ExxonMobil Environmental Services Company

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RECEIVED

5:04 pm, Apr 16, 2012

Alameda County Environmental Health Jennifer C. Sedlachek Project Manager



April 12, 2012

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

RE: Former Exxon RAS #79374/990 San Pablo Avenue, Albany, California.

Dear Ms. Jakub:

Attached for your review and comment is a copy of the letter report entitled *Well Installation Report*, dated April 12, 2012, for the above-referenced site. The report was prepared by Cardno ERI of Petaluma, California, and details activities pertaining to the subject site.

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

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

Sincerely,

Jennifer C. Sedlachek Project Manager

Attachment:

Cardno ERI's Well Installation Report, dated April 12, 2012

cc:

w/ attachment

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

w/o attachment

Ms. Paula Sime, Cardno ERI



April 12, 2012 Cardno ERI 2735C.R03

Ms. Jennifer C. Sedlachek ExxonMobil Environmental Services 4096 Piedmont Avenue #194 Oakland, California 94611 Cardno ERI License A/C10-611383

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SUBJECT

Well Installation Report

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

Alameda County Department of Environmental Health RO No. 2974

Ms. Sedlachek:

At the request of ExxonMobil Environmental Services (EMES), on behalf of Exxon Mobil Corporation, Cardno ERI installed AS and SVE wells at the subject site in preparation for an AS/SVE test to evaluate the feasibility of AS and SVE as remediation technologies to remove hydrocarbons from soil and groundwater and to obtain engineering data for potential future remediation activities. The work was performed in accordance with the Work Plan for Air Sparge and Soil Vapor Extraction Well Installation and Feasibility Testing (Work Plan), dated July 5, 2011 (Cardno ERI, 2011b), approved by Alameda County Department of Environmental Health (the County), in a letter dated December 14, 2011 (Appendix A). Additionally, Cardno ERI installed monitoring well MW3A near well MW3 with a screened interval targeting the zone of maximum hydrocarbon concentrations, as directed by the County in the aforementioned letter. Based on the results of the investigation, Cardno ERI concludes that the data is consistent with previous investigations and recommends the evaluation of remediation alternatives and further off-site investigation. Results of the feasibility testing will be submitted under separate cover.

SITE DESCRIPTION

Former Exxon Service Station 79374 is located at 990 San Pablo Avenue, on the northwestern corner of the intersection of Buchanan Street and San Pablo Avenue, Albany, California (Plate 1). The site is currently occupied by a retail outlet for Benjamin Moore paints and painting products and associated paved asphalt driveway and parking area. The surrounding areas consist of residential and commercial properties (Plate 2). A Shell Service Station and an Atlantic Richfield Company Service Station (Arco) are located approximately 350 feet and 500 feet, respectively, south-southeast of the site.

According to City of Albany building permits issued in 1951, a service station owned by Signal Oil Company occupied the site. Humble Oil company acquired the site in approximately 1967 from Standard Oil Company of California (Chevron) rebranding the site as an Enco station. The station was rebranded as an Exxon service station in 1972. The service station was demolished in 1983; during demolition activities, one used-oil UST and four gasoline USTs were removed and the tank cavity was backfilled with sand to 90% compaction (City of Albany permit 82-0708).

Cardno ERI reviewed eight historical aerial photographs of the site and vicinity dated between September 6, 1949, and June 21, 1983. Based on these photographs, the dispenser islands were most likely located beneath the station canopy on the north side of the site and the former USTs were most likely located on the south side of the site, east of the station's service bays. The location of the former used-oil UST is not apparent. The approximate locations of the former dispenser island and UST cavity are shown on Plate 3.

GEOLOGY AND HYDROGEOLOGY

The site lies at an approximate elevation of 40 feet above msl, and the local topography slopes toward the southwest. The site is located along the eastern margin of the San Francisco Bay within the East Bay Plain (Hickenbottom and Muir, 1988). The surficial deposits in the site vicinity are mapped as Holocene alluvial fan and fluvial deposits (Graymer, 2000). The site is located approximately 1,630 feet north-northwest of Cordornices Creek. The active northwest trending Hayward fault is located approximately 1½ mile northeast of the site.

The East Bay Plain is regionally divided into two major groundwater basins: the San Pablo and the San Francisco Basin. These basins are tectonic depressions that are filled primarily with a sequence of coalescing alluvial fans. The San Francisco Basin is further divided into seven sub-areas. The site is located in the Berkeley Sub-Area, which is filled primarily by alluvial deposits that range from 10 to 300 feet thick with poorly defined aquitards (CRWQCB, 1999). Under natural conditions, the direction of groundwater flow in the East Bay Plain is east to west.

Soil borings indicate that the soil beneath the site consists predominantly of silt and clay with an apparently continuous coarse-grained unit 2 to 8 feet thick encountered between approximately 8 and 20 feet bgs (EC&A, 2008; Cardno ERI, 2011a). CPT borings indicate the presence of predominantly silt and clay between approximately 20 and 60 feet bgs, the maximum depth explored. Minor coarse-grained layers up to 3 feet thick are interbedded with the silts and clays. During the groundwater monitoring events conducted to date, the DTW ranged from approximately 5 to 9 feet bgs. During the four groundwater monitoring events conducted through fourth quarter 2011, the groundwater flow direction has been variable. The distribution of dissolved-phase hydrocarbons suggests that the dominant groundwater flow direction is towards the west (Cardno ERI, 2011c).

PREVIOUS WORK

Cumulative groundwater monitoring and sampling data are presented in Tables 1A and 1B. Cumulative results of soil samples collected at the site are presented in Tables 2A and 2B. Well construction details are presented in Table 3.

Fueling System Activities

In 1983, one used-oil UST and four gasoline USTs were removed and the tank cavity was backfilled with sand to 90% compaction (City of Albany).

Site Assessment Activities

Six exploratory borings (B1 through B6) were advanced on site in 2008 (EC&A, 2008). Maximum concentrations of TPHg, TPHd, and benzene were reported in the soil samples collected at 10.5 feet bgs from borings B1 and B2 located near the former USTs. Grab groundwater results indicated maximum dissolved-phase TPHg, TPHd, and benzene concentrations in the samples collected from soil borings B1 and B2 located near the former USTs. The laboratory reported an immiscible sheen present in the groundwater samples collected from borings B1 and B2.

Monitoring wells MW1 through MW6 and borings CPT1/HP1 and CPT2/HP2 were installed at the site in 2010 (Cardno ERI, 2011a). Maximum concentrations of TPHg and TPHd in soil were reported in the samples collected at 10.5 feet bgs from wells MW3 and MW5, west of the former USTs. Dissolved-phase hydrocarbons were adequately delineated vertically at the site with petroleum hydrocarbon concentrations absent or near the laboratory reporting limits in the deeper water-bearing zones.

Remediation Activities

No documented remedial activities have been performed at the site. According to City of Albany permit 82-0708, the USTs were removed and backfilled in 1983. It is unknown if overexcavation was performed during the UST removal.

Groundwater Monitoring Activities

Groundwater monitoring was initiated at the site in 2010 with the installation of wells MW1 through MW6. Results of groundwater monitoring have indicated maximum dissolved-phase TPHg and benzene concentrations in groundwater samples of 23,000 μ g/L and 650 μ g/L, respectively. Maximum dissolved-phase TPHg and benzene are primarily west of the former USTs.

FIELD ACTIVITIES

Cardno ERI performed the fieldwork in accordance with the Work Plan, 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-Field Activities

Prior to field activities, Cardno ERI obtained drilling permits from the County (Appendix C), notified Underground Service Alert, and contracted a private utility-locating company to locate underground utilities at the site. From January 16 to 17, 2012, Cardno ERI observed Cascade Drilling, L.P. (Cascade) clear well locations for SVE wells SVE1 through SVE3, monitoring well MW3A, and AS well AS1 to depths between 5 and 8 feet bgs, using air and hand tools.

Air Sparge and Soil Vapor Extraction Wells

From January 17 to 18, 2012, Cardno ERI observed Cascade install wells SVE1 through SVE3, AS1, and MW3A. Select soil samples were preserved for laboratory analysis.

Wells SVE1 through SVE3 and MW3A were completed as 4-inch schedule 40 PVC wells with 10 feet of 0.020 inch slotted screens from 5 to 15 feet bgs. Well AS1 was completed as a 1-inch schedule 80 PVC well with 3 feet of stainless steel #60 mesh screen from 10.25 to 13.5 bgs. Well construction details are presented on the boring logs in Appendix D and on Table 3.

Well Development

On January 26 and 27, 2012, Cardno ERI observed Cascade develop wells SVE1 through SVE3 and MW3A. Well development records are included in Appendix E.

Laboratory Analyses

Cardno ERI submitted soil samples for analysis to a state-certified laboratory. Laboratory analytical reports and COC records are provided in Appendix F. Cumulative soil sample analytical data is summarized in Table 2A and 2B.

Waste Management Plan

The decontamination rinsate water and drill cuttings were temporarily stored on site in DOT-approved, sealed 55-gallon drums. Upon characterization of the waste, the drums were transported to EMES-approved disposal facilities. Copies of the waste documentation for the disposal of soil and water are included in Appendix G. The water disposal documentation includes approximately 40 gallons of water generated during feasibility testing.

Site Survey

On February 6, 2012, Cardno ERI observed Morrow Surveying, of West Sacramento, California, survey the locations and elevations of the newly-installed wells. The survey report is included in Appendix H.

RESULTS OF INVESTIGATION

Site Geology

Sediments observed during the advancement of wells AS1, MW3A, and SVE1 through SVE3 consist largely of silty sand and clayey sand, with clays and gravels also present to 15.5 feet bgs, the maximum depth explored. A laterally extensive sand unit of varying thickness appears to underlie the entire site at approximately 10.5 feet bgs. Fill material was encountered in the boring for well SVE3 (located in the former UST pit) to approximately 7 feet bgs. Groundwater was encountered at between approximately 7.4 and 10.5 feet bgs.

Hydrocarbons in Soil

Concentrations of TPHmo, TPHd, TPHg, toluene, ethylbenzene, and total xylenes were reported in soil samples collected during this investigation (Table 2A; Plate 3). Maximum concentrations of hydrocarbons were encountered between approximately 10 and 12.5 feet bgs.

CONCLUSIONS

Residual hydrocarbon concentrations reported during this investigation are consistent with previous findings. Maximum residual hydrocarbon concentrations occur near the former USTs at approximately 10 feet bgs. Residual concentrations attenuate with depth and are adequately delineated by approximately 15 feet bgs.

Dissolved-phase hydrocarbons are currently not delineated at the site.

RECOMMENDATIONS

Cardno ERI recommends the evaluation of remediation alternatives as well as off-site assessment of hydrocarbons in soil and groundwater.

Cardno ERI recommends performing semi-annual monitoring and sampling during the second and fourth quarters pending the onset of active remediation.

CONTACT INFORMATION

The responsible party contact is Ms. Jennifer C. Sedlachek, ExxonMobil Environmental Services, 4096 Piedmont Avenue #194, Oakland, California, 94611. The consultant contact is Ms. Rebekah Westrup, Cardno ERI, 601 N. McDowell Boulevard, Petaluma, California, 94954. The agency contact is Ms. Barbara Jakub, Alameda County Environmental Health Department, 1131 Harbor Bay Parkway, Suite 250, Alameda, California, 94502.

LIMITATIONS

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

This document was prepared in accordance with generally accepted standards of environmental, geological and engineering practices in California at the time of investigation. No soil engineering or geotechnical references are implied or should be inferred. The evaluation of the geologic conditions at the site for this investigation is made from a limited number of data points. Subsurface conditions may vary away from these data points.

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

Sincerely,

Alexander G. Snyder Staff Geologist

for Cardno ERI 707 766 2000

Email: alex.snyder@cardno.com

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

Email: david.daniels@cardno.com

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

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

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

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

Enclosures:

References

Acronym List

Plate 1 Site Vicinity Map
Plate 2 Local Area Map

Plate 3 Select Analytical Results

Table 1A Cumulative Groundwater Monitoring and Sampling Data

Table 1B Additional Cumulative Groundwater Monitoring and Sampling Data

Table 2A Cumulative Soil Analytical Results

Table 2B Additional Cumulative Soil Analytical Results – HVOCs

Table 3 Well Construction Details

Appendix A Correspondence

Appendix B Field Protocol

Appendix C Permits

Appendix D Boring Logs

Appendix E Well Development Records

Appendix F Laboratory Reports

Appendix G Waste Disposal Documentation

Appendix H Survey Data

REFERENCES

California Regional Water Quality Control Board San Francisco Bay Region Groundwater Committee (CRWQCB). June 1999. East Bay Plain Groundwater Basin Beneficial Use Evaluation Report, Alameda and Contra Costa Counties, CA.

City of Albany. March 28, 1983. Building Permit 82-0708.

Cardno ERI. February 28, 2011a. Site Assessment Report, Former Exxon Service Station 79374, 990 San Pablo Avenue, Albany, California, Alameda County #RO00002974.

Cardno ERI. July 5, 2011b. Work Plan for Air Sparge and Soil Vapor Extraction Well Installation and Feasibility Testing, Former Exxon Service Station 79374, 990 San Pablo Avenue, Albany, California, Alameda County #RO00002974.

Cardno ERI. November 18, 2011c. Groundwater Monitoring Report, Fourth Quarter 2011, Former Exxon Service Station 79374, 990 San Pablo Avenue, Albany, California, Alameda County #R000002974.

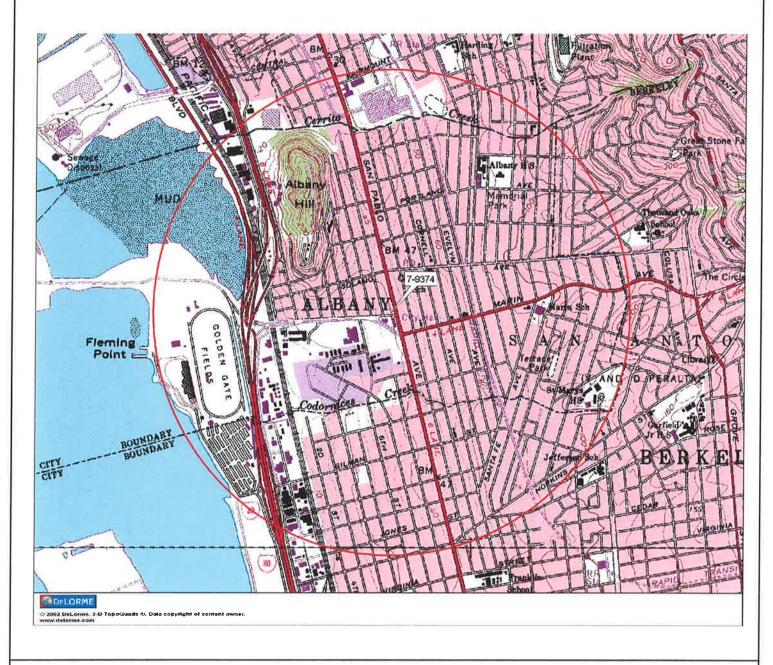
Edd Clark & Associates (EC&A). January 31, 2008. Report of Phase II Environmental Assessment, 990 San Pablo Avenue, Albany, California 94706. EC&A Project No 0589,002.07.

Graymer, R.W. 2000. Geologic map and map database of the Oakland metropolitan area, Alameda, Contra Costa, and San Francisco Counties, California. USGS, Miscellaneous Field Studies MF-2342.

Hickenbottom, Kelvin and Muir, Kenneth S. June 1988. *Geohydrogeology and Groundwater Quality Overview of the East Bay Plain Area, Alameda County, CA*. Alameda County Flood Control and Water Conservation District. 83p.

