrachloride		ND		0.0031	1.00		
Chlorobenzene		ND		0.0023	1.00		
Chloroethane		ND		0.0013	1.00		
Chloroform		ND		0.0024	1.00		
Chloromethane		ND		0.0010	1.00		
Dibromochloromethane		ND		0.0043	1.00		
Dichlorodifluoromethane		ND		0.0025	1.00		
Diisopropyl Ether (DIPE)		ND		0.0084	1.00		
1,1-Dichloroethane		ND		0.0020	1.00		
1,1-Dichloroethene		ND		0.0020	1.00		
1,2-Dibromoethane		ND		0.0038	1.00		
Dichlorotetrafluoroethane		ND		0.014	1.00		
1,2-Dichlorobenzene		ND		0.0030	1.00		
1,2-Dichloroethane		ND		0.0020	1.00		
1,2-Dichloropropane		ND		0.0023	1.00		
1,3-Dichlorobenzene		ND		0.0030	1.00		
1,4-Dichlorobenzene		ND		0.0030	1.00		
c-1,3-Dichloropropene		ND		0.0023	1.00		
c-1,2-Dichloroethene		ND		0.0020	1.00		
t-1,2-Dichloroethene		ND		0.0020	1.00		
t-1,3-Dichloropropene		ND		0.0045	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND		0.0084	1.00		
Ethylbenzene		ND		0.0022	1.00		
4-Ethyltoluene		ND		0.0025	1.00		
Hexachloro-1,3-Butadiene		ND		0.016	1.00		
2-Hexanone		ND		0.0061	1.00		
Methyl-t-Butyl Ether (MTBE)		ND		0.0072	1.00		

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### **Analytical Report**

Cardno ERI	Da	ate Received:		08/26/14
601 North McDowell Blvd.	W	ork Order:		14-08-1907
Petaluma, CA 94954-2312	Pr	eparation:		N/A
		ethod:		EPA TO-15M
		nits:		mg/m3
	U	iits.		-
Project: ExxonMobil 99105/022783C				Page 16 of 18
Parameter	Result	<u>RL</u>	DF	Qualifiers
Methylene Chloride	ND	0.017	1.00	
4-Methyl-2-Pentanone	ND	0.0061	1.00	
Naphthalene	ND	0.026	1.00	
o-Xylene	ND	0.0022	1.00	
p/m-Xylene	ND	0.0087	1.00	
Xylenes (total)	ND	0.0022	1.00	
Styrene	ND	0.0064	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0084	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.015	1.00	
Tetrachloroethene	ND	0.0034	1.00	
Toluene	ND	0.019	1.00	
Trichloroethene	ND	0.0027	1.00	
Trichlorofluoromethane	ND	0.0056	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.011	1.00	
1,1,1-Trichloroethane	ND	0.0027	1.00	
1,1,2-Trichloroethane	ND	0.0027	1.00	
1,3,5-Trimethylbenzene	ND	0.0025	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0069	1.00	
1,2,4-Trimethylbenzene	ND	0.0074	1.00	
1,2,4-Trichlorobenzene	ND	0.015	1.00	
Vinyl Acetate	ND	0.0070	1.00	
Vinyl Chloride	ND	0.0013	1.00	
Surrogate	<u>Rec. (%)</u>	Control Limits	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	91	57-129		
1,2-Dichloroethane-d4	90	47-137		
Toluene-d8	101	78-156		

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#### **Analytical Report**

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Cardno ERI	Date Received:	08/26/14
601 North McDowell Blvd.	Work Order:	14-08-1907
Petaluma, CA 94954-2312	Preparation:	N/A
	Method:	EPA TO-15M
	Units:	mg/m3
Project: ExxonMobil 99105/022783C		Page 17 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-981-4714	N/A	Air	GC/MS II	N/A	09/02/14 14:00	140902L02
Parameter		Result		RL	DF	Qua	alifiers
Acetone		ND		0.12	1.00		
Benzene		ND		0.0016	1.00		
Benzyl Chloride		ND		0.0078	1.00		
Bromodichloromethane		ND		0.0034	1.00		
Bromoform		ND		0.0052	1.00		
Bromomethane		ND		0.0019	1.00		
2-Butanone		ND		0.0044	1.00		
Carbon Disulfide		ND		0.031	1.00		
Carbon Tetrachloride		ND		0.0031	1.00		
Chlorobenzene		ND		0.0023	1.00		
Chloroethane		ND		0.0013	1.00		
Chloroform		ND		0.0024	1.00		
Chloromethane		ND		0.0010	1.00		
Dibromochloromethane		ND		0.0043	1.00		
Dichlorodifluoromethane		ND		0.0025	1.00		
Diisopropyl Ether (DIPE)		ND		0.0084	1.00		
1,1-Dichloroethane		ND		0.0020	1.00		
1,1-Dichloroethene		ND		0.0020	1.00		
1,2-Dibromoethane		ND		0.0038	1.00		
Dichlorotetrafluoroethane		ND		0.014	1.00		
1,2-Dichlorobenzene		ND		0.0030	1.00		
1,2-Dichloroethane		ND		0.0020	1.00		
1,2-Dichloropropane		ND		0.0023	1.00		
1,3-Dichlorobenzene		ND		0.0030	1.00		
1,4-Dichlorobenzene		ND		0.0030	1.00		
c-1,3-Dichloropropene		ND		0.0023	1.00		
c-1,2-Dichloroethene		ND		0.0020	1.00		
t-1,2-Dichloroethene		ND		0.0020	1.00		
t-1,3-Dichloropropene		ND		0.0045	1.00		
Ethyl-t-Butyl Ether (ETBE)		ND		0.0084	1.00		
Ethylbenzene		ND		0.0022	1.00		
4-Ethyltoluene		ND		0.0025	1.00		
Hexachloro-1,3-Butadiene		ND		0.016	1.00		
2-Hexanone		ND		0.0061	1.00		
Methyl-t-Butyl Ether (MTBE)		ND		0.0072	1.00		

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#### **Analytical Report**

Cardno ERI	Da	te Received:		08/26/14		
601 North McDowell Blvd.	Wo	Work Order:				
Petaluma, CA 94954-2312	Pre	eparation:		N/A		
		thod:		EPA TO-15M		
	Uni			mg/m3		
Project: ExxonMobil 99105/022783C				Page 18 of 18		
	Result		<u>DF</u>	Qualifiers		
<u>Parameter</u> Methylene Chloride	ND	<u>KL</u> 0.017	<u>DF</u> 1.00	Quaimers		
4-Methyl-2-Pentanone	ND	0.0061	1.00			
Naphthalene	ND	0.026	1.00			
	ND	0.0022	1.00			
o-Xylene p/m-Xylene	ND	0.0022	1.00			
Xylenes (total)	ND	0.0022	1.00			
Styrene	ND	0.0022	1.00			
	ND	0.0084	1.00			
Tert-Amyl-Methyl Ether (TAME)	ND	0.0084	1.00			
Tert-Butyl Alcohol (TBA)						
Tetrachloroethene	ND	0.0034	1.00			
	ND	0.019	1.00			
	ND	0.0027	1.00			
	ND	0.0056	1.00			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.011	1.00			
1,1,1-Trichloroethane	ND	0.0027	1.00			
1,1,2-Trichloroethane	ND	0.0027	1.00			
1,3,5-Trimethylbenzene	ND	0.0025	1.00			
1,1,2,2-Tetrachloroethane	ND	0.0069	1.00			
1,2,4-Trimethylbenzene	ND	0.0074	1.00			
1,2,4-Trichlorobenzene	ND	0.015	1.00			
Vinyl Acetate	ND	0.0070	1.00			
Vinyl Chloride	ND	0.0013	1.00			
Surrogate	<u>Rec. (%)</u>	Control Limits	<u>Qualifiers</u>			
1,4-Bromofluorobenzene	100	57-129				
1,2-Dichloroethane-d4	96	47-137				
Toluene-d8	98	78-156				

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#### **Analytical Report**

Cardno ERI			Date Re	cei	/ed:			08/26/1
601 North McDowell Blvd.			Work O	rder	:			14-08-190
Petaluma, CA 94954-2312			Prepara	tion	:			N/
			Method:					EPA TO-3
			Units:					mg/m
Project: ExxonMobil 99105/022	783C		01110.				Pa	ige 1 of 1
Client Sample Number	Lab Sample	Date/Time	Matrix		Instrument	Date	Date/Time	QC Batch ID
	Number	Collected		_	GC 13	Prepared	Analyzed	4 400001 04
V-INF-COMP-5	14-08-1907-1-A	08/20/14 12:30	Air	1	GC 13	N/A	08/26/14 13:18	140826L01
Parameter		Result		<u>RL</u>		DF	Qua	alifiers
ΓPH as Gasoline		4800		35		5.00		
V-INF-COMP-6	14-08-1907-2-A	08/20/14 20:35	Air		GC 13	N/A	08/26/14 13:43	140826L01
Parameter		Result		<u>RL</u>		<u>DF</u>	Qua	alifiers
TPH as Gasoline		4900		35		5.00		
V-INF-COMP-7	14-08-1907-3-A	08/21/14 04:30	Air		GC 13	N/A	08/26/14 13:54	140826L01
Parameter		Result		<u>RL</u>		DE	Qua	alifiers
TPH as Gasoline		5200		35		5.00		
/-INF-COMP-8	14-08-1907-4-A	08/21/14 12:30	Air		GC 13	N/A	08/26/14 14:07	140826L01
Parameter		Result		RL		DE	Qua	alifiers
TPH as Gasoline		5300		35		5.00		
/-INF-COMP-9	14-08-1907-5-A	08/21/14 20:30	Air		GC 13	N/A	08/26/14 14:19	140826L01
Parameter		Result		<u>RL</u>		DF	Qua	alifiers
TPH as Gasoline		5000		35		5.00		
V-INF-COMP-10	14-08-1907-6-A	08/22/14 04:30	Air		GC 13	N/A	08/26/14 14:31	140826L01
Parameter		Result		<u>RL</u>		DF	Qua	alifiers
TPH as Gasoline		4600		35		5.00		
V-INF-COMP-11	14-08-1907-7-A	08/22/14 12:05	Air		GC 13	N/A	08/26/14 14:43	140826L01
Parameter		Result		<u>RL</u>		DE	Qua	alifiers
TPH as Gasoline		5200		35		5.00		
Method Blank	098-01-005-5761	N/A	Air		GC 13	N/A	08/26/14 09:46	140826L01
Parameter		<u>Result</u>		RL		DF	Qua	alifiers
FPH as Gasoline		ND		7.0		1.00		

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#### **Quality Control - Sample Duplicate**

Cardno ERI			Date Received	d:		08/26/14
601 North McDowell Blvd			Work Order:			14-08-1907
Petaluma, CA 94954-231	2		Preparation:			N/A
			Method:			EPA TO-3M
Project: ExxonMobil 9910	5/022783C					Page 1 of 1
Quality Control Sample ID	Туре	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
V-INF-COMP-5	Sample	Air	GC 13	N/A	08/26/14 13:18	140826D01
V-INF-COMP-5	Sample Duplicate	Air	GC 13	N/A	08/26/14 13:30	140826D01
Parameter		Sample Conc.	DUP Conc.	<u>RPD</u>	RPD CL	Qualifiers
TPH as Gasoline		4847	4831	0	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

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#### **Quality Control - LCS/LCSD**

Cardno ERI		Date Receive	ed:		08/26/14
601 North McDowell Blvd.		Work Order:			14-08-1907
Petaluma, CA 94954-2312		Preparation:			N/A
		Method:			EPA TO-15M
Project: ExxonMobil 99105/022783C					Page 1 of 5
Quality Control Sample ID Type	Matrix	Instrument	Date Prenared	Date Analyzed	LCS/LCSD Batch Number