ACRONYM LIST

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

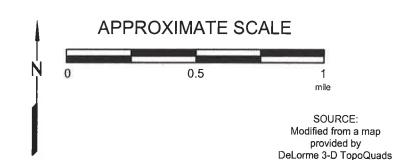


FN 2735 TOPO

EXPLANATION



1/2-mile radius circle





SITE VICINITY MAP

FORMER EXXON SERVICE STATION 79374 990 San Pablo Avenue Albany, California PROJECT NO. 2735

PLATE

1

100-Meter and 300-Meter Radius

LEGEND

Commericial / Industrial

VAC Vacant Lot

P Parking Lot

(3) Additional Residential

WELLS

Private wells are not located within a 300-meter radius. See the Regional Area Map.

WELLS (SPECIAL USE OR MUNICIPAL)

A Public wells are not located within a 300-meter

RESIDENCES

- 1041/1043 Buchanan Street (Duplex)
- 973/975 Adams Street (Duplex)
- 971 Adams Street
- 970 Adams Street (Apartments)
- 6 960/962 Adams Street (Duplex)

PUBLIC USE AREAS

City of Albany Police/Fire/City Offices

2 Physical Therapy

SURFACE WATER

Surface water is not located within a 300-meter radius.

LOCAL AREA MAP

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



Shaping the Future

nV/2735 AutoCad\SPECIALTY MAPS\12 R03\12 R03 SRS AERIAL PROJECT NO.

2735

PLATE

2

SP.

METERS

APPROXIMATE SCALE

FN 2735 12 R03 SRS AERIAL_SP

Total Petroleum Hydrocarbons Total Petroleum Hydrocarbons as diesel

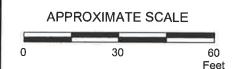
Benzene Methyl Tertiary Butyl Ether

Less Than the Stated Laboratory Reporting Limit

ug/L Micrograms per Liter

The sample chromatographic pattern does not match that of the specified standard.

01/17/12 10 FT. 14 FT. 390a < 0.50 37a <5.0 <0.50 <0.0050 SAN PABLO AVENUE EXISTING BUILDING < 0.50 < 0.0050 CPT1 FORMER TATION DRIVE WAY 01/17/12 01/17/12 FORMER USTs 8.5 FT. 11.5 FT. EXISTING 12.5 FT. 15 FT. MW5 18 BUILDING < 0.50 1,900a 87a <5.0 <0.50 <0.50 <0.50 <0.0050 760a <5.0 <2.5 <0.0050 <2.5 <0.0050 MW4 DRIVE WAY 01/18/12 01/18/12 8 FT. 14 FT. 10 FT. **BUCHANAN STREET** 2,900 800a <2.5 <2.5 <5.0 <5.0 <0.0050 <0.0050 <0.0050 <0.0050 SS MH



FN 2735 12 R03 SOIL SAR_SP



SELECT ANALYTICAL RESULTS

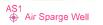
FORMER EXXON SERVICE STATION 79374 990 San Pablo Avenue Albany, California













B6 Soil Boring

CPT2

Cone Penetration Test Boring

SVE3
Soil Vapor Extraction Well

PLATE 3

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

Well ID	Sampling Date	Depth (feet)	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	O&G (µg/L)	TPHmo (μg/L)	TPHd (µg/L)	TPHg (µg/L)	MTBE (µg/L)	B (µg/L)	Τ' (μg/L)	Ε (μg/L)	Χ (μg/L)
													741.301.20	and Collins.	(10)
Ionitoring \	Well Samples														
VIVV 1	11/04/10		Well inst	alled.											
VIVV 1	12/01/10		41.45	Well su	irveyed.										
√W1	12/16/10		41.45	9.18	32.27	No	-	<250	71a	54	<0.50	1.4	0.65	0.58	1.6
/IW1	01/31/11		41.45	8.78	32.67	No	***	<250	<50	<50	< 0.50	<0.50	<0.50	< 0.50	<0.50
/IW 1	04/07/11		41.45	8.45	33.00	No	200	<250	65a	160a	< 0.50	2.9	0.92	< 0.50	1.7
/IW1	07/18/11		41.45	9.49	31.96	No		<250	<50	63a	< 0.50	<0.50	<0.50	< 0.50	<0.50
IW1	10/13/11		41.45	9.86	31.59	No		<250	54	<50	<0.50	<0.50	<0.50	<0.50	<0.50
1W2	11/04/10		Well inst	alled.				(*)							
/W2	12/01/10		41.25	Wellsu	rveyed.										
/IW2	12/16/10		41.25	8.11	33.14	No		<250	110a	<50	<0.50	< 0.50	< 0.50	< 0.50	<0.50
/IW2	01/31/11		41.25	9.29	31.96	No		<250	<50	<50	< 0.50	<0.50	< 0.50	< 0.50	<0.50
/W2	04/07/11		41.25	8.21	33.04	No		<250	<50	<50	0.51	<0.50	< 0.50	< 0.50	<0.50
/W2	07/18/11		41.25	9.52	31.73	No		<250	<50	54a	< 0.50	<0.50	< 0.50	<0.50	<0.50
IW2	10/13/11		41.25	9.56	31.69	No		<250	98	75a	<0.50	<0.50	<0.50	<0.50	<0.50
1 W3	11/08/10		Well inst	alled.											
/W3	12/01/10		40.42	Well su	irveyed.										
/IW3	12/16/10		40.42	8.18	32.24	No		<250	2,900a	19,000	<12	350	130	940	290
/IW3	01/31/11		40.42	7.64	32.78	No		390	2,800a	17,000a	<12	540	140	700	270
/tW3	04/07/11		40.42	5.88	34.54	No	220	<250	2,700a	14,000	<10	600	150	780	230
/IW3	07/18/11		40.42	8.31	32.11	No		<250	1,700a	19,000	<10	650	140	660	220
IW3	10/13/11	****	40.42	8.76	31.66	No		<250	1,900a	16,000	<10	520	150	900	270
1W4	11/05/10		Wellinst	alled.											
1 ₩4	12/01/10		39.30	Well su	irveyed.										
/IW4	12/16/10		39.30	6.10	33.20	No		<250	2,000a	9,900	<5.0	440	40	170	380
/IW4	01/31/11		39.30	6.84	32.46	No		260	3,900a	13,000	<10	500	59	320	740
/IW4	04/07/11		39.30	5.29	34.01	No		<250	1,900a	9,600	<10	530	59	250	340
/IW4	07/18/11		39.30	7.36	31.94	No		<250	2,800a	14,000	<10	570	66	320	510
1W4	10/13/11		39.30	7.83	31.47	No		320	7,200a	14,000	<10	350	43	340	690
I W5	11/11/10		Well inst	alled.											
/IW5	12/01/10		40.38	Wellsu	rveyed.										
/IW5	12/16/10		40.38	7.69	32.69	No		<250	1,100a	6,200	<2.5	150	96	270	980
/IW5	01/31/11		40.38	8.00	32.38	No		270	4,600a	15,000	<10	520	310	1,100	2,500
/IW5	04/07/11		40.38	6.73	33.65	No	_	<250	610a	2,500	<2.5	61	32	180	390
/IW5	07/18/11		40.38	7.63	32.75	No		<250	2,000a	11,000	<2.5	340	160	990	1,800
/IW5	10/13/11		40.38	9.31	31.07	No	-	660	7,600a	23,000	<20	390	160	1,200	3,100

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

							740	diry, Camorn	a						
Well ID	Sampling Date	Depth (feet)	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	O&G (µg/L)	TPHmo (µg/L)	TPHd (µg/L)	TPHg (µg/L)	MTBE (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	Χ (μg/L)
MW6	11/03/10		Well inst	alled.				44-4-4-1			110	(1-3/	(1-5-2)	(F9-2)	(19,1)
MW6	12/01/10		41.06	Wellsu	rveyed.										
MW6	12/16/10		41.06	8.55	32.51	No		<250	110a	1,700	<0.50	2.8	1.2	61	46
MW6	01/31/11		41.06	8.52	32.54	No		<250	800a	2,000a	<1.0	6.0	<1.0	30	24
MW6	04/07/11		41.06	7.78	33.28	No		<250	660a	2,000	< 0.50	10	1.0	20	19
MW6	07/18/11		41.06	9.27	31.79	No		<250	350a	1,000a	< 0.50	2.5	< 0.50	3.8	3.5
MW6	10/13/11		41.06	10.21	30.85	No		<250	3 7 0a	890a	<0.50	2.8	<0.50	7.9	5.5
Grab Ground	water Samples														
B-1W	01/06/08	-				(m+m)	26r,s	<5,000	99,000o,n,r	76,000m,p,r	<50	<50	93	3,100	9,600
B-2W	01/06/08		***	344	(in the last of t			310s	23,000о,г,ѕ	77,000 l,r,s	<50	1,500	300	2,000	6,800
B-3W	01/06/08		-		-	***		<250s	2,000o,s	6,200 I,s	<10	170	32	740	250
B-4W	01/06/08	•••	-		\ 			<250s	3,100o,s	7,700 l,s	<10	360	<10	240	20
B-5W	01/06/08	(200	****	-	***			<250s	120o,s	120q,s	<0.5	<0.5	<0.5	<0.5	<0.5
B-6W	01/06/08	(mean)	***	1,000	-	1222	·	<250s	830o,s	1,700 l,s	<2.5	5.2	<2.5	100	8.6
DR-W	01/06/08	5412		-			199	<250	960	730m,p	<0.5	<0.5	<0.5	6.9	14
W-27.5-HP1A	10/28/10	27.5						260	330a	63a	<0.50	<0.50	<0.50	<0.50	<0.50
W-36-HP1A	10/28/10	36		•				<250	220a	<50	<0.50	<0.50	<0.50	<0.50	<0.50
W-46.5-HP1A	10/28/10	46.5		-	•••	***	A.299	<420	<83	<50	<0.50	<0.50	<0.50	<0.50	<0.50
W-59-HP1B	10/27/10	59	to make				X 228	<250	130	<50	<0.50	<0.50	<0.50	<0.50	<0.50
W-27.5-HP2A	10/29/10	27.5						<250	100a	340	<0.50	1.7	2.1	20	46
W-52-HP2A	10/29/10	52						<250	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
W-60.5-HP2B	10/27/10	60.5					Canal	<250	62	<50	<0.50	<0.50	<0.50	<0.50	<0.50
W-10-SVE1-1	01/31/12	10	1222		•••		-	990a	1,900a	2,000	<2.0	87	2.1	13	23
W-10-SVE1-2	01/31/12	10			***		Vani	890a	1,500a	1,400	<1.0	46	2.0	24	23

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

Notes:		
TOC	=	Top of well casing elevation; datum is mean sea level.
DTW	=	Depth to water.
GW Elev.	=	Groundwater elevation; datum is mean sea level. If liquid-phase hydrocarbons present, elevation adjusted using TOC - [DTW - (PT x 0.76)].
NAPL	=	Non-aqueous phase liquid.
O&G	=	Oil and grease with silica gel clean-up analyzed using Standard Method 5520B/F.
TPHmo	=	Total petroleum hydrocarbons as motor oil analyzed using EPA Method 8015 (modified).
TPHd	=	Total petroleum hydrocarbons as diesel analyzed using EPA Method 8015 (modified).
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015 (modified).
MTBE	=	Methyl tertiary butyl ether analyzed using EPA Method 8260B.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8260B.
EDB	=	1,2-dibromoethane analyzed using EPA Method 8260B.
1,2-DCA	Ξ	1,2-dichloroethane analyzed using EPA Method 8260B.
TAME	=	Tertiary amyl methyl ether analyzed using EPA Method 8260B.
TBA	=	Tertiary butyl alcohol analyzed using EPA Method 8260B.
ETBE	=	Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
DIPE	=	Di-isopropyl ether analyzed using EPA Method 8260B.
Add'l VOCs	=	Additional volatile organic carbons analyzed using EPA Method 8260B.
Add'l SVOCs	=	Additional semi-volatile organic carbons analyzed using EPA Method 8270C.
μg/L	=	Micrograms per liter.
ND	=	Not detected at or above laboratory reporting limits.
9 -10	=	Not measured/Not sampled/Not analyzed.
<	=	Less than the stated laboratory reporting limit.
а	=	Sample chromatographic pattern does not match that of the specified standard.
b	=	n-butylbenzene.
С	=	sec-butylbenzene.
d	=	Isopropylbenzene.
е	=	n-propylbenzene.
f	=	1,2,4-trimethylbenzene.
g	=	1,3,5-trimethylbenzene.
h	=	Naphthalene.
i	=	1-butanone.
j	=	1,2-dibromo-3-chloropropane.
k	=	2-methylnapthalene.
I	=	Unmodified or weakly modified gasoline is significant.
m	=	Heavier gasoline range compounds are significant.
n	=	Diesel range compounds are significant; no recognizable pattern.
0	=	Gasoline range compounds are significant.
р	=	No recognizable pattern.
q	=	Strongly aged gasoline or diesel compounds are significant.
r	=	Lighter than water immiscible sheen/product is present.
s	=	Liquid sample that contains greater than approximately 1 volume % sediment.

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

Well ID	Sampling Date	Depth (feet)	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Add'l VOCs (μg/L)	Add'l SVOCs (µg/L)
onitoring	g Well Samples									
MW1	12/16/10		<0.50	<0.50	<0.50	<5.0	<0.50	<0.50		5551
ЛW1	01/31/11		<0.50	<0.50	<0.50	<5.0	<0.50	<0.50		272.1 272.1
/IW1	04/07/11		<0.50	<0.50	<0.50	10	<0.50	<0.50		
VIVV1	07/18/11		<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	•••	5570.1 200 .7
/IW1	10/13/11		<0.50	<0.50	<0.50	<5.0	<0.50	<0.50		
/IW2	12/16/10		<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	***	***
/IW2	01/31/11		<0.50	<0.50	< 0.50	<5.0	< 0.50	< 0.50		***
/W2	04/07/11		< 0.50	< 0.50	<0.50	<5.0	<0.50	< 0.50		
√W2	07/18/11	200	< 0.50	<0.50	<0.50	<5.0	<0.50	<0.50		
MW2	10/13/11		<0.50	<0.50	<0.50	<5.0	<0.50	<0.50		77T.
MW3	12/16/10	####.	<12	<12	<12	<120	<12	<12		
/IW3	01/31/11	222	<12	<12	<12	<120	<12	<12	<u></u>	***
/IW3	04/07/11		<10	<10	<10	<100	<10	<10		
/IW3	07/18/11		<10	<10	<10	<100	<10	<10		
MW3	10/13/11		<10	<10	<10	<100	<10	<10		
/IW4	12/16/10	***	<5.0	<5.0	<5.0	<50	<5.0	<5.0		
√W4	01/31/11		<10	<10	<10	<100	<10	<10		
/IW4	04/07/11	1000 0	<10	<10	<10	<100	<10	<10		
/IW4	07/18/11	****	<10	<10	<10	<100	<10	<10		222
/W4	10/13/11	****	<10	<10	<10	<100	<10	<10		222
/IW5	12/16/10		<2.5	<2.5	<2.5	<25	<2.5	<2.5		
MW5	01/31/11		<10	<10	<10	<100	<10	<10		
MW5	04/07/11	100	<2.5	<2.5	<2.5	<25	<2.5	<2.5		
√lW5	07/18/11	255000	<2.5	<2.5	<2.5	<25	<2.5	<2.5		
/IW5	10/13/11	200	<20	<20	<20	<200	<20	<20		1070.
/IW6	12/16/10		<0.50	<0.50	<0.50	<5.0	<0.50	<0.50		***
√IW6	01/31/11		<1.0	<1.0	<1.0	<10	<1.0	<1.0		***
MW6	04/07/11		< 0.50	<0.50	< 0.50	<5.0	<0.50	< 0.50		***
√lW6	07/18/11		< 0.50	<0.50	< 0.50	<5.0	<0.50	< 0.50	 :	***
IW6	10/13/11		<0.50	<0.50	<0.50	<5.0	<0.50	<0.50		1171 ()
Grab Grou	ındwater Sample	es								
3-1W	01/06/08	***	<50	<50	<50	<200	<50	<50	210b, 68c, 370d, 1,100e, 3,800f, 1,300g, 1,500h	4,000h, 3,900
3-2W	01/06/08	***	<50	<50	<50	<200	<50	<50	110b, 140e, 440f, 2,400g, 730h, 610i, 32j	
3-3W	01/06/08	ger (<10	<10	<10	<40	<10	<10	25b, 11c, 74d, 190e, 290f, 49g, 55i	
									.,	