Quality Control Sample ID	Туре		Matrix	Instru	ument	Date Prepare			LCS/LCSD Ba	tch Number
099-12-981-4713	LCS		Air	GC/N	AS II	N/A	08/31/	14 20:14	140831L01	
099-12-981-4713	LCSD	9 - Yu	Air	GC/I	AS II	N/A	08/31/	14 21:06	140831L01	phone la se
Parameter	<u>Spike</u> Added	LCS Conc.	LCS %Rec.	LCSD Conc.	<u>LCSD</u> %Rec.	<u>%Rec. CL</u>	ME CL	<u>RPD</u>	RPD CL	<u>Qualifiers</u>
Acetone	0.05939	0.05785	97	0.05825	98	50-150	33-167	1	0-35	
Benzene	0.07987	0.08819	110	0.08955	112	60-156	44-172	2	0-40	
Benzyl Chloride	0.1294	0.1397	108	0.1432	111	50-150	33-167	2	0-35	
Bromodichloromethane	0.1675	0.1674	100	0.1690	101	50-150	33-167	1	0-35	
Bromoform	0.2584	0.2490	96	0.2544	98	50-150	33-167	2	0-38	
Bromomethane	0.09708	0.09414	97	0.09501	98	50-150	33-167	1	0-35	
2-Butanone	0.07373	0.08112	<b>1</b> 10	0.08153	111	50-150	33-167	1	0-35	
Carbon Disulfide	0.07785	0.08196	105	0.08289	106	50-150	33-167	1	0-35	
Carbon Tetrachloride	0.1573	0.1464	93	0.1481	94	64-154	49-169	1	0-32	
Chlorobenzene	0.1151	0,1203	104	0.1227	107	50-150	33-167	2	0-35	
Chloroethane	0.06596	0.06625	100	0.06680	101	50-150	33-167	1	0-35	
Chloroform	0.1221	0.1216	100	0.1225	100	50-150	33-167	1	0-35	
Chloromethane	0.05163	0.05048	98	0.05450	106	50-150	33-167	8	0-35	
Dibromochloromethane	0.2130	0.2050	96	0.2100	99	50-150	33-167	2	0-35	
Dichlorodifluoromethane	0.1236	0.1219	99	0.1231	100	50-150	33-167	1	0-35	
Diisopropyl Ether (DIPE)	0.1045	0.1119	107	0.1127	108	60-140	47-153	1	0-30	
1,1-Dichloroethane	0.1012	0.1058	105	0.1069	106	50-150	33-167	1	0-35	
1,1-Dichloroethene	0.09912	0.09261	93	0.09385	95	50-150	33-167	1	0-35	
1,2-Dibromoethane	0.1921	0,1998	104	0.2045	106	54-144	39-159	2	0-36	
Dichlorotetrafluoroethane	0.1748	0.1665	95	0.1724	99	50-150	33-167	3	0-35	
1,2-Dichlorobenzene	0.1503	0.1533	102	0.1574	105	34-160	13-181	3	0-47	
1,2-Dichloroethane	0.1012	0.09807	97	0.09910	98	69-153	55-167	1	0-35	
1,2-Dichloropropane	0.1155	0.1252	108	0.1276	110	67-157	52-172	2	0-35	
1,3-Dichlorobenzene	0.1503	0.1522	101	0.1562	104	50-150	33-167	3	0-35	
1,4-Dichlorobenzene	0.1503	0.1557	104	0.1599	106	36-156	16-176	3	0-47	
c-1,3-Dichloropropene	0.1135	0.1265	111	0.1286	113	61-157	45-173	2	0-35	
c-1,2-Dichloroethene	0.09912	0.1096	111	0.1103	111	50-150	33-167	1	0-35	
t-1,2-Dichloroethene	0.09912	0.1072	108	0.1083	109	50-150	33-167	1	0-35	
t-1,3-Dichloropropene	0.1135	0.1272	112	0.1286	113	50-150	33-167	1	0-35	
Ethyl-t-Butyl Ether (ETBE)	0.1045	0.1159	111	0.1156	111	60-140	47-153	0	0-30	
Ethylbenzene	0.1086	0.1121	103	0.1151	106	52-154	35-171	3	0-38	
4-Ethyltoluene	0.1229	0.1285	105	0.1322	108	50-150	33-167	3	0-35	
Hexachloro-1,3-Butadiene	0.2666	0.2423	91	0.2468	93	50-150	33-167	2	0-35	
2-Hexanone	0.1024	0.1155	113	0.1189	116	50-150	33-167	3	0-35	
Methyl-t-Butyl Ether (MTBE)	0,09013	0.09797	109	0.09875	110	50-150	33-167	1	0-35	
Methylene Chloride	0.08684	0.08628	99	0.08704	100	50-150	33-167	1	0-35	
-										

RPD: Relative Percent Difference. CL: Control Limits

Return to Contents

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#### **Quality Control - LCS/LCSD**

Cardno ERI				Date	Receive	d:				08/26/14
601 North McDowell Blvd.				Worl	c Order:				1	4-08-1907
Petaluma, CA 94954-2312				Pren	aration:					N/A
Felalullia, CA 94934-2312				Meth					FP	PA TO-15M
Dreiset: EuropMabil 00105	0007000			Meti	100.				Page	
Project: ExxonMobil 99105	/0227630								Faye	2015
Parameter	Spike Added	LCS Conc.	LCS <u>%Rec.</u>	LCSD Conc.	LCSD %Rec.	<u>%Rec. CL</u>	ME_CL	RPD	RPD CL	<u>Qualifiers</u>
4-Methyl-2-Pentanone	0.1024	0.1157	113	0.1174	115	50-150	33-167	1	0-35	
Naphthalene	0.1311	0.1338	102	0.1355	103	40-190	15-215	1	0-30	
o-Xylene	0.1086	0.1075	99	0.1105	102	52-148	36-164	3	0-38	
p/m-Xylene	0.2171	0.2155	99	0.2201	101	42-156	23-175	2	0-41	
Styrene	0.1065	0.1137	107	0.1178	111	50-150	33-167	3	0-35	
Tert-Amyl-Methyl Ether (TAME)	0.1045	0.1168	112	0.1168	112	60-140	47-153	0	0-30	
Tert-Butyl Alcohol (TBA)	0.1516	0.1609	106	0.1626	107	60-140	47-153	1	0-30	
Tetrachloroethene	0.1696	0.1684	99	0.1721	101	56-152	40-168	2	0-40	
Toluene	0.09421	0.09776	104	0.1008	107	56-146	41-161	3	0-43	
Trichloroethene	0.1343	0.1407	105	0.1428	106	63-159	47-175	1	0-34	
Trichlorofluoromethane	0.1405	0.1243	88	0.1245	89	50-150	33-167	0	0-35	
1,1,2-Trichloro-1,2,2- Trifluoroethane	0,1916	0.1997	104	0.2016	105	50-150	33-167	1	0-35	
1,1,1-Trichloroethane	0.1364	0.1304	96	0.1326	97	50-150	33-167	2	0-35	
1,1,2-Trichloroethane	0.1364	0.1477	108	0.1502	110	65-149	51-163	2	0-37	
1,3,5-Trimethylbenzene	0.1229	0.1226	100	0.1261	103	50-150	33-167	3	0-35	
1,1,2,2-Tetrachloroethane	0.1716	0.1771	103	0.1810	105	50-150	33-167	2	0-35	
1,2,4-Trimethylbenzene	0.1229	0.1235	100	0.1270	103	50-150	33-167	3	0-35	
1,2,4-Trichlorobenzene	0.1855	0.1935	104	0.1964	106	50-150	33-167	1	0-35	
Vinyl Acetate	0.08803	0.09530	108	0.09643	110	50-150	33-167	1	0-35	
Vinyl Chloride	0.06391	0.06392	100	0.06600	103	45-177	23-199	3	0-36	

Total number of LCS compounds: 56

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

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#### **Quality Control - LCS/LCSD**

Cardno ERI	Date Received:	08/26/14
601 North McDowell Blvd.	Work Order:	14-08-1907
Petaluma, CA 94954-2312	Preparation:	N/A
	Method:	EPA TO-15M
Project: ExxonMobil 99105/022783C		Page 3 of 5

Quality Control Sample ID	Туре		Matrix	Instr	ument	Date Prepare	A617 11 AND	and the second second	LCS/LCSD Ba	tch Number
099-12-981-4714	LCS		Air	GC/I	NS II	N/A	09/02/	14 11:31	140902L02	
099-12-981-4714	LCSD		Air	GC/I	NS II	N/A	09/02/	14 12:23	140902L02	
Parameter	<u>Spike</u> Added	LCS Conc.	LCS <u>%Rec.</u>	L <u>CSD</u> Conc.	<u>LCSD</u> <u>%Rec.</u>	<u>%Rec. CL</u>	ME CL	<u>RPD</u>	RPD CL	Qualifiers
Acetone	0.05939	0.05350	90	0,05280	89	50-150	33-167	1	0-35	
Benzene	0.07987	0.08541	107	0.08529	107	60-156	44-172	0	0-40	
Benzyl Chloride	0.1294	0.1498	116	0.1455	112	50-150	33-167	3	0-35	
Bromodichloromethane	0.1675	0.1687	101	0.1682	100	50-150	33-167	0	0-35	
Bromoform	0.2584	0.2672	103	0.2638	102	50-150	33-167	1	0-38	
Bromomethane	0.09708	0.09466	98	0.09442	97	50-150	33-167	0	0-35	
2-Butanone	0.07373	0.07414	101	0.07320	99	50-150	33-167	1	0-35	
Carbon Disulfide	0.07785	0.08067	104	0.08035	103	50-150	33-167	0	0-35	
Carbon Tetrachloride	0.1573	0.1547	98	0.1546	98	64-154	49-169	0	0-32	
Chlorobenzene	0.1151	0.1203	104	0.1198	104	50-150	33-167	0	0-35	
Chloroethane	0.06596	0.06302	96	0.06191	94	50-150	33-167	2	0-35	
Chloroform	0.1221	0.1220	100	0.1225	100	50-150	33-167	0	0-35	
Chloromethane	0.05163	0.04802	93	0.04897	95	50-150	33-167	2	0-35	
Dibromochloromethane	0.2130	0.2159	101	0.2136	100	50-150	33-167	1	0-35	
Dichlorodifluoromethane	0.1236	0.1271	103	0.1279	103	50-150	33-167	1	0-35	
Diisopropyl Ether (DIPE)	0.1045	0.1027	98	0.1033	99	60-140	47-153	1	0-30	
1,1-Dichloroethane	0.1012	0.1012	100	0.1007	100	50-150	33-167	0	0-35	
1,1-Dichloroethene	0.09912	0.08868	89	0.08850	89	50-150	33-167	0	0-35	
1,2-Dibromoethane	0.1921	0.2013	105	0.1999	104	54-144	39-159	1	0-36	
Dichlorotetrafluoroethane	0.1748	0.1712	98	0.1739	100	50-150	33-167	2	0-35	
1,2-Dichlorobenzene	0.1503	0.1587	106	0.1564	104	34-160	13-181	1	0-47	
1,2-Dichloroethane	0.1012	0.09796	97	0.09789	97	69-153	55-167	0	0-35	
1,2-Dichloropropane	0.1155	0.1161	101	0.1165	101	67-157	52-172	0	0-35	
1,3-Dichlorobenzene	0.1503	0.1603	107	0.1578	105	50-150	33-167	2	0-35	
1,4-Dichlorobenzene	0,1503	0.1628	108	0.1602	107	36-156	16-176	2	0-47	
c-1,3-Dichloropropene	0.1135	0.1234	109	0.1229	108	61-157	45-173	0	0-35	
c-1,2-Dichloroethene	0.09912	0.1089	110	0.1070	108	50-150	33-167	2	0-35	
t-1,2-Dichloroethene	0.09912	0.1070	108	0.1057	107	50-150	33-167	1	0-35	
t-1,3-Dichloropropene	0.1135	0.1260	111	0.1264	111	50-150	33-167	0	0-35	
Ethyl-t-Butyl Ether (ETBE)	0.1045	0.1138	109	0,1128	108	60-140	47-153	1	0-30	
Ethylbenzene	0.1086	0,1119	103	0,1108	102	52-154	35-171	1	0-38	
4-Ethyltoluene	0.1229	0.1332	108	0.1317	107	50-150	33-167	1	0-35	
Hexachloro-1,3-Butadiene	0.2666	0.2510	94	0.2535	95	50-150	33-167	1	0-35	
2-Hexanone	0.1024	0.1057	103	0.1036	101	50-150	33-167	2	0-35	
Methyl-t-Butyl Ether (MTBE)	0.09013	0.09917	110	0.09809	109	50-150	33-167	1	0-35	
Methylene Chloride	0.08684	0.08350	96	0.07433	86	50-150	33-167	12	0-35	

RPD: Relative Percent Difference. CL: Control Limits

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#### **Quality Control - LCS/LCSD**

Cardno ERI				Date	Receive	d:				08/26/14
601 North McDowell Blvd.				Worl	c Order:				1	4-08-1907
Petaluma, CA 94954-2312				Pren	aration:					N/A
				Meth					FP	A TO-15M
Project: ExxonMobil 99105	10227830			Med	104.				Page	
Project. Extonitiobil 99105	0227030								Faye	+015
Parameter	<u>Spike</u> Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	<u>%Rec. CL</u>	ME CL	<u>RPD</u>	RPD CL	Qualifiers
4-Methyl-2-Pentanone	0.1024	0.1070	104	0.1063	104	50-150	33-167	1	0-35	
Naphthalene	0.1311	0.1280	98	0.1286	98	40-190	15-215	0	0-30	
o-Xylene	0.1086	0.1085	100	0.1079	99	52-148	36-164	0	0-38	
p/m-Xylene	0.2171	0.2194	101	0.2168	100	42-156	23-175	1	0-41	
Styrene	0.1065	0.1133	106	0.1127	106	50-150	33-167	1	0-35	
Tert-Amyl-Methyl Ether (TAME)	0.1045	0.1181	113	0.1180	113	60-140	47-153	0	0-30	
Tert-Butyl Alcohol (TBA)	0.1516	0.1609	106	0.1304	86	60-140	47-153	21	0-30	
Tetrachloroethene	0.1696	0.1764	104	0.1740	103	56-152	40-168	1	0-40	
Toluene	0.09421	0.09690	103	0.09595	102	56-146	41-161	1	0-43	
Trichloroethene	0.1343	0.1420	106	0.1417	105	63-159	47-175	0	0-34	
Trichlorofluoromethane	0.1405	0.1263	90	0.1237	88	50-150	33-167	2	0-35	
1,1,2-Trichloro-1,2,2- Trifluoroethane	0.1916	0.2061	108	0.2055	107	50-150	33-167	0	0-35	
1,1,1-Trichloroethane	0.1364	0.1357	99	0.1356	99	50-150	33-167	0	0-35	
1,1,2-Trichloroethane	0.1364	0.1437	105	0.1436	105	65-149	51-163	0	0-37	
1,3,5-Trimethylbenzene	0.1229	0.1259	102	0.1252	102	50-150	33-167	1	0-35	
1,1,2,2-Tetrachloroethane	0.1716	0.1717	100	0.1710	100	50-150	33-167	0	0-35	
1,2,4-Trimethylbenzene	0.1229	0.1283	104	0.1272	103	50-150	33-167	1	0-35	
1,2,4-Trichlorobenzene	0.1855	0.1902	103	0.1907	103	50-150	33-167	0	0-35	
Vinyl Acetate	0.08803	0.08950	102	0.08845	100	50-150	33-167	1	0-35	
Vinyl Chloride	0.06391	0.06172	97	0.06271	98	45-177	23-199	2	0-36	

Total number of LCS compounds: 56

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

### Calscience

#### **Quality Control - LCS**

Cardno ERI			Date Recei	ved:				08/26/14
601 North McDowell Blvd.			Work Order	r:				14-08-1907
Petaluma, CA 94954-2312	2		Preparatior	า:				N/A
			Method:					EPA TO-3N
Project: ExxonMobil 9910	5/022783C						Pag	je 5 of 5
Quality Control Sample ID	Туре	Matrix	Instrument	Date P	repared	Date Analyzed	LCS Batch	Number
098-01-005-5761	LCS	Air	GC 13	N/A		08/26/14 09:29	140826L01	L STALLET
Parameter		Spike Added	Conc. Reco	vered L	CS %Red	%Rec.	CL	Qualifiers
TPH as Gasoline		932.5	1011	1	08	80-120	0	