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

Well ID	Sampling Date	Depth (feet)	EDB (µg/L)	1,2-DCA (μg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Add'l VOCs (µg/L)	Add'l SVOCs (µg/L)
3-4W	01/06/08	(22)	<10	<10	<10	<40	<10	<10	46b, 19c, 48d, 160e, 16f, 100h	•••
3-5W	01/06/08	-	ND	<0.5	<0.5	<2.0	<0.5	<0.5	2.6b, 0.83e, 4.8f, 1.2g, 6.5h	
3-6W	01/06/08		<2.5	<2.5	<2.5	<10	<2.5	<2.5	¹ 14b, 5.6c, 17d, 60e, 32f, 5.8g, 38h, 10i	
DR-W	01/06/08	-	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	6.9b, 2.4c, 2.5d, 11e, 17f, 5.5g, 7.0h	
N-27.5-HP	1A 10/28/10	27.5	<0.50	< 0.50	<0.50	<5.0	<0.50	< 0.50		
N-36-HP1A	10/28/10	36	< 0.50	< 0.50	< 0.50	<5.0	< 0.50	< 0.50	1	
V-46.5-HP	1A 10/28/10	46.5	< 0.50	<0.50	<0.50	<5.0	<0.50	<0.50	1 555	
W-59-HP1E	3 10/27/10	59	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	r.ess	
N-27.5-HP2	2A 10/29/10	27.5	<0.50	<0.50	<0.50	<5.0	<0.50	< 0.50	:	
W-52-HP2A	10/29/10	52	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	- 	
N-60.5-HP2	2B 10/27/10	60.5	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	:	-
W-10-SVE1	1-1 01/31/12	10	<2.0	<2.0	<2.0	62	<2.0	<2.0		
V-10-SVE1	1-2 01/31/12	10	<1.0	<1.0	<1.0	57	<1.0	<1.0		

TABLE 1B

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

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

TABLE 2A CUMULATIVE SOIL ANALYTICAL RESULTS

Former Exxon Service Station 79374 990 San Pablo Boulevard Albany, California (Page 1 of 3)

Sample	Sampling	Depth	TPHmo	TPHd	TPHg	MTBE	В	Ť	E	×	EDB	1,2-DCA	TBA	DIPE	ETBE	TAME	Total Lead
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)
Soil Boring Samples														3.07		1113113/	(99)
B-1	01/06/08	6.0	<5.0	3.7c	<1.0	< 0.05	< 0.005	<0.005	<0.005	<0.005	-	1224		Oppose	1959		
B-1	01/06/08	10.5	<100	1,400b,c	7,200b,f	<5.0	2	51	110	400		-		-			
														37777		-	
B-2	01/06/08	5.5	<5.0	<1.0	<1.0	< 0.05	<0.005	< 0.005	< 0.005	< 0.005				-	10		
B-2	01/06/08	10.5	<100	1,400d	4,500b,f	<5.0	13	35	100	380			***	16	-		222
D 0																	
B-3 B-3	01/06/08	5.5	<5.0	<1.0	<1.0	<0.50	< 0.005	<0.005	< 0.005	<0.005		10			***	***	***
B-3	01/06/08	10.5	<5.0	53d	130e,f	<0.50	0.37	0.29	2.6	0.44	_	1-9	_	_			-
B-4	01/06/08	5.5	<5.0	62d	140e.f	<0.50	-0.005	4.0									
B-4	01/06/08	10.5	<5.0 <5.0	15d	140e,i 140e,f	<0.50	<0.005 0.25	1.0 1.5	0.066	0.094			***	_	-		
	01100100	10.0	٠٠.٥	100	1,00,1	~0.50	0.23	1.5	1.3	0.11	0 1115	***	***				
B-5	01/06/08	5.5	<5.0	<1.0	<1.0	< 0.05	<0.005	<0.005	< 0.005	<0.005							
B-5	01/06/08	11.5	<5.0	5.4c,d	32e,f	<0.25	0.038	0.24	0.051	0.035	0775		****	5.000	***	3440	
									0.00	0.000			=	5,35	1500	-	_
B-6	01/06/08	5.5	<5.0	<1.0	<1.0	< 0.05	< 0.005	< 0.005	<0.005	< 0.005						-	
B-6	01/06/08	10.5	<5.0	6.0c,d	32e,f	< 0.05	0.009	0.41	<0.005	0.039	_			_			-
Monitoring Well Samples																	
S-5-MW1	10/20/10	5.0	<25	<5.0	<0.50	<0.0050	< 0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	***
S-10-MW1 S-14.5-MW1	11/04/10 11/04/10	10.0	<25	<5.0	<0.50	<0.0050	<0.0050	< 0.0050	<0.0050	< 0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	***
3-14.5-101001	11/04/10	14.5	<25	<5.0	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	-
S-10-MW2	11/04/10	10.0	<25	<5.0	3.1a	<0.0050	<0.0050	<0.0050	<0.0050	<0.00E0	<0.00E0	-0.0050	-0.050	-0.040	0.045		
S-15-MW2	11/04/10	15.0	<25	<5.0	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050 <0.0050	<0.0050 <0.0050	<0.0050 <0.0050	<0.050 <0.050	<0.010	<0.010	<0.010	
		10.0	-20	.0.0	-0.00	40.0000	-0.0000	\0.0000	~ 0.0030	~0.0030	~ 0.0030	<0.0050	<0.050	<0.010	<0.010	<0.010	
S-5-MW3	10/20/10	5.0	<25	<5.0	< 0.50	<0.0050	< 0.0050	< 0.0050	< 0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	
S-10.5-MW3	11/08/10	10.5	<25	11a	220	< 0.50	< 0.50	< 0.50	2.0	1.1	<0.50	< 0.50	<5.0	<1.0	<1.0	<1.0	_
S-15.5-MW3	11/08/10	15.5	<25	<5.0	2.2	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050	<0.010	< 0.010	<0.010	_
_																	
S-8-MW3A	01/18/12	8.0	<25	<5.0	< 0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0050	<0.050	<0.010	<0.010	< 0.010	
S-14.5-MW3A	01/18/12	14.5	<25	<5.0	<0.50	<0.0050	<0.0050	<0.0050	0.015	0.0052	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	-
S-5-MW4	10/20/10	5.0	<25	<5.0	-0.50	40.0050	-0.0050	.0.0050									
S-10-MW4	11/05/10	10.0	<25 <25	<5.0 <5.0	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	
S-15-MW4	11/05/10	15.0	<25	<5.0	44a <0.50	<0.50 <0.0050	<0.50 <0.0050	<0.50	<0.50	<0.50	< 0.50	< 0.50	<5.0	<1.0	<1.0	<1.0	
S-16.5-MW4	11/05/10	16.5	<25	<5.0	<0.50	<0.0050	<0.0050	<0.0050 <0.0050	<0.0050 <0.0050	<0.0050 <0.0050	<0.0050 <0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	
	50/10	. 5.0	-20	-0.0	-0.00	-0.0000	~0.0000	~0.0000	~0.0000	VC.0050	~U.UU3U	<0.0050	<0.050	<0.010	<0.010	<0.010	
S-5-MW5	10/20/10	5.0	<25	<5.0	<0.50	< 0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.050	<0.010	<0.010	<0.010	
S-10.5-MW5	11/05/10	10.5	29	93a	450a	< 0.050	<0.050	1.5	<0.50	<0.50	<0.50	<0.50	<5.0	<1.0	<1.0	<1.0	
S-16.5-MW5	11/05/10	16.5	<25	<5.0	< 0.50	< 0.0050	< 0.0050	<0.0050	< 0.0050	<0.0050	<0.0050	<0.0050	< 0.050	<0.010	<0.010	<0.010	
S-5-MW6	10/20/10	5.0	<25	<5.0	< 0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0050	< 0.050	<0.010	<0.010	<0.010	
S-10-MW6	11/02/10	10.0	<25	8.2a	8.7a	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.050	< 0.010	< 0.010	< 0.010	
S-14.5-MW6	11/02/10	14.5	<25	<5.0	1.8a	<0.0050	<0.0050	<0.0050	<0.0093	<0.0050	<0.0050	<0.0050	< 0.050	<0.010	<0.010	<0.010	

TABLE 2A CUMULATIVE SOIL ANALYTICAL RESULTS

Former Exxon Service Station 79374 990 San Pablo Boulevard Albany, California (Page 2 of 3)

							,	,																			
Sample	Sampling	Depth	TPHmo	TPHd	TPHg	MTBE	В	Т	E	Х	EDB	1,2-DCA	TBA	DIPE	ETBE	TAME	Total Lead										
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)										
S-20-MW6	11/02/10	20.0	<25	<5.0	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010											
S-5-CPT1	10/20/10	5.0	<25	<5.0	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010											
S-5-CPT2	10/20/10	5.0	<25	<5.0	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	777										
S-10-AS1	01/18/12	10.0	<25	800a	2,900	<2.5	<2.5	<2.5	47	<2.5	<2.5	<2.5	<25	<5.0	<5.0	<5.0	===										
S-8.5-SVE1	01/17/12	8.5	<25	87a	480a	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<1.0	<1.0	<1.0											
S-11.5-SVE1	01/17/12	11.5	<25	<5.0	18	<0.0050	<0.50	0.010	0.084	0.11	<0.0050	<0.0050	<0.50	<0.010	<0.010	<0.010											
S-10-SVE2	01/17/12	10.0	53a	37a	390a	< 0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<1.0	<1.0	<1.0											
S-14-SVE2	01/17/12	14.0	<25	<5.0	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.50	<0.010	<0.010	<0.010											
S-12:5-SVE3	01/17/12	12.5	57a	760a	1,900a	<2.5	<2.5	<2.5	<2.5	<2.5	<0.50	<0.50	<5.0	<1.0	<1.0	<1.0	===										
S-15-SVE3	01/17/12	15.0	<25	<5.0	<0.50	<0.0050	<0.0050	<0.0050	0.015	0.033	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010											
Drum Samples DR-1	01/06/08	-	<5.0	2.5c,d	4.9e,f	<0.050	<0.005	0.027	0.035	0.035	1990	(200)		-		22	9.7										
Soil Stockpile Samples																											
COMP(S-Profile-1-4) S-SP1 (1-4)	11/08/10 01/18/12		<25 190a	7.1a 39a	14a 230	<0.0050 <0.0050	<0.0050 0.20	<0.0050 0.66	0.069 4.3	0.049 14	<0.0050 <0.0050	<0.0050 <0.0050	<0.050 <0.050	<0.010 <0.010	<0.010 <0.010	<0.010 <0.010	6.93 37.6										
Notes:																											
S-15-MW4	=	Soil - depth -	_																								
TPHmo	=	Total petrole	-																								
TPHd	=	Total petrole				~																					
TPHg	=	Total petrole		-		,	•																				
MTBE	=	Methyl tertia			_			_		20 in 2008.																	
BTEX	=	Benzene, tol					ed using EP	A Method 8:	260B.																		
EDB	=	1,2-Dibromo		, ,																							
1,2-DCA	=	1,2-Dicholor																									
TBA	=	Tertiary buty		-	-																						
DIPE	=	Di-isopropyl		_			_																				
ETBE	=	Ethyl tertiary	butyl ether	analyzed u	sing EPA N	nethod 8260	B.									Ethyl tertiary butyl ether analyzed using EPA Method 8260B.											

Tertiary amyl methyl ether analyzed using EPA Method 8260B.

1,2,4-Trimethylbenzene analyzed using EPA Method 8260B.

1,3,5-Trimethlynemzene analyzed using EPA Method 8260B.

Isopropyltoluene analyzed using EPA Method 8260B.

n-Butylbenzene analyzed using EPA Method 8260B.

Naphthalene analyzed using EPA Method 8260B.

Total lead analyzed using EPA Method 6010B.

TAME

Total Lead

1,2,4-trimethylbenzene

1,3,5-trimethlynemzene

Isopropyltoluene

Naphthalene

n-Butylbenzene

=

TABLE 2A CUMULATIVE SOIL ANALYTICAL RESULTS

Former Exxon Service Station 79374 990 San Pablo Boulevard Albany, California (Page 3 of 3)

Notes (Cont.):		
p-Isopropyltoluene	=	p-Isopropyltoluene analyzed using EPA Method 8260B.
sec-Butylbenzene	=	sec-Butylbenzene analyzed using EPA Method 8260B.
t-Butylbenzene	=	t-Butylbenzene analyzed using EPA Method 8260B.
Add'I HVOCs	=	Additional Halogenated Volatile Organic Compounds analyzed using EPA Method 8260B.
feet bgs	=	Feet below ground surface.
ND	=	Not detected.
_	=	Not analyzed/Not applicable
<	=	Less than the laboratory reporting limit.
a	=	The sample chromatographic pattern does not match that of the specified standard.
b	=	Heavier gasoline range compounds are significant.
C	=	Diesel range compounds are significant; no recognizable pattern.
d	=	Gasoline range compounds are significant.
e	=	Strongly aged gasoline or diesel range compounds are significant.
f	=	No recognizable pattern.