RPD: Relative Percent Difference. CL: Control Limits

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#### **Glossary of Terms and Qualifiers**

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ork Order:	14-08-1907 Page 1 of 1
Qualifiers	Definition
AZ	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound v in control and, therefore, the sample data was reported without further clarification.
В	Analyte was present in the associated method blank.
BA	The MS/MSD RPD was out of control due to suspected matrix interference.
BB	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
DF	Reporting limits elevated due to matrix interferences.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time,
GE	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
HD	Chromat. profile inconsistent with pattern(s) of ref. fuel stnds.
но	High concentration matrix spike recovery out of limits
ΗΤ	Analytical value calculated using results from associated tests.
ΗХ	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS was in control.
IL.	Relative percent difference out of control.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
LD	Analyte presence was not confirmed by second column or GC/MS analysis.
LP	The LCS and/or LCSD recoveries for this analyte were above the upper control limit. The associated sample was non-detected. There the sample data was reported without further clarification.
LQ	LCS recovery above method control limits.
LR	LCS recovery below method control limits.
ND	Parameter not detected at the indicated reporting limit.
QO	Compound did not meet method-described identification guidelines. Identification was based on additional GC/MS characteristics.
RU	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
SG	A silica gel cleanup procedure was performed.
SN	See applicable analysis comment.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

#### Sandy Tat

From:	David R. Daniels <david.daniels@cardno.com></david.daniels@cardno.com>
Sent:	Wednesday, August 27, 2014 5:03 PM
То:	Sandy Tat
Subject:	RE: Change TAT on submitted samples
Attachments:	14-08-1899 Revised.pdf; 14-08-1907 Revised.pdf

Revised COCs attached. Thank You

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 <u>david.daniels@cardno.com</u> Web <u>www.cardno.com</u> <u>www.cardnoeri.com</u>

From: Sandy Tat [mailto:SandyTat@eurofinsUS.com] Sent: Wednesday, August 27, 2014 4:41 PM To: David R. Daniels Subject: RE: Change TAT on submitted samples

Here you go. Please revise the TAT.

Thanks

Sandy Tat Project Manager Assistant

From: David R. Daniels [<u>mailto:david.danlels@cardno.com</u>] Sent: Wednesday, August 27, 2014 4:00 PM To: Cecile L de Gula; Sandy Tat Subject: RE: Change TAT on submitted samples

I should have mentioned that we will want 5-day TAT.

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 <u>david.daniels@cardno.com</u> Web www.cardno.com www.cardnoeri.com

From: David R. Daniels Sent: Wednesday, August 27, 2014 3:55 PM To: Cecile L de Guia (<u>CecileLdeGuia@eurofinsUS.com</u>); Sandy Tat (<u>SandyTat@eurofinsUS.com</u>) Subject: Change TAT on submitted samples

We would like to change the TAT on some samples. I believe they arrived in Garden Grove yesterday. And should be on two COCs. They are for ExxonMobil site 99105. One of them is work order 14-08-1907. I'm not sure of the other one but

it is water samples for the same site. I'll revise the COCs if you can send them to me. We have a report due September

Thanks,

David R. Daniels, PG 8737 PROJECT GEOLOGIST CARDNO ERI



Shaping the Future

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 <u>david.daniels@cardno.com</u> Web <u>www.cardno.com</u> <u>www.cardnoeri.com</u>

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Consulta	int Project Mgr:	Greg G	urss												Elo	conl	Mob	il S	ite #	ŧ _			991	05				Major Project (/	AFE :	<b>#):</b>			
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Sample ID	rield Point Name	Date Sempled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Methanol	Sodium Bisultate HCI	NaOH	H <sub>2</sub> SO <sub>4</sub> Plastic	H2SO, Glass HNO3	Ice	Other	Controlator	Groundwater	Drinking Water	Skudge	Soli	Ar	Other (spacify): Diatiled Water	TPHd 8015 B	TPHg TO-3	Full List VOCs TO-16 Oxygenates 82608	Methanol 904ED		Motor UII by 80165	Kerosene by 8015B		RUBH TAT (Pre-Bchedule)	5-day TAT	Standard 10-day TAT	Due Date of Report
V-INF-MW5-1	ÉVENT-INF			1 -			-	H					1.	_			T			1				x	T.	T	1		Π	Ē	Ĩ	X	
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V-INF=MW6-1	EVENT-INF							H	-	-	-	¥*== 1=	-	H	4	-	1-	1-	•••	1			X		T	T	-					x	
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Comments/Special Instructions: TO-15 to include Full Scan VOCs, I GLOBAL 1D # T0600101855	Including BTEX	, fuel ox	ygenate	s, 1,2 DC	A, EL	)B, ai	nd na	phti	aler	ne.		PI									Sa	mpera mple mple )Cs F	ature Cont	Upon ainers	Re Int	act	?			Y Y		NN	
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Page 33 of 38

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Return to Contents

#### Cecile L de Guia

From: Sent: To: Cc: Subject: Azat Magdanov (Petaluma) [azat.magdanov@cardno.com] Tuesday, August 26, 2014 12:38 PM Cecile L de Guia David R. Daniels; Greg Gurss; Sandy Tat Re: COC for vapor samples taken from site 99105

Please proceed, Cecile.

Sent from my iPhone

On Aug 26, 2014, at 12:08 PM, "Cecile L de Guia" < CecileLdeGuia@eurofinsUS.com > wrote:

Good Afternoon Azat/David,

The attached COC was received today and all the tedlar bags were past the specified holding time. Please let me know if you would like to proceed with the analysis? Thank you.

Best regards, Cecile de Guia Project Manager

Eurofins Calscience 7440 Lincoln Way Garden Grove, CA 92841-1427 (714) 895-5494 Email: <u>ceciledeguia@eurofinsUS.com</u> Website: www. <u>eurofinsus.com</u>

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Click here to report this email as spam.

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Calscience, Inc.	Ga	rden	Grove	e, C	A 9	28	41			F	ax:	71	4-89	94-7	7501	1									X 011	ivi L-f	18	1	19	07
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Consultant A	ddress: 601 N	McDowel	I												In	voic	e Te	: Di	ect Bill	Card	no E	RI								
Consultant City/St	ate/Zip: Petalu	ima, CA 9	4954												R	еро	rt To	: Gr	eg Gurs	s										
ExxonMobil Proj	ct Mgr: Jenni	fer Sedla	chek											_ P	Proje	ect N	lam	e: 02	2783 C	x										
Consultant Proje	ct Mgr: Greg	Gurss		_	0								Ex	xoni	Моb	il SI	ite #	:		99	105	i			Major Proje	t (AF	E #):			
Consultant Telephone						Fax	No.:						_		Site	Add	ires	s: <u>63</u>	01 San I	Pabk	o Av	enue								
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Sample ID	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered Methanol	Sodium Bisulfate	HCI NaOH	H <sub>2</sub> SO <sub>4</sub> Plastic	H <sub>2</sub> SO <sub>4</sub> Glass	lce	Other	None	orounuwater Wastewater	Drinking Water	Sludge	Soll	Air Other (specify): Distilled Water	0 2 2 0 0 1 D	TPHa TO-3	-ull List VOCs TO-15	Oxygenates 8260B	Methanoi 8015B	Motor Oil by 8015B		Kerosene by 8015B	RUSH TAT (Pre-Schedule	6-day TAT	Standard 10-day TAT	Due Date of Report
V-INF-MW5-1	-INF	مىرىنىدە 😽	und	-	The sec			-					1	Ť				1		T <sub>x</sub>	-	-	-	-	ويعجب والمرزول	<b>x</b> 5-9 We	T.	<sup>o</sup>	X	0
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CSO CONTRACTOR	<b>&lt; WebShip</b> 800-322-5555 wv	
Ship From: ALAN KEMP CAL SCIENCE- CONCORD 5063 COMMERCIAL CIRCLE #H CONCORD, CA 94520 Ship To: SAMPLE RECEIVING	Tracking #: 525470207	NPS
CEL 7440 LINCOLN WAY GARDEN GROVE, CA 92841	GARDEN GROVE	
COD: ;\$0,00	D92845A	
Reference: CARDNO ERI Delivery Instructions:	27970055	
Signature Type: SIGNATURE REQUIRED		Print Date : 09/25/14 15:29 PM Package 1 of 1
Send Label To Printer Print All	Edit Shipment Fir	nish
	I shipments - each package must have a unique b on this page to print the shipping label on a laser or in	

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

#### ADDITIONAL OPTIONS:

pline and the second se	
Send Label Via Email	Create Return Label

#### TERMS AND CONDITIONS:

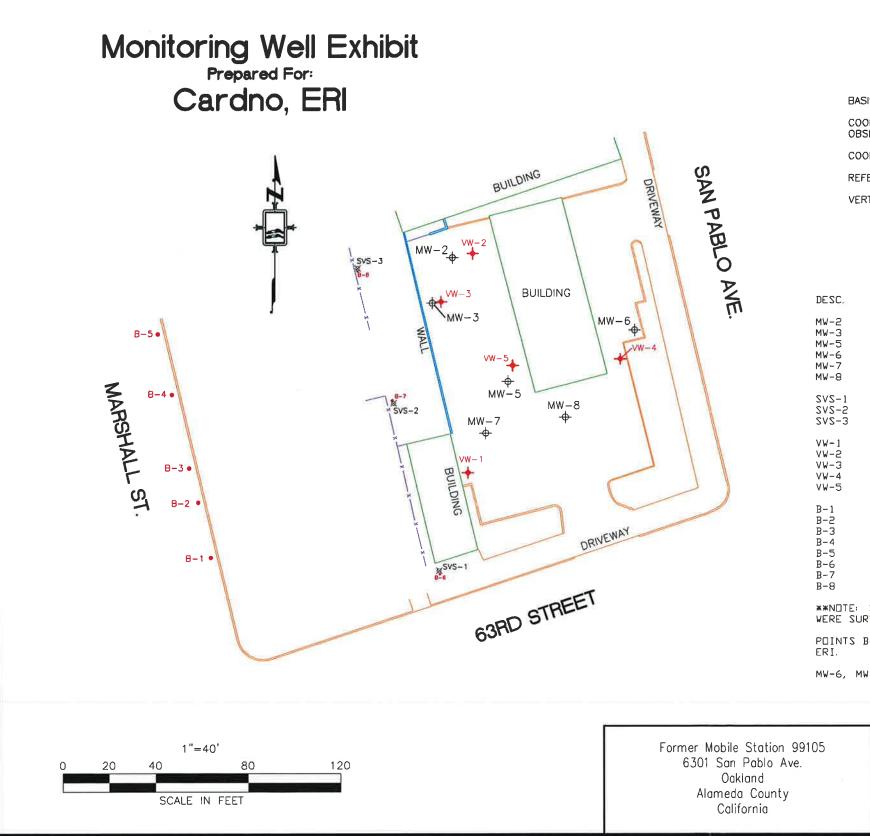
By giving us your shipment to deliver, you agree to all the service terms and conditions described in this section. Chir ilaniiity for loss or damage to any package is limited to your actual damages or \$100 whichever is less, unless you pay for and oectare a higher authorized value. If you declare a 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 lenowledge 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 bublic 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.

🔅 eurofins	WORK ORDE	R #: <b>14-</b>	Page 37	
	E RECEIPT FO	D	σλ .	
CLIENT: Carduo EM			<del>eoler</del> _/ 8/24/ 08/24/	2
para di mana di				
TEMPERATURE: Thermometer ID: SC1 (Cr			ediment/tissue	)
Temperature°C - 0.3 °C (0	CF) =°C	🗆 Blank	Sample	
Sample(s) outside temperature criteria (PM/	APM contacted by:)	)		
□ Sample(s) outside temperature criteria but r	eceived on ice/chilled on sam	ie day of samp	ling.	
Received at ambient temperature, place	d on ice for transport by	Courier.		
Ambient Temperature: Air D Filter			Checked by	: <u>8%</u>
			and the second second	
CUSTODY SEALS INTACT:	lot Intact) □ Not Prese	ent □ N/A	Checked by	. 84
	lot Intact)   □ Not Prese lot Intact)   □ Not Prese		Checked by	846
□ Sample □ □ No (N			Checked by	
SAMPLE CONDITION:		Yes	No	N/A
Chain-Of-Custody (COC) document(s) receiv	ed with samples	<b>Z</b>		
COC document(s) received complete				
□ Collection date/time, matrix, and/or # of container		4		
No analysis requested. Dot relinquished.	No date/time relinquished.			
Sampler's name indicated on COC		🗹		
Sample container label(s) consistent with CO	C	🗹		
Sample container(s) intact and good condition	n	🗹		
Proper containers and sufficient volume for a	nalyses requested	🗹		
Analyses received within holding time		🗆	$\mathbf{F}$	
Aqueous samples received within 15-minu	te holding time			
🗆 pH 🛛 Residual Chlorine 🛛 Dissolved Sulfid	es Dissolved Oxygen	🗆		
Proper preservation noted on COC or sample	container			Ø
Unpreserved vials received for Volatiles anal	ysis			
Volatile analysis container(s) free of headspa	се	🗆		ď
Tedlar bag(s) free of condensation				
Solid:  402CGJ  802CGJ  1602CGJ	□Sleeve () □EnCo	ores <sup>®</sup> ⊡Terra	aCores <sup>®</sup> □_	
Aqueous: □VOA □VOAh □VOAna₂ □1254	AGB □125AGBh □125AG	Bp □1AGB	□1AGB <b>na₂</b> □	1AGB <b>s</b>
□500AGB □500AGJ □500AGJs □250A	GB □250CGB □250CG	B <b>s</b> □1PB	□1PBna □	500PB
□250PB □250PBn □125PB □125PBznn	a ⊡100PJ ⊡100PJna₂ ⊡	0_	0	
Air: DTedlar <sup>®</sup> Canister Other: C Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Preservative: h: HCL n: HNO3 na <sub>2</sub> :Na <sub>2</sub> S <sub>2</sub> O3 na: NaOH p: H <sub>3</sub> PO		: Envelope	/Checked by: Reviewed by: Scanned by:	