TABLE 2B ADDITIONAL CUMULATIVE SOIL ANALYTICAL RESULTS - HVOCs

Former Exxon Service Station 79374 990 San Pablo Boulevard Albany, California (Page 1 of 2)

0 1			1,2,4-trimethyl-	1,3,5-trimethyl-	Isopropyl-	Naph-	n-Butyl-	p-Isopropyl-	sec-Butyl-	t-Butyl-	Add'l
Sample	Sampling	Depth	benzene	benzene	benzene	thalene	benzene	toluene	benzene	benzene	HVOCs
ID	Date	(feet bgs)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Soil Boring Samples											
Not analyzed for these analyte	S.										
Monitoring Well Samples											
Not analyzed for these analyte	S.										
Drum Samples											
Not analyzed for these analyte	S.										
Soil Stockpile Samples											
COMP(S-Profile-1-4)	11/08/10		0.0053	0.062	0.061	0.098	0.14	0.012	0.053	0.018	ND
S-SP1 (1-4)	01/18/12	-	8.3	2.2	0.12	<5.0	0.20	0.018	0.051	<0.0050	2.5g
Notes:											
S-15-MW4	=	Soil - depth - r	monitoring well 4.								
TPHmo	=	Total petroleur	m hydrocarbons as	motor oil analyzed us	sing EPA Met	hod 8015B.					
TPHd	=	Total petroleur	m hydrocarbons as	diesel analyzed usin	g EPA Metho	d 8015B.					
TPHg	=	Total petroleu	ım hydrocarbons as	gasoline analyzed u	ising EPA Me	thod 8015B					
MTBE	=			d using EPA Method				8020 in 2008.			
BTEX	=			and total xylenes ana	-	_					
EDB	=			g EPA Method 8260							
1,2-DCA	=			EPA Method 8260							
TBA	=	Tertiary butyl a	alcohol analyzed usi	ng EPA Method 826	60B.						
DIPE	=		=	EPA Method 8260B							
ETBE	=			using EPA Method 8							
TAME	=			d using EPA Method							
Total Lead	=		lyzed using EPA Me	-							
1,2,4-trimethylbenzene	=			using EPA Method 8	8260B.						
1,3,5-trimethlynemzene	=	-	•	using EPA Method							
Isopropyltoluene	=		ne analyzed using E								

TABLE 2B ADDITIONAL CUMULATIVE SOIL ANALYTICAL RESULTS - HVOCs

Former Exxon Service Station 79374 990 San Pablo Boulevard Albany, California (Page 2 of 2)

Notes (Cont.):		
Naphthalene	=	Naphthalene analyzed using EPA Method 8260B.
n-Butylbenzene	=	n-Butylbenzene analyzed using EPA Method 8260B.
p-Isopropyltoluene	=	p-Isopropyltoluene analyzed using EPA Method 8260B.
sec-Butylbenzene	=	sec-Butylbenzene analyzed using EPA Method 8260B.
t-Butylbenzene	=	t-Butylbenzene analyzed using EPA Method 8260B.
Add'l HVOCs	=	Additional halogenated volatile organic compounds analyzed using EPA Method 8260B.
feet bgs	=	Feet below ground surface.
ND	=	Not detected.
	=	Not analyzed/Not applicable
<	=	Less than the laboratory reporting limit.
а	=	The sample chromatographic pattern does not match that of the specified standard.
b	=	Heavier gasoline range compounds are significant.
С	=	Diesel range compounds are significant; no recognizable pattern.
d	=	Gasoline range compounds are significant.
е	=	Strongly aged gasoline or diesel range compounds are significant.
f	=	No recognizable pattern.
g	Ξ	n-Propylbenzene

TABLE 3

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

Well ID	Well Installation Date	TOC Elevation (feet)	Borehole Diameter (inches)	Total Depth of Boring (feet bgs)	Well Depth (feet bgs)	Casing Diameter (inches)	Well Casing Material	Screened Interval (feet bgs)	Slot Size (inches)	Filter Pack Interval (feet bgs)	Filter Pack Material
MW1	11/04/10	41.45	8	17	17	2	Schedule 40 PVC	12-17	0.020	10-17	#3 Sand
MW2	11/04/10	41.25	8	17	17	4	Schedule 40 PVC	12-17	0.020	10-17	#3 Sand
MW3	11/08/10	40.42	8	17	17	4	Schedule 40 PVC	11-16	0.020	9-16	#3 Sand
MW3A	01/18/12	40.68	10	15.5	15.5	4	Schedule 40 PVC	5-15	0.020	4.5-15.5	#2/12 Sand
MW4	11/05/10	39.30	8	17	13	2	Schedule 40 PVC	8-13	0.020	6-13	#3 Sand
MW5	11/05/10	40.38	8	17	14	2	Schedule 40 PVC	9-14	0.020	7-14	#3 Sand
MW6	11/03/10	41.06	10	20	20	2	Schedule 40 PVC	15-20	0.020	13-20	#3 Sand
AS1	01/18/12	(1000)	8	15.5	15.5	1	Schedule 80 PVC	10.25-13.5	#60 mesh	10.5-15.5	#2/12 Sand
SVE1	01/17/12	40.58	10	15.5	15.5	4	Schedule 40 PVC	5-15	0.020	4.5-15.5	#2/12 Sand
SVE2	01/17/12	40.94	10	15	15	4	Schedule 40 PVC	5-15	0,020	4.5-15	#2/12 Sand
SVE3	01/17/12	40.93	10	15	15	4	Schedule 40 PVC	5-15	0.020	4,5-15.5	#2/12 Sand

Notes:

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

PVC Polyvinyl chloride.

feet bgs Feet below ground surface.

APPENDIX A

CORRESPONDENCE

ALAMEDA COUNTY HEALTH CARE SERVICES



ALEX BRISCOE, Agency Director



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

December 14, 2011

Ms. Jennifer Sedlachek
ExxonMobil
4096 Piedmont Ave., #194
Oakland, CA 94611
(Sent via E-mail to:

jennifer.c.sedlachek@exxonmobil.com)

Mrs. Muriel Blank Blank Family Trust 1164 Solano Ave., #406 Albany, CA 94706

Subject: Fuel Leak Case No. RO0002974 and GeoTracker Global ID T0619716673, Exxon, 990 San Pablo Ave., Albany, CA 94706

Dear Ms. Sedlachek and Mrs. Blank:

Thank you for the recently submitted document entitled, Work Plan for Air-Sparge and Soil Vapor Extraction Well Installation and Feasibility Testing dated July 5, 2011 which was 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 work plan recommends installing pilot test wells and performing an air-sparge and soil vapor extraction (AS/SVE) pilot test.

ACEH generally concurs with the proposed scope of work and requests that you address the following technical comments, perform the proposed work, and send us the technical reports described below.

TECHNICAL COMMENTS

1. Proposed Monitoring Well MW-3A – Instead of overdrilling MW-3 and installing a new well in the same borehole to a depth of 16 feet below ground surface (ft bgs), please install another monitoring well adjacent to this well and leave MW-3 as another monitoring point. The new well (MW-3A) should be screened across both the top of water surface and reach the 10 to 10.5 ft bgs interval with the maximum hydrocarbon detection. This will minimize the well screen length and provide discrete sampling for this interval.

Please ensure that new well MW-3A is developed and sampled before the AS/SVE test begins.

2. <u>Future Maps</u> – Please include the location of the UST pit on the map. We request that you use an aerial photo as the basemap for future site maps submitted for the site. Please label and identify the use of all properties on your map.

Ms. Sedlachek and Mrs. Blank RO0002974 December 14, 2011, Page 2

TECHNICAL REPORT REQUEST

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

April 16, 2012 – Pilot Test Results Report

Thank you for your cooperation. Should you have any questions or concerns regarding this correspondence or your case, please call me at (510) 639-1287 or send me an electronic mail message at barbara.jakub@acgov.org.

Sincerely,

Digitally signed by Barbara J. Jakub Indan part-

DN: cn=Barbara J. Jakub, o, ou, email=barbara.jakub@acgov.org,

Date: 2011.12.14 16:24:02 -08'00'

Barbara J. Jakub, P.G.

Hazardous Materials Specialist

Enclosure: Responsible Party(ies) Legal Requirements/Obligations

ACEH Electronic Report Upload (ftp) Instructions

cc: Paula Sime, Environmental Resolutions, Inc., 601 North McDowell Blvd.Petaluma, CA 94954

(Sent via E-mail to: psime@ERI-US.com)

Mrs. Marcia B. Kelly, 641 SW Morningside Rd., Topeka, KS 66615 (Sent via E-mail to:

marciabkelly@earthlink.net)

Rev. Deborah Blank, 1563 Solano Ave. #344, Berkeley, CA 94707 (Sent via E-mail to:

miracoli@earthlink.net)

Donna Drogos, ACEH (Sent via E-mail to: donna.drogos@acgov.org)

Barbara Jakub, ACEH (Sent via E-mail to: <u>barbara.jakub@acgov.org</u>)

GeoTracker, file

APPENDIX B

FIELD PROTOCOL

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 California-modified 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 TeflonTM 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.

Groundwater Sampling

A groundwater sample, if desired, is collected from the boring by using HydropunchTM sampling technology or installing a well in the borehole. In the case of using HydropunchTM 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.

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. Deionized 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 Transportation-approved, 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.

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

Application Approved on: 12/08/2011 By jamesy

Permit Numbers: W2011-0753 to W2011-0755

Permits Valid from 12/19/2011 to 01/31/2012

Application Id:

1323301857829

Site Location:

990 San Pablo Ave, Albany, CA

Project Start Date: Extension Start Date: 12/19/2011

12/19/2011

Extension Count:

Completion Date: 12/19/2011 Extension End Date: 01/31/2012

City of Project Site: Albany

Extended By: priest

Assigned Inspector:

Property Owner:

Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org

Applicant:

Cardno ERI - Alex Snyder

601 N McDowell Bl, Petaluma, CA 94612

The Blank Family Trust

1164 Solano Avé, Albany, CA 94706 **ExxonMobil Environmental Services**

4096 Piedmont Ave, Oakland, CA 94611

Phone: 707-766-2000

Phone: 510-527-4337

Phone: 510-547-8196 x

Client:

Total Due:

\$927.00

\$927.00

Receipt Number: WR2011-0367 Total Amount Paid: Payer Name: Environmental Resolutions, Paid By: CHECK

Inc.

Works Requesting Permits:

Remediation Well Construction-Injection - 1 Wells Driller: Cascade - Lic #: 938110 - Method: hstem

Work Total: \$265.00

Specifications

openious on a second se									
Permit #	Issued Date	Expire Date	Owner Well	Hole Diam.	Casing	Seal Depth	Max. Depth		
			ld		Diam.				
W2011- 0753	12/08/2011	03/18/2012	AS1	8.00 in.	1.00 in.	12.00 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. 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.
- 4. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.

Alameda County Public Works Agency - Water Resources Well Permit

- 5. Applicant shall contact Steve Miller for an inspection time at (510) 670-5517 or email to stevem@acpwa.org 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. Minimum seal depth (Neat Cement Seal) is 2 feet below ground surface (BGS).
- 7. Minimum surface seal thickness is two inches of cement grout placed by tremie.
- 8. 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.
- 9. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a 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.

Remediation Well Construction-Extraction - 3 Wells

Driller: Cascade - Lic #: 938110 - Method: hstem Work Total: \$265.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2011- 0754	12/08/2011	03/18/2012	SVE1	8.00 in.	4.00 in.	5.00 ft	15.00 ft
W2011- 0754	12/08/2011	03/18/2012	SVE2	8.00 in.	4.00 in.	5.00 ft	15.00 ft
W2011- 0754	12/08/2011	03/18/2012	SVE3	8.00 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. 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.
- 4. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.
- 5. Applicant shall contact Steve Miller for an inspection time at (510) 670-5517 or email to stevem@acpwa.org at least

Alameda County Public Works Agency - Water Resources Well Permit

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. Minimum seal depth (Neat Cement Seal) is 2 feet below ground surface (BGS).
- 7. Minimum surface seal thickness is two inches of cement grout placed by tremie.
- 8. 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.
- 9. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a 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.

Monitoring Well Replacement-(Redrill)-Monitoring - 1 Wells

Driller: Cascade - Lic #: 938110 - Method: hstem

Work Total: \$397.00

Specifications

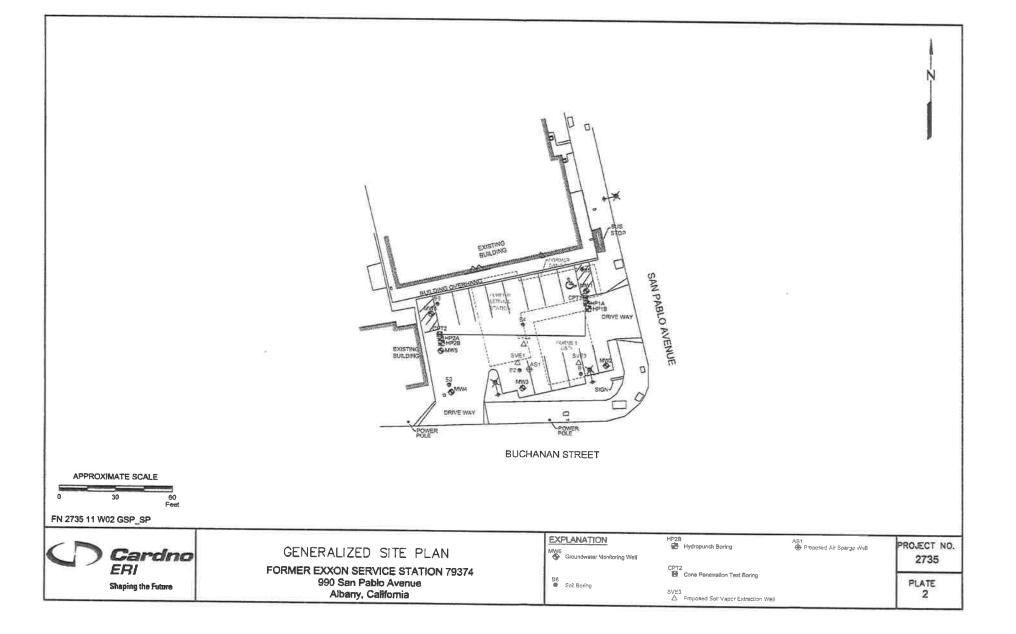
Permit #	Issued Date	Expire Date	Owner Well	Hole Diam.	Casing	Seal Depth	Max. Depth
			ld		Diam.		
W2011-	12/08/2011	03/18/2012	MW3A	8.00 in.	4.00 in.	5.00 ft	15.00 ft
0755							

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. Remove the Christy box or similar structure. Drill out & Replace with New Well.
- 4. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well 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 submit the copies of the approved encroachment permit to this office within 60 days.
- 6. Applicant shall contact Steve Miller for an inspection time at (510) 670-5517 or email to stevem@acpwa.org 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.

Alameda County Public Works Agency - Water Resources Well Permit

- 7. 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.
- 8. Minimum surface seal thickness is two inches of cement grout placed by tremie.
- 9. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.
- 10. 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.
- 11. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a 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.



APPENDIX D

BORING LOGS



BORING LOG AS1

(Page 1 of 1)

Date Drilled : 01/18/12 Drilling Co. : Cascade Drilling **Drilling Method** : Hollow-Stem Auger : 2" CA Modified Split Spoon Sampling Method Borehole Diameter : 8" Casing Diameter : 1" Latitude : 37,8879226 : 122.2985448

Project No.: : 022735

20

Site: : Former Exxon 79374, 990 San Pablo Avenue, Albany, CA

: Alexander G. Snyder Logged By:

Longitude Total Boring Depth : 15.5' bgs Reviewed By: David R. Daniels, P.G. 8737 Signature: First GW Depth : 9.5' bgs Sample Condition Water Levels No Recovery Groundwater After Completion Not Sampled Blow Count / 6" ▼ Groundwater While Drilling Described Sample Well: AS1 OVM/PID Depth (ft) Elevation: 41.07 Preserved Sample Sample Column DESCRIPTION (%clay/silt/sand/gravel) Well Box 0 4" Asphalt Poorly Graded GRAVEL with Sand: fine- to medium-grained, angular to subrounded, moderately graded, fine- to medium-grained sand 2.5 Poorly Graded SAND: fine- to medium-grained, brown, dry, subangular to subrounded, poorly graded (0,0,100,0) Silty SAND: fine- to medium-grained, greenish gray, dry, subangular to subrounded, poorly graded (0,40,60,0) Neat Cement Silty SAND with Clay: fine- to medium-grained, greenish gray, dry, >2000 Grout 5 subangular to subrounded, poorly graded (10,25,65,0) 1" Schedule 50.1 80 PVC Blank Casing SM Cleared to 8 feet bgs on 1/16/12 23.2 4 4 376 Silty SAND: fine- to medium-grained, damp, greenish gray, subangular 4 to subrounded, poorly graded, trace clay (5,15,80,0) 10 Bentonite 7 Chips V Poorly Graded SAND with Clay and Gravel: fine- to coarse-grained, 15 green, wet, subangular to subrounded, moderately graded; fine- to 12 medium-grained, subangular to subrounded gravel (10,0,60,30) #2/12 Sand 18 24 801 1.25" Stainless Steel 5 Silty SAND: fine- to medium-grained, reddish brown with green #60 Mesh Screen mottling, dry, subangular to subrounded, poorly graded, trace clay 30.7 5 (5,25,70,0)11 Clayey SAND: fine-grained, greenish gray, damp, subrounded, poorly 5 graded (25,5,70,0) 5 Silty SAND: fine- to medium-grained, reddish brown with green 15 13.8 5 mottling, dry, subangular to subrounded, poorly graded, trace clay (5,25,70,0)The descriptive information for classification symbol and name of soil is based on ASTM D2488 Standard Practice for Description and Identification of Soils (Visual-Manual Procedure).