¢ e	uro	fins	12840	science		anu selitore con			-08-222
□ Sam □ Hold □ Insut □ Impr □ Impr □ No p	ple(s) N ple(s) re ing time fficient o oper co oper pro reserva	OT REC eceived l e expired quantitie ntainer( eservations tive note	EIVED be but NOT d – list sa es for ana s) used – ve used – ed on CO	ut listed on ( LISTED on ( mple ID(s) ar alysis – list ta - list test - list test - list test C or label –	COC nd test est list test &	& notify lat		) All	analyses past Iding time.
Sample labels illegible – note test/container type									
☐ Sam ☐ Air : ☐ ☐	Sample Flat Very lo Leaking Leaking	ainer(s) containe w in vol g (Not tr g (transi	ume ansferre erred int	led promised – d - duplicate o Calscienc o Client's Te	e bag sul e Tedlar	bmitted) <sup>®</sup> Bag*)			
HEADS	Container	# of Vials Received	ners wil	Container ID(s)	# of Vials Received	or 1⁄4 inch Sample #	Container iD(s)	# of Cont. received	Analysis
Commen		ent's requ	est.					nitial / Da	nte:
	- dilinere								SOP T100_090 (06/02/14

### **APPENDIX G**

### SURVEY DATA



BASIS OF COORDINATES AND ELEVATIONS:

COORDINATES ARE CALIFORNIA STATE PLANE ZONE 3 COORDINATES FROM GPS OBSERVATIONS USING CSDS VIRTUAL SURVEY NETWORK.

COORDINATE DATUM IS NAD 83.

REFERENCE GEOID IS GEOIDO3.

VERTICAL DATUM IS NAVD 88 FROM GPS OBSERVATIONS.

DESC	NORTHING	EASTING	LATITUDE	LONGITUDE	EL. PVC	EL.RIM	
MW-2 MW-3 MW-5 MW-6 MW-7 MW-8	2135415.1 2135395.2 2135361.0 2135383.5 2135338.5 2135338.5 21353345.4	6046243.7 6046234.9 6046267.8 6046322.7 6046258.2 6046292.7	37.8459707 37.8459157 37.8458234 37.8458880 37.8457611 37.8457820	-122.2851518 -122.2851810 -122.2850651 -122.2848764 -122.2850966 -122.2849776	42.24 42.18 41.86 42.00 41.34 41.30	42, 54 42, 44 42, 21 42, 37 41, 72 41, 75	
1-2V2 2V2-2 2V2-3	2135278.6 2135351.6 2135410.4	6046237.8 6046218.1 6046202.7	37.8455955 37.8457949 37.8459556	-122.2851633 -122.2852363 -122.2852938		38.78 41.05 42.64	
VW-1 VW-2 VW-3 VW-4 VW-5	2135321.4 2135416.9 2135395.9 2135370.9 2135367.9	6046250.4 6046252.6 6046238.8 6046316.5 6046269.8	37.8457136 37.8459762 37.8459177 37.8458532 37.8458426	-122.2851225 -122.2851214 -122.2851677 -122.2848969 -122.2850585		41.03 42,49 42.38 42.44 42.29	
B-1 B-2 B-3 B-4 B-5 B-6 B-7 B-8	2135284.3 2135308.4 2135323.3 2135355.4 2135381.7 2135277.0 2135353.0 2135409.1	6046139.2 6046133.7 6046129.8 6046122.4 6046116.4 6046238.2 6046217.7 6046202.7	37. 8456062 37. 8456721 37. 8457127 37. 8458004 37. 8458724 37. 8455913 37. 8457987 37. 8459522	-122. 2855053 -122. 2855259 -122. 2855402 -122. 2855681 -122. 2855905 -122. 2851619 -122. 2852379 -122. 2852379			
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MW-6, MW-7, MW-8 SURVEYED DN 8-18-14



Date: December, 2010 Scale: 1''=40' Field: 12-15-10,8-18-14 Revised: 7-3-12, 8-22-14 Field Book: MW-52,58 Dwg. No. 1876-156 MAM Ref: 1893-070 mom

### **APPENDIX H**

### WASTE DISPOSAL DOCUMENTATION

### NON-HAZARDOUS WASTE MANIFEST

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SOVINK

WASTE MANIFEST	As print or type (Form designed for use on elite (12 pitch) typowriter)           NON-HAZARDOUS         1. Generator's US EPA ID No.         Manifest           WASTE MANIFEST         1. Generator's VS EPA ID No.         Document No.         EPI 2-78           3. Generator's Name and Mailing Address         EV # 99/05         10.4 Document No.         EV # 99/05							
3. Generator's Name and Mailing Address	CAP	CARDNO ERI						
4. Generator's Phone ( )								
6. Transporter 1 Company Name	6.	US EPA ID Number		A. State Transporter's ID B. Transporter 1 Phone				
INSTRAT INC 7. Transporter 2 Company Namo		US EPA ID Number		C. Stale Transporter				
r. Transporter 2 Company reality				D. Transporter 2				
9. Designated Facility Name and Sile Add	iress 10	US EPA ID Number		E. Slate Facility's ID				
INSTRAT, INC. 1105 C AIRPORT RD.				F. Facility's Phone (707) 374-3834				
11. WASTE DESCRIPTION			12. Co	ntainers	13.	14. Unit		
	2/		No.	Туре	Total Quantity	Unit Wt_/Vol.		
Non-HAZ	PURGE WATER		)	POLY	160	GAL		
G b. E								
E R c. A								
0			_			_		
R d.		8						
		¥						
G. Additional Descriptions for Materiale Li	H. Handling Codes for Wastes Listed Above							
15. Special Handling Instructions and Adv	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			Mol	Date nth Day Yea		
	ecelpt of Materials	Signature			Ma			
		Signature Signature			Ma	nth Day Yea Date Date Nth Day Yea		
		Signature			Ма	nth Day Yea Date Date Day Yea Date		
17. Transporter 1 Acknowledgement of P Printed/Typed Name 18. Transporter 2 Acknowledgement of P Printed/Typed Name E Richard Sp		Signature		-daos	Ма	nth Day Yea Date nth Day Yea Date Date		
17. Transporter 1 Acknowledgement of F         Printed/Typed Name         18. Transporter 2 Acknowledgement of F         Printed/Typed Name         Richard Sp         19. Discrepancy Indication Space	receipi of Materials Pangler	Signature Signature Pick	lad	daas	Ма	nth Day Yea Date nth Day Yea Date Date		
TRAN Printed/Typed Name 18. Transporter 1 Acknowledgement of F Printed/Typed Name Richard Sp 19. Discrepancy Indication Space	receipi of Materials Pangler	Signature Signature Pick	lad	deas	Ма	nth Day Yea Date Inth Day Yea Date Date Date		
17. Transporter 1 Acknowledgement of F         Printed/Typed Name         18. Transporter 2 Acknowledgement of F         Printed/Typed Name         Richard Sp         19. Discrepancy Indication Space         19. Discrepancy Indication Space         20. Factility Owner or Operator: Carificat         T         Printed/Typed Name	receipi of Materials Pangler	Signature Signature Pick	lad	deas W	Ма	nth Day Yea Date Date Date Date Date Date Date		
17. Transporter 1 Acknowledgement of F         Printed/Typed Name         18. Transporter 2 Acknowledgement of F         Printed/Typed Name         Richard Sp         19. Discrepancy Indication Space         12. Factility Owner or Operator: Carlificat         13. Printed/Typed Name         14. Transporter 2 Acknowledgement of F         15. Discrepancy Indication Space         16. Transporter or Operator: Carlificat         17. Transporter or Operator: Carlificat	Necesipi of Materials POLNGIEY Ion of receipt of the waste makeriale co TEHERD	Signature Signature Puick vered by this manifest, except as noted	lad	lid	Ma Que é	nth Day Yea Date Inth Day Yea Date Date Date		

### **NON-HAZARDOUS WASTE MANIFEST**

Pleas	e print or type (Form designed for use on elite	e (12 pitch) typewriter)					
	NON-HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No.			Manifest Document No.	EK12783	2. Page 1 of
	3, Generator's Name and Mailing Address	# 99/05			CA	DNO ERI	
	6	301 SAN PABLO	) AVE			(UNO EK)	
	4. Generator's Phone ( )	AKLAND, CA					
	5. Transporter 1 Company Name	6.	US EPA ID Number		A. State Trans	porter's ID	
(Same	CARDNO ERI				B. Transporter	1 Phone	
	7. Transporter 2 Company Name	8.	US EPA ID Number		C. State Trans	porter's ID	
					D. Transporter	2 Phone	
100	9. Designated Facility Name and Site Address	10.	US EPA ID Number		E. State Facilit	ty's ID	
	Bietrat, Bic. 1166 Camport RD.				F. Facility's Ph	1000	
22	RIO VISTA, CA 96571	1			1.1 dointy 011	(769) 224	1-0004
	11. WASTE DESCRIPTION			12. C	ontainers	13. Total	14. Unit
1-1				No.	Туре	Quantity	Wt./Vol.
	а.						
	NON-HAZ PUR	GE WATER			POLY	5	GAL
G	b						
N							
G E N E R A T	С.			-			
Ä							
J							
Ó R	d.						
53							
	G. Additional Descriptions for Materials Listed Ab	QVê		1	H. Handling C	odes for Wastes Listed Abov	/e
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	BROWN, FINES, NO	ODOR					
	,						
P	15. Special Handling Instructions and Additional	nformation			I		
R							
1				17 ANN	7 10007 1	AND AND ALL	Annual Annual
	16. GENERATOR'S CERTIFICATION: I hereby	certify that the contents of this ship	ment are fully and accurately described	and are ir	all respects		ACCOUNT OF THE
H	16. GENERATOR'S CERTIFICATION: I hereby in proper condition for transport. The material	s described on this manifest are no	t subject to federal hazardous waste r	egulations.			
	2						Date
1	Printed/Typed Name		Signature			Mor	nth Day Year
2	17 Transporter 1 Adaptive designment of Description	f Matariala			9		Date
TRANSPORTER	17. Transporter 1 Acknowledgement of Receipt of Printed/Typed Name		Signature	- 7	- An	Mor	
N S	Davin Einhe	11	Penyir	2 CA	NIN	L 8	
P	18. Transporter 2 Acknowledgement of Receipt of	f Materials					Date
ĮΪ	Printed/Typed Name		Signature			Mor	nth Day Year
Ŕ							
F	19. Discrepancy Indication Space						
A C							
	20. Facility Owner or Operator; Certification of re	ceipt of the waste materials covered	d by this manifest, except as noted in i	tem 19.			
님							Date
T	Printed/Typed Name		Signature	( 0.	N	Mor	,
Y	MICHAEL WHITEHE	A-D	MU	Ni	/		29 14

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**NON-HAZARDOUS WASTE** 



### NON-HAZARDOUS WASTE MANIFEST

Pleas	I. Generator's US EP	PA ID No.	-	Manifest Document No.	ER12783	2. Page 1 of
	WASTE MANIFEST				CRITIOS	
	3. Generator's Name and Mailing Address Em # 99/05	PABLO AVE		CA	KOND ERI	
				5.00		
	4. Generator's Phone ( ) OAKLAND, (	CA.	_	A	14 A.	
	5. Transporter 1 Company Name	6 US EPA ID Number		A. State Transpo	orter's ID	
No.	CARDNO ERI			B. Transporter 1	Phone	-
Sec.	7. Transporter 2 Company Name	8. US EPA ID Number		C. State Transpo	orter's ID	
1				D. Transporter 2	Phone	
a faire	9. Designated Facility Name and Site Address	10. US EPA ID Number		E. State Facility'	s ID	- 18 <sup>-1</sup>
	INSTRAT, INC.					
-	1105 C AIRPORT PD.			F. Facility's Pho	ne	
4	PIO VISTA, CA 94571			-	(707) 374	-3534
-	11. WASTE DESCRIPTION		12. Co	ontainers	13.	14. Unit
			No.	Туре	Total Quantity	Wt./Vol.
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1	NON-HAZ PURGE WATE	R		POLY	20	ONE
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E	С.				_	
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GENERATOR						-
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R	d,					
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	G. Additional Descriptions for Materials Listed Above			H. Handling Cod	les for Wastes Listed Abov	e
	BROWN, NO ODOR, NO JOLID				a 19	
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1	15. Special Handling Instructions and Additional Information					
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80		tion and all the same in	-	-		and and
			J Esta			
-	16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of t in proper condition for transport. The materials described on this manifest	his shipment are fully and accurately describe st are not subject to federal hazardous waste	ed and are in regulations.	all respects		
		and the second second				
						Date
1	Printed/Typed Name	Signature			Mon	th Day Year
No.	and the second	· · · · · · · · · · · · · · · · · · ·	0.1	-		
ŢΪ	17 Transporter 1 Acknowledgement of Receipt of Materials		-	1.0		Date
A I	Printed/Typed Name	Signature			Mon	th Day Year
ŝ						
TRANSPORTER	18. Transporter 2 Acknowledgement of Receipt of Materials				and the second sec	Date
Ŧ	Printed/Typed Name	Signature			Mon	th Day Year
Ē				1 C 1 C 1	1. N	
	19. Discrepancy Indication Space					-
F A						
ĉ				A		
	20. Facility Owner or Operator; Certification of receipt of the waste materials	covered by this manifest, except as noted in	item 19,		1	
Ļ		and the second se				Date
$\frac{1}{1}$	Printed/Typed Name	Signature			Mon	
Ϋ́	MICHAEL WHITEHEAD	New Y	LP.A		8	
	WITCHIER MULTERE	1000		and the second		I FIT

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NON-HAZARDOUS WASTE

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