Shoping the Future

BORING LOG MW3A

(Page 1 of 1)

Date Drilled : 01/18/12
Drilling Co. : Cascade Drilling
Drilling Method : Hollow-Stem Auger
Sampling Method : 2" CA Modified Split Spoon

Well: MW3A

Elevation: 40.95

Well Box

Grout

Neat Cement

4" Schedule

40 PVC Blank Casing

Bentonite

Chips

Borehole Diameter : 10"
Casing Diameter : 4"

Latitude : 37.8879037 Longitude : 122.2985623 Total Boring Depth : 15.5' bgs First GW Depth : 9.5' bgs

Project No.: : 022735
Site: : Former Exxon 79374, 990 San Pablo Avenue, Albany, CA
Logged By: : Alexander G, Snyder
Reviewed By: : David R, Daniels, P.G. 8737
Signature:

First GW Depth Water Levels Sample Condition ▼ Groundwater After Completion No Recovery Not Sampled ▼ Groundwater While Drilling Blow Count / Described Sample OVM/PID (ppmv) Depth (ft) Preserved Sample Sample Column uscs DESCRIPTION (%clay/silt/sand/gravel) 4" Asphalt Poorly Graded GRAVEL with Sand: fine- to medium-grained, angular to subrounded, moderately graded, fine- to medium-grained sand, trace clay (5,0,15,80) 3.0 Clayey SAND: fine- to medium-grained, brown, damp, subangular to subrounded, poorly graded (40,0,60,0) Sandy CLAY: brown, damp, moderate plasticity, fine-grained sand,

rootlets and black nodules present (65,0,35,0)

Clavey SAND with Silt: fine- to medium-grained, brown with green

mottling, dry, subangular to subrounded, poorly graded (15,10,75,0)

Silty SAND: fine- to medium-grained, light brown with green mottling, 10.1 dry, subangular to subrounded, poorly graded (0,20,80,0) 5 Cleared to 5 feet bgs on 1/16/12 5 5 5 7.5 Clayey SAND: fine- to coarse-grained, greenish gray, damp, 10 subangular to subrounded, moderately graded, trace gravel 328 12 (25,0,75,0)Green @ 8.5' bgs 18 Clayey SAND: fine- to coarse-grained, greenish gray, wet, subangular 14 10 to subrounded, moderately graded; fine- to medium-grained, angular to 15 844 subrounded gravel (15,0,75,10) 15 Clayey SAND: fine- to medium-grained, brown with green mottling, 9 wet, subrounded, poorly graded, trace gravel (20,0,80,0) 9 >9999 SC 15 7 9 Silty SAND: fine- to medium-grained, brown with green mottling, dry, 10 252 subangular to subangular, poorly graded (0,20,80,0) 9 Clayey SAND: fine- to medium-grained, greenish gray, moist, subrounded, poorly graded, trace silt (20,5,75,0) 9 15 Silty SAND: fine- to medium-grained, brown with green mottling, dry, 16 106 subangular to subangular, poorly graded (0,20,80,0).

4" Schedule 40 PVC 0.020"

0.020" Screened Casing

-#2/12 Sand

The descriptive information for classification symbol and name of soil is based on ASTM D2488 Standard Practice for Description and Identification of Soils (Visual-Manual Procedure).



BORING LOG SVE1

(Page 1 of 1)

Drilling Co. : Cascade Drilling **Drilling Method** Sampling Method

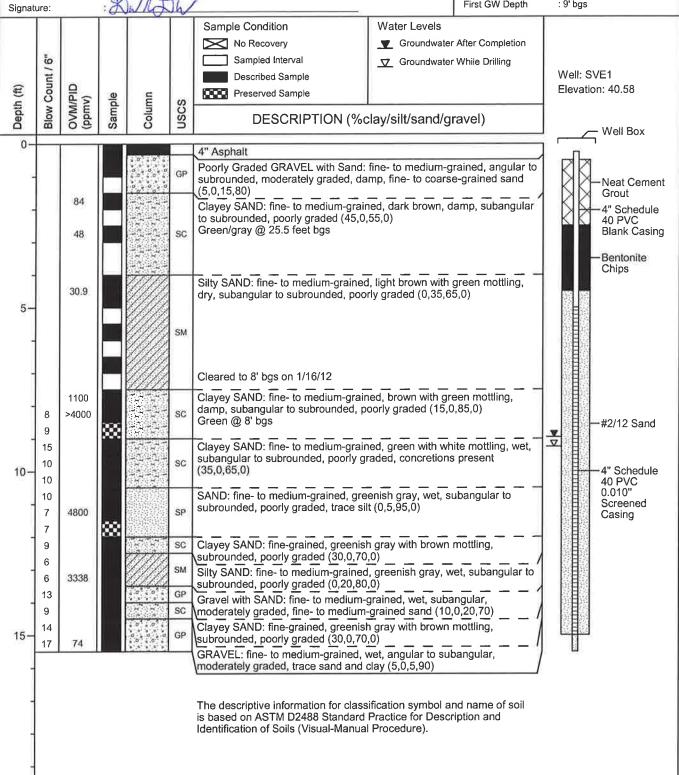
: Hollow-Stem Auger : 2" CA Modified Split Spoon

: 01/17/12

Borehole Diameter

Date Drilled

: 10" : 4" Casing Diameter Project No.: : 022735 : 37.8879326 Latitude : Former Exxon 79374, 990 San Pablo Avenue, Albany, CA Site: Longitude : 122.2985668 : Alexander G. Snyder Logged By: Total Boring Depth : 15.5' bas David R. Daniels, P.G. 8737 Reviewed By: First GW Depth : 9' bgs





BORING LOG SVE2

(Page 1 of 1)

Date Drilled . 01/17/12 Drilling Co. : Cascade Drilling **Drilling Method** : Hollow-Stem Auger Sampling Method : 2" CA Modified Split Spoon

Borehole Diameter

Casing Diameter : 4" Project No.: Latitude : 37.8879620 : Former Exxon 79374, 990 San Pablo Avenue, Albany, CA Site: : 122.2985456 Longitude : Alexander G. Snyder Logged By: **Total Boring Depth** : 15' bgs : David R. Daniels, P.G. 8737 Reviewed By: First GW Depth : 9.31' bgs Signature: Sample Condition Water Levels No Recovery ▼ Groundwater After Completion Blow Count / 6" Not Sampled ▼ Groundwater While Drilling Well: SVE2 Described Sample OVM/PID (ppmv) Depth (ft) Elevation: 40.94 Preserved Sample Sample Column nscs DESCRIPTION (%clay/silt/sand/gravel) Well Box 4" Asphalt GP GRAVEL with Sand: fine- to medium-grained, angular to subrounded, moderately graded, damp, fine- to coarse-grained sand, trace clay Neat Cement SAND with Clay: fine- to medium-grained, light brown, dry, subangular Grout to subrounded, poorly graded (10,0,90,0) 4" Schedule 40 PVC Blank Casing 1.7 Bentonite Chips 5. >9000 Clayey SAND: fine- to medium-grained, greenish gray, damp, subangular to subrounded, poorly graded (25,0,75,0) SC -#2/12 Sand Moist to wet @ 10' bgs Cleared to 10' bgs @ 0945 on 1/17/12 4" Schedule 10-V 2 >9999 40 PVC 0.020" Poorly Graded SAND: fine- to medium-grained, greenish gray, wet, 2 Screened angular to subrounded, poorly graded, micas present (0,0,100,0) 4 Casing 5 SP 5 >9999 5 Clayey SAND: fine- to medium-grained, dark greenish gray, wet, 7 angular to subrounded, poorly graded, micas present (15,0,85,0) 12 Poorly Graded GRAVEL with Sand: fine-grained, wet, subrounded, 14 72 moderately graded, fine- to medium-grained sand, trace clay and silt 12/6 (5,5,20,70)15 Clayey SAND: fine-grained, brown with green mottling, subrounded, poorly graded (40,0,60,0) Concretions and black organics present, approximately 1 cm diameter. TD: 15 feet bgs The descriptive information for classification symbol and name of soil is based on ASTM D2488 Standard Practice for Description and Identification of Soils (Visual-Manual Procedure).



BORING LOG SVE3

(Page 1 of 1)

Date Drilled : 01/17/12 Drilling Co. : Cascade Drilling Drilling Method : Hollow-Stem Auger Sampling Method : 2" CA Modified Split Spoon

Borehole Diameter : 10" : 4" Casing Diameter

Project No.: : 022735 Latitude : 37.8879296 : Former Exxon 79374, 990 San Pablo Avenue, Albany, CA Site: : 122,2984573 Longitude : Alexander G. Snyder Logged By: Total Boring Depth : 15' bgs : David R. Daniels, P.G. 8737 Reviewed By: First GW Depth : 8.95' bas Signature: Water Levels Sample Condition Groundwater After Completion No Recovery Blow Count / 6" Not Sampled ▼ Groundwater While Drilling Well: SVE3 Described Sample OVM/PID (ppmv) Elevation: 40.93 Depth (ft) Preserved Sample Sample Column nscs DESCRIPTION (%clay/silt/sand/gravel) Well Box 0 3" Asphalt Poorly Graded SAND: fine- to medium-grained, brown, dry, subangular to subrounded, poorly graded, trace silt (0,5,95,0) SP Neat Cement 1.5 Grout 4" Schedule 40 PVC Silty SAND: fine- to medium-grained, green with brown mottling, damp, 9.3 Blank Casing subangular-subrounded, poorly graded (0,15,85,0) Bentonite Chips 198 SM 5 Silty SAND: fine- to medium-grained, greenish gray, moist, subangular 1117 to subrounded, poorly graded, trace clay (5,20,75,0) 2 Cleared to 8.5 feet bgs on 1/16/12 -#2/12 Sand ¥ 2 2 4" Schedule 10-3 SM 40 PVC Wet at 10.5 feet bgs V 0.020" 6 Screened >3000 3 Casing 3 3 7 14 265 Clayey SAND with Silt: fine- to medium-grained, dark green, wet, subangular to subrounded, poorly graded, micas and concretions 20 present (20,10,70,0) 5 Clayey Silty SAND: fine-grained, brown with green mottling, damp, subrounded, poorly graded (20,20,60,0) 5 15 Brown with red mottling at 15.5 feet bgs 9 19 TD: 15.5 Feet bgs The descriptive information for classification symbol and name of soil is based on ASTM D2488 Standard Practice for Description and Identification of Soils (Visual-Manual Procedure).

APPENDIX E WELL DEVELOPMENT RECORDS

2735c/06L

ERI Job# (735	Quarter 5	Year 2017	-		Surging
Client/Site: FORMET	R EXXEN 3	49374		Start 0736	Stop 074
Location: o.c.	T-0.0	A		Start	Stop
Name.: Alex Su	udic			Start	Stop
DATE: 1/27/12	0			Start	Stop
Weather: Choudy				Start	Stop
VELL ID		(8) 50 explored 5	STATE OF TRAFF	SALL FERMANDAMENT OF	etop
VELL ID SVES					
TIME	PURGE VOLUME	Temp	COND	pH	Turbidity
hr:min	Gal	deg C F		unit	NTU
		1 deg	10%	0.1	Less Than 5
0753	5	17.3	1975	6.55	Less Than 5
0756	17.				
0720	13	17.3	1496	7.7.1	-
0844	22	19.3	1305	9,05	
5857	29	17.3	1210	7.02	1569
0908	33	17.4	1150	H.DI	669
0920	- 5%	17.4	1182	7.05	380 9
933 738	4/	17.8	1159	7.13	9402
	45	18.0	1175	-2,04	7-89.5
947	48	18.2	1150	6.89	27-1.9
959	52	18.1	1154	To. 99	1(02.9
	F 19.				
		7)			
	-				
2000年1月1日	571 College	SHIP OF BUILDING	Title Part Average	9141074084751111	
I Purge Volume SING VOL. FACTOR	54 Gallons				
SING VOL. FACTOR			6-12 WELL IN	FORMATION	
diameter	asters diff. Use	Time	14.99	2/	
2"-dia:	0.163	TD:		(S)	
2 -dia. 4"-dia;		DTW :	8,95	7	
6"-dia:	0.652 1.457	h: csg vol:	3,93	-	
To Final Land	1.30	COMMEN.			

137-700

2735L/06L

30

Client/Site: FORANCE	EXXUN 7	9374		Start 1442	Stop U
Location: 990 Say	Table	14		Start 605	Stop 6
Name : Alex Sm	100	41		Start	Stop 6
DATE: 1/20/12	you	F		Start	Stop
Weather: Glonday				Start	Stop
WELL ID		Valence 2	uranoste autores	otalit	Otop
WELL ID SVEZ					
TIME	PURGE VOLUME	Temp	COND	pH	Turbi
hr:min	Gal	deg C F		unit	NTU
×		1 deg	10%	0.1	Less Than 5
1504 (1-26-12)	5	19.7	1887 25	7.30	- Less mans
1516	10			11.00	
1620	_15	18.7	11.52	7,37	-
1625	25	¥	10-5	, ,	
1425 (1-27-14)	30	19,4	1479	7,33	
1454	30 35	19.5	1480	7.32	-
1457	37	19.3	1433	7,18	-
1522	初	19.3	1351	7.10	1096
/			1031	7.70	1010
					_
7					
			-		

			-		
					-
×	-				
Same as a service of					17
tal Purge Volume	Gallons				
ASING VOL. FACTOR				ORMATION	
	duling the over	Time	1442	1415	
diameter	1	TD:	14.9	14.9	
2"-dia:	0.163	DTW:	9.31	9.31	× ×
4"-dia:	0.652	h:	5.59	A Ne Y	
6"-dia:	1.457	csg vol:	3.64		
		COMMENT	79		

Sheen

14.1-1510

2735C/06L

ERI Job# 1735 Quarter 15 Year 2017 Surging Client/Site: FORMER EXYON 79374 Stop 936 Start 918 Sou Polak An Allowry Start Stop 1100 9.73 Name .: Alex Sunder Start 345 Stop /357 DATE: Start Stop Weather: Clauden Start Stop WELL ID PURGE TIME Temp COND pH Turbidity VOLUME hr:min Gal deg C F unit NTU 1 deg 10% 0.1 Less Than 5 940 191.3 2.75 W.S 10.35 150 75 1105 19.0 17 2.23 -5 7.87 - 16 gel - Parysing 1403 21 18.8 1538 6.87 1423 25 19.5 1430 7.22 1301 (1-27-12 30 18.8 1336 7.20 35 1306 18.9 14710 21.19 1333 42 19.1 1279 6,95 1100 40 1348 19.2 \$10.49 96 1269 97.95 1353 50 19,2 1256 10.81 112.2 Gallons Total Purge Volume CASING VOL. FACTOR WELL INFORMATION Time 09//(1-2612) 1255 (1-29-12) diameter TD: 15 2"-dia: DTW: 8.72 8,71 0.163 4"-dia: h: 6.28 0.652 6"-dia: 1.457 csg vol: 4,019 COMMENTS

Bull 1

145-13

9,

Bort- 979

2.5

12.4 - 947 11.4 - 106 b

12 - 1116

2735/06L

~ 6

1130	B./. 1.	Temp deg C F 1 deg 15.1 19.9 18.4 18.4 18.5 7w.0	10% 10% 1053,6 1234 1249 1317	Start 135 Start	Stop St
Name.: After Straffing DATE: 1/2 6/1? Weather: Justing WELL ID My SA TIME hrimin 1158 1250 1252 1275 1275	PURGE VOLUME Gal 5 11.5 12.5	Temp deg C F 1 deg S I	10% 10% 1053,45 1234 1249 1317	Start Start Start Start pH unit 0.1 7,40	Stop Stop Stop Turbidit NTU Less Than 5
Weather: 1/2 6/12 Weather: 1/2 6/12 WELL ID MUSA TIME hr:min 1158 1250 1202 1202 1045 1048	PURGE VOLUME Gal 5 11.5 12.5	Temp deg C F 1 deg S I	10% 10% 1053,45 1234 1249 1317	Start Start PH unit 0.1 7,40	Stop Stop Stop Turbidit NTU Less Than 5
Weather: North Net Line	PURGE VOLUME Gal	Temp deg C F 1 deg 18.1 17.9	10% 10% 1053,45 1234 1249 1317	pH unit 0.1 7,40 7,40	Turbidit NTU Less Than 5
Weather: Clouds WELL ID MUSEA TIME hr:min 1158 1250 1702 17045 1048 1150	PURGE VOLUME Gal	Temp deg C F 1 deg 18.1 17.9	10% 10% 1053,45 1234 1249 1317	pH unit 0.1 7,40 7,40	Turbidit NTU Less Than 5
TIME hr:min 1158 1250 1250 1202 1045 1048 1150	VOLUME Gal 5 11.5 12.5	Temp deg C F 1 deg 18.1 17.9	10% 10% 1053,45 1234 1249 1317	pH unit 0.1 7,65 7,40	Turbidit NTU Less Than 5
TIME hr:min 1158 1250 1702 17045 1048 1150	VOLUME Gal 5 11.5 12.5	Temp deg C F 1 deg 18.1 17.9	10% 10% 1053,45 1234 1249 1317	pH unit 0.1 7,65 7,40	Turbidit NTU Less Than 5
1158 1250 1250 1202 1045 1048	Gal 5 11.5 12.5 15 15	1 deg 18.1 19.9 18.4 18.4 18.5	1234 1249	0.1 7.65 7.59	Less Than 5
1250 1202 1045 1048 1150	11.5 12.5 15 18	18.4	1234 1249	7,40	
1250 1202 1045 1048 1150	11.5 12.5 15 18	18.4	1234 1249	7,40	
1202 1045 1048 1150	12.5 15 18	184	1234	7,40	
1045 1048 1130	15	18.4	1249	7,40	
1049 1130	NO	18.4	1249	7.40 7.36 7.58 7.58	
1130	NO	18.5 W.O	1317	7.36 7.58 7.58	
		18.5 W.D		7.58	
12.42	22	w.D	151	9.58	
			1		
					-
VS-029 V2 (074) 05600	Gallons	or - Harts Ivosi ev	CONTRACTOR OF	OTCH STANSANDASSAN	
Purge Volume	Gallons	PONCY I PRODUCT	Charles Straig		
SING VOL. FACTOR				FORMATION	THE RESULTS
			1130(126-12)	0830 (1-77-17)	
diameter 2"-dia:	0.163	TD:	7.40	15.0	
2 -dia: 4"-dia:	0.163			10.11	
4"-dia:	0.652 1.457	h: csg vol:	7.60 4.95		
	1.101	COMMENT			

1111

5.91-11.3

736-1202 127-1238 125 1340

APPENDIX F LABORATORY REPORTS





CALSCIENCE

WORK ORDER NUMBER: 12-01-1200

The difference is service



SOIL : WATER : MARINE CHEMISTRY

Analytical Report For

Client: Cardno ERI

Client Project Name: ExxonMobil 79374/022735C

Attention: Paula Sime

601 North McDowell Blvd. Petaluma, CA 94954-2312

Cecile & ex Saia

Approved for release on 02/2/2012 by: Cecile deGuia

Project Manager

ResultLink >

Email your PM >



Calscience Environmental Laboratories certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety. Note that the Chain-of-Custody Record and Sample Receipt Form are integral parts of this report.



Contents

Client Project Name: ExxonMobil 79374/022735C

Work Order Number: 12-01-1200

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CASE NARRATIVE

Calscience Work Order No.: 12-01-1200 Client Reference: ExxonMobil 79374/022735C

Four (4) soil samples were received for Calscience work order 12-01-1200 on January 20, 2012. Testing was performed in accordance with the chain-of-custody instructions.

EPA 8260B:

LCS/LCSD: All target analytes were within acceptance criteria with the exception of Methyl-t-Butyl Ether (MTBE). The LCS and/or LCS Duplicate recoveries for this analyte was above the upper control limit of 120%, but was below the NELAC-defined upper marginal exceedance (ME) limit of 127%. (ME = +/- 4 standard deviations.) Based upon the number of analytes spiked into the LCS/LCSD, and per NELAC, the laboratory is allowed to report associated data when there is, in this case, one marginal exceedance in the LCS/LCSD.

Methyl-t-Butyl Ether (MTBE) is reported as a marginal exceedance in the following QC batch:

120120L01 120124L02







Cardno ERI

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

Work Order No:

Preparation: Method:

12-01-1200 EPA 3550B

EPA 8015B (M)

01/20/12

Project: ExxonMobil 79374/022735C

Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-SP1 (1-4)		12-01-1200-5-A	01/18/12 11:40	Solid	GC 46	01/23/12	01/23/12 22:09	120123B02
Parameter	Result	RL	DF	<u>Qual</u>	<u>Units</u>			
TPH as Motor Oil	190	25	1	SG,HD	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	110	61-145						
Method Blank		099-12-254-2,319	N/A	Solid	GC 46	01/23/12	01/23/12 17:35	120123B02
Parameter	Result	RL	DF	Qual	Units			
TPH as Motor Oil	ND	25	1	U	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	114	61-145						









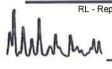
Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received: Work Order No: Preparation:

Method:

01/20/12 12-01-1200 EPA 3550B EPA 8015B (M)

Project: ExxonMobil 79374/022735C

Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-SP1 (1-4)		12-01-1200-5-A	01/18/12 11:40	Solid	GC 46	01/23/12	01/23/12 22:09	120123B01
Parameter	Result	RL	DF	Qual	Units	94		
TPH as Diesel	39	5.0	1	SG,HD	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	110	61-145						
Method Blank		099-12-275-4,348	N/A	Solid	GC 46	01/23/12	01/23/12 17:35	120123B01
Parameter	Result	RL	<u>DE</u>	Qual	<u>Units</u>			
TPH as Diesel	ND	5.0	1	U	mg/kg			
<u>Surrogates:</u>	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	114	61-145						







Cardno ERI

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

Work Order No:

Preparation:

Method:

01/20/12

12-01-1200 EPA 5030C

EPA 8015B (M)

Project: ExxonMobil 79374/022735C

Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-SP1 (1-4)		12-01-1200-5-A	01/18/12 11:40	Solid	GC 4	01/20/12	01/20/12 20:27	120120B02
Parameter	Result	<u>RL</u>	<u>DF</u>	Qual	Units			
TPH as Gasoline	230	10	20		mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
1,4-Bromofluorobenzene - FID	87	42-126						
Method Blank		099-14-571-154	N/A	Solid	GC 4	01/20/12	01/20/12 14:16	120120B02
Parameter	Result	RL	DE	Qual	Units			
TPH as Gasoline	ND	4.0	8	U	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
1,4-Bromofluorobenzene - FID	77	42-126						







Cardno ERI

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

Work Order No:

Preparation:

Method:

Units:

01/20/12

12-01-1200 EPA 5030C

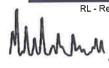
EPA 8260B

mg/kg

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Project: ExxonMobil 79374/022735C

S-SP1 (1-4) 12-01-12/00-5-A	Client Sample Number				b Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/		QC Batch ID
Benzene					No. of Contract of	01/18/12	Solid	GC/MS XX	01/20/12	01/20/12		120120L01
Toluene	<u>Parameter</u>	Result	RL	<u>DF</u>	Qual	Parameter			Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>
Ethylbenzene	Benzene	0.20	0.0050	1		2-Chlorotoluen	ie		ND	0.0050	1	U
Xylenes (total) 14 0.50 100 Acetone ND 0.12 1 U MethylButyl Ether (MTBE) ND 0.0050 1 U Bromobenzene ND 0.0050 1 U Diisopropyl Ether (DIPE) ND 0.010 1 U Bromoform ND 0.0050 1 U Eirhyl-Butyl Ether (ETBE) ND 0.010 1 U Bromoform ND 0.0050 1 U Eirhyl-Butyl Ether (ETBE) ND 0.010 1 U Bromoform ND 0.0050 1 U Eirh-Amyl-Methy Ether (ETABE) ND 0.010 1 U Carbon Disulfide ND 0.050 1 U 1,1,1-Trichloroethane ND 0.0050 1 U Carbon Tetrachloride ND 0.0050 1 U Chlorobenzene ND 0.0050 1 U Dibromochloromethane ND 0.0050 1 U Chloroform ND 0.0050<	Toluene	0.66	0.50	100		4-Chlorotoluen	ie		ND	0.0050	1	U
Methyl-t-Butyl Ether (MTBE) ND 0.0050 1 U Bromobenzene ND 0.0050 1 U Tert-Butyl Alcohol (TBA) ND 0.050 1 U Bromochloromethane ND 0.0050 1 U Diisopropyl Ether (DIPE) ND 0.010 1 U Bromoform ND 0.025 1 U Ethyl-Butyl Ether (ETBE) ND 0.010 1 U Bromomethane ND 0.025 1 U Tert-Amyl-Methyl Ether (TAME) ND 0.010 1 U Carbon Disulfide ND 0.050 1 U Carbon Tetrachloride ND 0.050 1 U Carbon Tetrachloride ND 0.050 1 U Carbon Tetrachloride ND 0.050 1 U Chlorochane ND 0.0050	Ethylbenzene	4.3	0.50	100		4-Methyl-2-Per	ntanone		ND	0.050	1	U
Tert-Butyl Alcohol (TBA)	Xylenes (total)	14	0.50	100		Acetone			ND	0.12	1	U
Diisopropy Ether (DIPE) ND 0.010 1 U Bromoform ND 0.0050 1 U Ethyt-Butyl Ether (ETBE) ND 0.010 1 U Bromomethane ND 0.025 1 U Tert-Amyl-Methyl Ether (TAME) ND 0.010 1 U Garbon Disulfide ND 0.050 1 U II.1,2-Tetrachloroethane ND 0.0050 1 U Carbon Tetrachloride ND 0.0050 1 U II.1,1,2-Tetrachloroethane ND 0.0050 1 U Chlorobenzene ND 0.0050 1 U II.1,2-Tetrachloroethane ND 0.0050 1 U Chlorobenzene ND 0.0050 1 U II.1,2-Trichloroethane ND 0.0050 1 U Chlorobenzene ND 0.0050 1 U II.1,2-Trichloroethane ND 0.0050 1 U Chlorobenzene ND 0.0050 1 U II.1,2-Trichloroethane ND 0.0050 1 U Chlorobenzene ND 0.0050 1 U II.1,2-Trichloroethane ND 0.0050 1 U Chlorobenzene ND 0.0050 1 U II.1,2-Trichloroethane ND 0.0050 1 U Chlorobenzene ND 0.0050 1 U II.1,2-Trichloroethane ND 0.0050 1 U Chlorobenzene ND 0.0050 1 U II.1,2-Trichloroethane ND 0.0050 1 U Dibromomethane ND 0.0050 1 U II.1,2-Trichloroethane ND 0.0050 1 U Dibromomethane ND 0.0050 1 U II.1,2-Trichloroethane ND 0.0050 1 U Bromodichloromethane ND 0.0050 1 U II.1,2-Trichloroethane ND 0.0050 1 U Bromodichloromethane ND 0.0050 1 U II.1,2-Trichloroethane ND 0.0050	Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	U	Bromobenzene	•		ND	0.0050	1	U
Ethyl-Hebuty Ether (ETBE) ND 0.010 1 U Bromomethane ND 0.025 1 U Tert-Amyl-Methyl Ether (TAME) ND 0.010 1 U Carbon Disulfice ND 0.050 1 U Chlorobenzene ND 0.0050 1 U Dibromomethane ND 0.0050 1 U U Dichlorodifluoromethane ND 0.0050 1 U U Dichlorodenzene ND 0.0050 1 U Dichlorodenzene N	Tert-Butyl Alcohol (TBA)	ND	0.050	1	U	Bromochlorom	ethane		ND	0.0050	1	U
Terf-Amyl-Methyl Ether (TAME) ND 0.010 1 U Carbon Disulfide ND 0.050 1 U 1,1,1,2-Tetrachloroethane ND 0.0050 1 U Carbon Tetrachloride ND 0.0050 1 U U Carbon Tetrachloride ND 0.0050 1 U U Chlorobenzene ND 0.0050 1 U U U Chlorobenzene ND 0.0050 1 U U U U U U U U U	Diisopropyl Ether (DIPE)	ND	0.010	1	U	Bromoform			ND	0.0050	1	U
1,1,1,2-Tetrachloroethane	Ethyl-t-Butyl Ether (ETBE)	ND	0.010	1	U	Bromomethane	Э		ND	0.025	1	U
1,1,1-Trichloroethane	Tert-Amyl-Methyl Ether (TAME)	ND	0.010	1	U	Carbon Disulfic	de		ND	0.050	1	U
1,1,2,2-Tetrachloroethane	1,1,1,2-Tetrachloroethane	ND	0.0050	1	U	Carbon Tetrac	hloride		ND	0.0050	1	U
1,1,2-Trichloroethane ND 0.0050 1 U Chloroethane ND 0.050 1 U 1,1,2-Trichloro-1,2,2-Trifluoroethane ND 0.050 1 U Chlorofform ND 0.0050 1 U 1,1-Dichloroethane ND 0.0050 1 U Chloromethane ND 0.0050 1 U 1,1-Dichloroethene ND 0.0050 1 U Dibromomethane ND 0.0050 1 U 1,1-Dichloroptropene ND 0.0050 1 U Bromodichloromethane ND 0.0050 1 U 1,2,3-Trichlorobenzene ND 0.010 1 U Dichlorodifluoromethane ND 0.0050 1 U 1,2,4-Trimethylbenzene ND 0.0050 1 U Isopropylbenzene 0.12 0.0050 1 U 1,3-5-Trimethylbenzene 2.2 0.50 100 Methylene Chloride ND 0.050 1 U <	1,1,1-Trichloroethane	ND	0.0050	1	U	Chlorobenzene	•		ND	0.0050	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	1,1,2,2-Tetrachloroethane	ND	0.0050	1	U	Dibromochloro	methane		ND	0.0050	1	U
1,1-Dichloroethane ND 0.0050 1 U Chloromethane ND 0.025 1 U 1,1-Dichloroethene ND 0.0050 1 U Dibromomethane ND 0.0050 1 U 1,1-Dichloropropene ND 0.0050 1 U Bromodichloromethane ND 0.0050 1 U 1,2,3-Trichlorobenzene ND 0.0050 1 U Dichlorodifluoromethane ND 0.0050 1 U 1,2,3-Trichloropropane ND 0.0050 1 U Hexachloro-1,3-Butadiene ND 0.010 1 U 1,2,4-Trichlorobenzene ND 0.0050 1 U Isopropytbenzene 0.12 0.0050 1 U 1,2,4-Trimethylbenzene 8.3 0.50 100 Hexachloro-1,3-Butadiene ND 0.050 1 U 1,2,4-Trimethylbenzene 8.3 0.50 100 Hexachloro-1,3-Butadiene ND 0.050 1 U <tr< td=""><td>1,1,2-Trichloroethane</td><td>ND</td><td>0.0050</td><td>1</td><td>U</td><td>Chloroethane</td><td></td><td></td><td>ND</td><td>0.0050</td><td>1</td><td>U</td></tr<>	1,1,2-Trichloroethane	ND	0.0050	1	U	Chloroethane			ND	0.0050	1	U
1,1-Dichloroethene ND 0.0050 1 U Dibromomethane ND 0.0050 1 U 1,1-Dichloropropene ND 0.0050 1 U Bromodichloromethane ND 0.0050 1 U 1,2,3-Trichlorobenzene ND 0.010 1 U Dichlorodifluoromethane ND 0.0050 1 U 1,2,3-Trichloropropane ND 0.0050 1 U Hexachloro-1,3-Butadiene ND 0.010 1 U 1,2,4-Trichlorobenzene ND 0.0050 1 U Hexachloro-1,3-Butadiene ND 0.010 1 U 1,2,4-Trimethylbenzene 8.3 0.50 100 U Isopropylbenzene 0.12 0.0050 1 U 1,2,4-Trimethylbenzene 8.3 0.50 100 Methylene Chloride ND 0.050 1 U 1,2,5-Trimethylbenzene 2.2 0.50 100 Methylene Chloride ND 0.050 1 U	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.050	1	U	Chloroform			ND	0.0050	1	U
1,1-Dichloropropene ND 0.0050 1 U Bromodichloromethane ND 0.0050 1 U 1,2,3-Trichlorobenzene ND 0.010 1 U Dichlorodiffuoromethane ND 0.0050 1 U 1,2,3-Trichloropropane ND 0.0050 1 U Hexachloro-1,3-Butadiene ND 0.10 1 U 1,2,4-Trichloropropane ND 0.0050 1 U Isopropylbenzene 0.12 0.0050 1 U 1,2,4-Trimethylbenzene 8.3 0.50 100 Methylene Chloride ND 0.050 1 U 1,3,5-Trimethylbenzene 2.2 0.50 100 Methylene Chloride ND 0.050 1 U 1,2-Dichloroethene ND 0.0050 1 U 2-Hexanone ND 0.050 1 U 1,2-Dichloropropane ND 0.010 1 U Naphthalene ND 0.0050 1 U 1,2-Di	1,1-Dichloroethane	ND	0.0050	1	U	Chloromethane	•		ND	0.025	1	U
1,2,3-Trichlorobenzene ND 0.010 1 U Dichlorodiffuoromethane ND 0.0050 1 U 1,2,3-Trichloropropane ND 0.0050 1 U Hexachloro-1,3-Butadiene ND 0.10 1 U 1,2,4-Trichlorobenzene ND 0.0050 1 U Isopropylbenzene 0.12 0.0050 1 U 1,2,4-Trimethylbenzene 8.3 0.50 100 Methylene Chloride ND 0.050 1 U 1,3,5-Trimethylbenzene 2.2 0.50 100 Methylene Chloride ND 0.050 1 U 1,2-Dichloroethene ND 0.0050 1 U 2-Hexanone ND 0.050 1 U 1,2-Dibromoe3-Chloropropane ND 0.0050 1 U Naphthalene ND 0.050 1 U n-Butylbenzene ND 0.0050 1 U n-Butylbenzene 0.20 0.0050 1 U n-Butylbenzene 0.20	1,1-Dichloroethene	ND	0.0050	1	U	Dibromometha	ne		ND	0.0050	1	U
1,2,3-Trichloropropane ND 0.0050 1 U Hexachloro-1,3-Butadiene ND 0.10 1 U 1,2,4-Trichlorobenzene ND 0.0050 1 U Isopropylbenzene 0.12 0.0050 1 U 1,2,4-Trimethylbenzene 8.3 0.50 100 Z-Butanone ND 0.050 1 U 1,3,5-Trimethylbenzene 2.2 0.50 100 Methylene Chloride ND 0.050 1 U -1,2-Dichloroethene ND 0.0050 1 U 2-Hexanone ND 0.050 1 U 1,2-Dibromo-3-Chloropropane ND 0.010 1 U Naphthalene ND 0.050 1 U 1,2-Dibromoethane ND 0.0050 1 U n-Butylbenzene 0.20 0.0050 1 1,2-Dichloroethane ND 0.0050 1 U p-Isopropylbenzene 2.5 0.50 100 1,2-Dichloropropane ND	1,1-Dichloropropene	ND	0.0050	1	U	Bromodichloromethane			ND	0.0050	1	U
1,2,4-Trichlorobenzene ND 0.0050 1 U Isopropylbenzene 0.12 0.0050 1 1,2,4-Trimethylbenzene 8.3 0.50 100 Ze-Butanone ND 0.050 1 U 1,3,5-Trimethylbenzene 2.2 0.50 100 Methylene Chloride ND 0.050 1 U c-1,2-Dichloroethane ND 0.0050 1 U 2-Hexanone ND 0.050 1 U 1,2-Dibromoethane ND 0.010 1 U Naphthalene ND 5.0 100 U 1,2-Dichlorobenzene ND 0.0050 1 U n-Butylbenzene 0.20 0.0050 1 U n-Propylbenzene 0.20 0.0050 1 U n-Propylbenzene 2.5 0.50 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100	1,2,3-Trichlorobenzene	ND	0.010	1	U	Dichlorodifluoro	omethane		ND	0.0050	1	U
1,2,4-Trimethylbenzene 8.3 0.50 100 2-Butanone ND 0.050 1 U 1,3,5-Trimethylbenzene 2.2 0.50 100 Methylene Chloride ND 0.050 1 U c-1,2-Dichloroethene ND 0.0050 1 U 2-Hexanone ND 0.050 1 U 1,2-Dibromo-3-Chloropropane ND 0.010 1 U Naphthalene ND 5.0 100 U 1,2-Dichromoethane ND 0.0050 1 U n-Butylbenzene 0.20 0.0050 1 U 1,2-Dichloroptopane ND 0.0050 1 U n-Propylbenzene 0.20 0.0050 1 U 1,2-Dichloroptopane ND 0.0050 1 U n-Propylbenzene 2.5 0.50 100 1,2-Dichloroptopane ND 0.0050 1 U p-Isopropylbenzene 0.018 0.0050 1 1-1,2-Dichloroptopane ND 0.0050 1 U Styrene ND 0.0050 1 U	1,2,3-Trichloropropane	ND	0.0050	1	U	Hexachloro-1,3	-Butadiene		ND	0.10	1	U
1,3,5-Trimethylbenzene 2.2 0.50 100 Methylene Chloride ND 0.050 1 U c-1,2-Dichloroethene ND 0.0050 1 U 2-Hexanone ND 0.050 1 U 1,2-Dibromo-3-Chloropropane ND 0.010 1 U Naphthalene ND 5.0 100 U 1,2-Dibromoethane ND 0.0050 1 U n-Butylbenzene 0.20 0.0050 1 1,2-Dichlorobenzene ND 0.0050 1 U n-Propylbenzene 2,5 0.50 100 1,2-Dichloroethane ND 0.0050 1 U p-Isopropyltoluene 0.018 0.0050 1 1,2-Dichloropropane ND 0.0050 1 U sec-Butylbenzene 0.051 0.0050 1 1-1,2-Dichloropropane ND 0.0050 1 U Styrene ND 0.0050 1 U 1-1,3-Dichloropropene ND 0.0050 1 U tert-Butylbenzene ND 0.0050 1 U	1,2,4-Trichlorobenzene	ND	0.0050	1	U	Isopropylbenze	ne		0.12	0.0050	1	
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1,2-Dibromo-3-Chloropropane ND 0.010 1 U Naphthalene ND 5.0 100 U 1,2-Dibromoethane ND 0.0050 1 U n-Butylbenzene 0.20 0.0050 1 1,2-Dichlorobenzene ND 0.0050 1 U n-Propylbenzene 2,5 0.50 100 1,2-Dichloroethane ND 0.0050 1 U p-Isopropyltoluene 0.018 0.0050 1 1,2-Dichloropropane ND 0.0050 1 U sec-Butylbenzene 0.051 0.0050 1 1,2-Dichloropropane ND 0.0050 1 U Styrene ND 0.0050 1 U 1,3-Dichloropropene ND 0.0050 1 U tert-Butylbenzene ND 0.0050 1 U 1,3-Dichloropropene ND 0.0050 1 U Tetrachloroethene ND 0.0050 1 U 1,3-Dichloropropane ND 0.0050	1,3,5-Trimethylbenzene	2.2	0.50	100		Methylene Chlo	oride		ND	0.050	1	U
1,2-Dibromoethane ND 0.0050 1 U n-Butylbenzene 0.20 0.0050 1 1,2-Dichlorobenzene ND 0.0050 1 U n-Propylbenzene 2.5 0.50 100 1,2-Dichloroethane ND 0.0050 1 U p-Isopropyltoluene 0.018 0.0050 1 1,2-Dichloropropane ND 0.0050 1 U sec-Butylbenzene 0.051 0.0050 1 1,1,2-Dichloropropane ND 0.0050 1 U Styrene ND 0.0050 1 U 1,3-Dichloropropene ND 0.0050 1 U tert-Butylbenzene ND 0.0050 1 U 1,3-Dichloropropene ND 0.0050 1 U Tetrachloroethene ND 0.0050 1 U 1,3-Dichloropropane ND 0.0050 1 U Trichlorofluoromethane ND 0.0050 1 U 1,4-Dichlorobenzene ND 0.00	c-1,2-Dichloroethene	ND	0.0050	1	U	2-Hexanone			ND	0.050	1	U
1,2-Dichlorobenzene ND 0.0050 1 U n-Propylbenzene 2,5 0.50 100 1,2-Dichloroethane ND 0.0050 1 U p-Isopropyltoluene 0.018 0.0050 1 1,2-Dichloropropane ND 0.0050 1 U sec-Butylbenzene 0.051 0.0050 1 1,1,2-Dichloropropane ND 0.0050 1 U Styrene ND 0.0050 1 U 1,3-Dichloropropene ND 0.0050 1 U Tetrachloroethene ND 0.0050 1 U 1,3-Dichloropropane ND 0.0050 1 U Tetrachloroethene ND 0.0050 1 U 1,3-Dichloropropane ND 0.0050 1 U Trichloroethene ND 0.0050 1 U 1,3-Dichloropropene ND 0.0050 1 U Trichlorofluoromethane ND 0.050 1 U 1,4-Dichlorobenzene ND <td>1,2-Dibromo-3-Chloropropane</td> <td>ND</td> <td>0.010</td> <td>1</td> <td>U</td> <td>Naphthalene</td> <td></td> <td></td> <td>ND</td> <td>5.0</td> <td>100</td> <td>U</td>	1,2-Dibromo-3-Chloropropane	ND	0.010	1	U	Naphthalene			ND	5.0	100	U
1,2-Dichloroethane ND 0.0050 1 U p-Isopropyltoluene 0.018 0.0050 1 1,2-Dichloropropane ND 0.0050 1 U sec-Butylbenzene 0.051 0.0050 1 1,2-Dichloropthene ND 0.0050 1 U Styrene ND 0.0050 1 U c-1,3-Dichloropropene ND 0.0050 1 U tert-Butylbenzene ND 0.0050 1 U 1,3-Dichlorobenzene ND 0.0050 1 U Tetrachloroethene ND 0.0050 1 U 1,3-Dichloropropane ND 0.0050 1 U Trichloroethene ND 0.0050 1 U 1,3-Dichloropropene ND 0.0050 1 U Trichlorofluoromethane ND 0.0050 1 U 1,4-Dichlorobenzene ND 0.0050 1 U Vinyl Chloride ND 0.0050 1 U 2,2-Dichloropropane	1,2-Dibromoethane	ND	0.0050	1	U	n-Butylbenzene)		0.20	0.0050	1	
1,2-Dichloropropane ND 0.0050 1 U sec-Butylbenzene 0.051 0.0050 1 1,2-Dichloroethene ND 0.0050 1 U Styrene ND 0.0050 1 U c-1,3-Dichloropropene ND 0.0050 1 U tert-Butylbenzene ND 0.0050 1 U 1,3-Dichlorobenzene ND 0.0050 1 U Tetrachloroethene ND 0.0050 1 U 1,3-Dichloropropane ND 0.0050 1 U Trichloroethene ND 0.0050 1 U 1,3-Dichloropropene ND 0.0050 1 U Trichloroethene ND 0.0050 1 U 1,4-Dichlorobenzene ND 0.0050 1 U Vinyl Chloride ND 0.0050 1 U 2,2-Dichloropropane ND 0.0050 1 U Vinyl Chloride ND 0.0050 1 U	1,2-Dichlorobenzene	ND	0.0050	1	U	n-Propylbenzer	ne		2,5	0.50	100	
ND	1,2-Dichloroethane	ND	0.0050	1	U	p-Isopropyltolue	ene		0.018	0.0050	1	
c-1,3-Dichloropropene ND 0.0050 1 U tert-Butylbenzene ND 0.0050 1 U 1,3-Dichlorobenzene ND 0.0050 1 U Tetrachloroethene ND 0.0050 1 U 1,3-Dichloropropane ND 0.0050 1 U Trichloroethene ND 0.0050 1 U i-1,3-Dichloropropene ND 0.0050 1 U Trichlorofluoromethane ND 0.050 1 U 1,4-Dichlorobenzene ND 0.0050 1 U Vinyl Chloride ND 0.0050 1 U 2,2-Dichloropropane ND 0.0050 1 U ND 0.0050 1 U	1,2-Dichloropropane	ND	0.0050	1	U	sec-Butylbenze	ne		0.051	0.0050	1	
1,3-Dichlorobenzene ND 0.0050 1 U Tetrachloroethene ND 0.0050 1 U 1,3-Dichloropropane ND 0.0050 1 U Trichloroethene ND 0.0050 1 U 1,4-Dichloropropane ND 0.0050 1 U Trichlorofluoromethane ND 0.050 1 U 1,4-Dichloropropane ND 0.0050 1 U Vinyl Chloride ND 0.0050 1 U 2,2-Dichloropropane ND 0.0050 1 U ND ND 0.0050 1 U	t-1,2-Dichloroethene	ND	0.0050	1	U	Styrene			ND	0.0050	1	U
1,3-Dichloropropane ND 0.0050 1 U Trichloroethene ND 0.0050 1 U t-1,3-Dichloropropene ND 0.0050 1 U Trichlorofluoromethane ND 0.050 1 U 1,4-Dichlorobenzene ND 0.0050 1 U Vinyl Chloride ND 0.0050 1 U 2,2-Dichloropropane ND 0.0050 1 U	c-1,3-Dichloropropene	ND	0.0050	1	U	tert-Butylbenze	ne		ND	0.0050	1	U
1-1,3-Dichloropropene ND 0.0050 1 U Trichlorofluoromethane ND 0.050 1 U 1,4-Dichlorobenzene ND 0.0050 1 U Vinyl Chloride ND 0.0050 1 U 2,2-Dichloropropane ND 0.0050 1 U	1,3-Dichlorobenzene	ND	0.0050	1	U	Tetrachloroethe	ene		ND	0.0050	1	U
1,4-Dichlorobenzene ND 0.0050 1 U Vinyl Chloride ND 0.0050 1 U 2,2-Dichloropropane ND 0.0050 1 U	1,3-Dichloropropane	ND	0.0050	1	U	Trichloroethene	•		ND	0.0050	1	U
2,2-Dichloropropane ND 0.0050 1 U	t-1,3-Dichloropropene	ND	0.0050	1	U	Trichlorofluoron	nethane		ND	0.050	1	U
DEC (N/) Control Out	1,4-Dichlorobenzene	ND	0.0050	1	U	Vinyl Chloride			ND	0.0050	1	U
DEO (N) On the last of the las	2,2-Dichloropropane	ND	0.0050	1	U							
Surrogates: REC (%) Control Qual Surrogates: REC (%) Control Qual Limits Limits	Surrogates:	REC (%)	Control Limits	Qual		Surrogates:			REC (%)	Control Limits	Qu	<u>ıal</u>
1.4-Bromofluorobenzene 111 60-132 Dibromofluoromethane 103 63-141	1,4-Bromofluorobenzene	111	60-132			Dibromofluorom	nethane		103	63-141		
	1,2-Dichloroethane-d4	94							103	80-120		







Cardno ERI

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

Work Order No: Preparation:

Method:

Units:

01/20/12

12-01-1200

EPA 5030C

EPA 8260B

mg/kg

Page 2 of 3

Project:	ExxonMobil	79374/022735C
i ioject.	EVVOI II AIODII	13017/0221000

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	_	_		_

Client Sample Number			L	ab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/ I Analy		QC Batch ID	115-57
Method Blank			099-1	2-882-1,258	N/A	Solid	GC/MS XX	01/20/12	01/20 12:		120120L01	
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	Parameter			Result	<u>RL</u>	DF	Qual	
Benzene	ND	0.0050	1	U	2-Chlorotoluene	€		ND	0.0050	1	U	
Toluene	ND	0.0050	1	U	4-Chlorotoluene	Э		ND	0.0050	1	U	
Ethylbenzene	ND	0.0050	1	U	4-Methyl-2-Pen	tanone		ND	0.050	1	U	
Xylenes (total)	ND	0.0050	1	U	Acetone			ND	0.12	1	U	
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	U	Bromobenzene			ND	0.0050	1	U	
Tert-Butyl Alcohol (TBA)	ND	0.050	1	U	Bromochlorome	ethane		ND	0.0050	1	U	
Diisopropyl Ether (DIPE)	ND	0.010	1	Ü	Bromoform			ND	0.0050	1	U	
Ethyl-t-Butyl Ether (ETBE)	ND	0.010	1	U	Bromomethane			ND	0.025	1	U	
Tert-Amyl-Methyl Ether (TAME)	ND	0.010	1	Ū	Carbon Disulfid			ND	0.050	1	U	
1.1.1.2-Tetrachloroethane	ND	0.0050	1	U	Carbon Tetrach	loride		ND	0.0050	1	U	
1.1.1-Trichloroethane	ND	0.0050	1	U	Chlorobenzene			ND	0.0050	1	U	
1,1,2,2-Tetrachloroethane	ND	0.0050	1	Ū	Dibromochloror	nethane		ND	0.0050	1	U	
1.1.2-Trichloroethane	ND	0.0050	1	Ū	Chloroethane			ND	0.0050	1	U	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.050	1	Ū	Chloroform			ND	0.0050	1	U	
1,1-Dichloroethane	ND	0.0050	1	Ū	Chloromethane			ND	0.025	1	U	
1,1-Dichloroethene	ND	0.0050	1	Ū	Dibromomethan	ne		ND	0.0050	1	Ü	
1.1-Dichloropropene	ND	0.0050	1	Ū	Bromodichloron			ND	0.0050	1	U	
1,2,3-Trichlorobenzene	ND	0.010	1	Ū	Dichlorodifluoro	methane		ND	0.0050	1	Ū	
1,2,3-Trichloropropane	ND	0.0050	1	Ū	Hexachloro-1,3-			ND	0.10	1	Ü	
1,2,4-Trichlorobenzene	ND	0.0050	1	Ū	Isopropylbenzer			ND	0.0050	1	U	
1,2,4-Trimethylbenzene	ND	0.0050	1	Ū	2-Butanone			ND	0.050	1	U	
1,3,5-Trimethylbenzene	ND	0.0050	1	Ū	Methylene Chlo	ride		ND	0.050	1	Ū	
c-1,2-Dichloroethene	ND	0.0050	1	Ū	2-Hexanone			ND	0.050	1	Ū	
1,2-Dibromo-3-Chloropropane	ND	0.010	1	Ü	Naphthaiene			ND	0.050	1	Ü	
1.2-Dibromoethane	ND	0.0050	i	Ü	n-Butylbenzene			ND	0.0050	1	ū	
1.2-Dichlorobenzene	ND	0.0050	1	Ü	n-Propylbenzen			ND	0.0050	1	Ū	
1.2-Dichloroethane	ND	0.0050	1	Ŭ	p-Isopropyltolue			ND	0.0050	1	Ü	
1,2-Dichloropropane	ND	0.0050	1	Ü	sec-Butylbenzer			ND	0.0050	1	Ū	
t-1,2-Dichloroethene	ND	0.0050	1	Ü	Styrene			ND	0.0050	1	Ü	
c-1,3-Dichloropropene	ND	0.0050	1	Ü	tert-Butylbenzer	ne		ND	0.0050	1	Ū	
1,3-Dichlorobenzene	ND	0.0050	1	Ū	Tetrachloroethe			ND	0.0050	1	Ū	
1,3-Dichloropropane	ND	0.0050	1	Ŭ	Trichloroethene			ND	0.0050	1	Ü	
t-1,3-Dichloropropene	ND	0.0050	1	Ŭ	Trichlorofluorom	ethane		ND	0.050	1	ŭ	
1.4-Dichlorobenzene	ND	0.0050	i	Ŭ	Vinyl Chloride	101110110		ND	0.0050	1	Ü	
2,2-Dichloropropane	ND	0.0050	3	Ŭ	tingi omoneo				0.0000	,	_	
Surrogates:	REC (%)	Control	Qua	_	Surrogates:			REC (%)	Control Limits	Q	<u>ual</u>	
4. 4. D	101	<u>Limits</u> 60-132			Dibromofluorom	othana		105	63-141			
1,4-Bromofluorobenzene						eulane						
1,2-Dichloroethane-d4	94	62-146			Toluene-d8			100	80-120			







Cardno ERI

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

Work Order No: Preparation:

Method:

Units:

01/20/12

12-01-1200

EPA 5030C

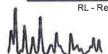
EPA 8260B

mg/kg

Project:	ExxonMobil.	79374/022735C
I IUICUL.		13314/0221330

Page 3	of 3	
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Client Sample Number				b Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared		Time yzed	QC Batch ID
Method Blank			099-12-	-882-1,263	3 N/A	Solid	GC/MS XX	01/24/12	01/2 13	4/12 :01	120124L02
<u>Parameter</u>	Result	<u>RL</u>	DF	Qual	<u>Parameter</u>			Result	<u>RL</u>	DF	Qual
Benzene	ND	0.50	100	U	2-Chlorotoluen	е		ND	0.50	100	U
Toluene	ND	0.50	100	U	4-Chlorotoluen	е		ND	0.50	100	U
Ethylbenzene	ND	0.50	100	U	4-Methyl-2-Per	ntanone		ND	5.0	100	U
Xylenes (total)	ND	0.50	100	U	Acetone			ND	12	100	U
Methyl-t-Butyl Ether (MTBE)	ND	0.50	100	U	Bromobenzene	;		ND	0.50	100	U
Tert-Butyl Alcohol (TBA)	ND	5.0	100	U	Bromochlorom	ethane		ND	0.50	100	U
Diisopropyl Ether (DIPE)	ND	1.0	100	U	Bromoform			ND	0.50	100	U
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	100	U	Bromomethane)		ND	2.5	100	U
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	100	U	Carbon Disulfic	de		ND	5.0	100	U
1,1,1,2-Tetrachloroethane	ND	0:50	100	U	Carbon Tetrach	nloride		ND	0.50	100	U
1,1,1-Trichloroethane	ND	0.50	100	U	Chlorobenzene	:		ND	0.50	100	U
1,1,2,2-Tetrachloroethane	ND	0.50	100	U	Dibromochloror	methane		ND	0.50	100	U
1,1,2-Trichloroethane	ND	0.50	100	U	Chloroethane			ND	0.50	100	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	5.0	100	U	Chloroform			ND	0.50	100	U
1,1-Dichloroethane	ND	0.50	100	U	Chloromethane	+		ND	2.5	100	U
1,1-Dichloroethene	ND	0.50	100	U	Dibromomethan	ne		ND	0.50	100	U
1,1-Dichloropropene	ND	0.50	100	U	Bromodichloror	nethane		ND	0.50	100	U
1,2,3-Trichlorobenzene	ND	1.0	100	U	Dichlorodifluoro	methane		ND	0.50	100	U
1,2,3-Trichloropropane	ND	0.50	100	U	Hexachloro-1,3	-Butadiene		ND	10	100	U
1,2,4-Trichlorobenzene	ND	0.50	100	U	Isopropylbenze	ne		ND	0.50	100	U
1,2,4-Trimethylbenzene	ND	0.50	100	U	2-Butanone			ND	5.0	100	U
1,3,5-Trimethylbenzene	ND	0.50	100	U	Methylene Chlo	ride		ND	5.0	100	U
c-1,2-Dichloroethene	ND	0.50	100	U	2-Hexanone			ND	5.0	100	U
1,2-Dibromo-3-Chloropropane	ND	1.0	100	U	Naphthalene			ND	5.0	100	U
1,2-Dibromoethane	ND	0.50	100	U	n-Butylbenzene	1		ND	0.50	100	U
1,2-Dichlorobenzene	ND	0.50	100	U	n-Propylbenzen	e		ND	0.50	100	U
1,2-Dichloroethane	ND	0.50	100	U	p-Isopropyltolue	ene		ND	0.50	100	U
1,2-Dichloropropane	ND	0.50	100	U	sec-Butylbenze	ne		ND	0.50	100	U
t-1,2-Dichloroethene	ND	0.50	100	U	Styrene			ND	0.50	100	U
c-1,3-Dichloropropene	ND	0.50	100	U	tert-Butylbenzer	ne		ND	0.50	100	U
1,3-Dichlorobenzene	ND	0.50	100	U	Tetrachloroethe	ne		ND	0.50	100	U
1,3-Dichloropropane	ND	0.50	100	U	Trichloroethene			ND	0.50	100	U
t-1,3-Dichloropropene	ND	0.50	100	U	Trichlorofluorom	nethane		ND	5.0	100	U
1,4-Dichlorobenzene	ND	0.50	100	U	Vinyl Chloride			ND	0.50	100	U
2,2-Dichloropropane	ND	0.50	100	U	-						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:			REC (%)	Control Limits	Qu	<u>ıal</u>
1.4-Bromofluorobenzene	100	60-132			Dibromofluorom	ethane		101	63-141		
1,2-Dichloroethane-d4	93	62-146			Toluene-d8			100	80-120		
, District out latte at		J_ 110			, Siderio-do				30 120		



DF - Dilution Factor ,





Cardno ERI

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

01/20/12

Work Order No:

12-01-1200

Preparation:

EPA 3050B

Method:

EPA 6010B

Project: ExxonMobil 79374/022735C

Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-SP1 (1-4)		12-01-1200-5-A	01/18/12 11:40	Solid	ICP 5300	01/20/12	17:54	120120L04
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>			
Lead	37.6	0.500	1		mg/kg			
Method Blank		097-01-002-15,59	6 N/A	Solid	ICP 5300	01/20/12	01/21/12 12:06	120120L04
Parameter	<u>Result</u>	RL	<u>DE</u>	Qual	<u>Units</u>			
_ead	ND	0.500	1	U	mg/kg			







Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received: Work Order No: Preparation: Method: 01/20/12 12-01-1200 EPA 3050B EPA 6010B

Quality Control Sample ID	Matrix	Matrix Instrument		Date Prepared			ISD Batch lumber
12-01-1210-2	Solid	ICP 5300	01/20/12		01/21/12	120120804	
<u>Parameter</u>	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	25.00	179	91	75-125	27	0-20	HX,BA





alscience nvironmental aboratories, Inc.

Quality Control - PDS / PDSD

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

12-01-1200 **EPA 3050B EPA 6010B**

Quality Control Sample ID		Matrix	Instrument	Date Prepared	Date Analyzed		DS / PDSD_Batch Number	
12-01-1210-2		Solid ICP 5300		01/20/12	01/21/12		120120S04	
<u>Parameter</u>	SPIKE ADDED	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers	
Lead	25.00	91	94	75-125	1	0-20		







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

Date Received: Work Order No: Preparation: Method:

01/20/12 12-01-1200 **EPA 3550B** EPA 8015B (M)

Quality Control Sample ID	Matrix	Matrix Instrument		Date Prepared			/ISD Batch lumber
12-01-1199-8	Solid	GC 46	01/23/12		01/23/12	120123502	
<u>Parameter</u>	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	<u>RPD</u>	RPD CL	Qualifiers
TPH as Motor Oil	400.0	106	108	64-130	2	0-15	







Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received: Work Order No: Preparation: Method: 01/20/12 12-01-1200 EPA 3550B EPA 8015B (M)

Quality Control Sample ID	Matrix	Matrix Instrument		Date Prepared			ISD Batch lumber
12-01-1199-8	Solid	GC 46	01/23/12		01/23/12	120123\$01	
<u>Parameter</u>	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Diesel	400.0	106	110	64-130	4	0-15	







Cardno ERI

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

Work Order No:

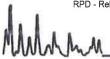
Preparation: Method:

01/20/12 12-01-1200 **EPA 5030C**

EPA 8260B

Quality Control Sample ID	Matrix			ate pared	Date Analyzed	MS/MSD Batch Number	
12-01-1078-5	Solid	GC/MS XX	(01/2	01/20/12		120120801	
<u>Parameter</u>	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	<u>RPD</u>	RPD CL	Qualifiers
Benzene	0.05000	104	97	61-127	7	0-20	
Toluene	0.05000	104	98	63-123	6	0-20	
Ethylbenzene	0.05000	97	91	57-129	7	0-22	
Methyl-t-Butyl Ether (MTBE)	0.05000	123	116	57-123	6	0-21	
Tert-Butyl Alcohol (TBA)	0.2500	98	91	30-168	7	0-34	
Diisopropyl Ether (DIPE)	0.05000	114	107	57-129	6	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	116	110	55-127	5	0-20	
Tert-Arnyl-Methyl Ether (TAME)	0.05000	115	109	58-124	5	0-20	
Ethanol	0.5000	99	144	17-167	36	0-47	
1,1-Dichloroethene	0.05000	116	106	47-143	9	0-25	
1,2-Dibromoethane	0.05000	104	97	64-124	7	0-20	
1,2-Dichlorobenzene	0.05000	90	83	35-131	8	0-25	
1,2-Dichloroethane	0.05000	97	91	80-120	6	0-20	
Carbon Tetrachloride	0.05000	112	108	51-135	4	0-29	
Chlorobenzene	0.05000	95	88	57-123	7	0-20	
Trichloroethene	0.05000	184	172	44-158	7	0-20	HX
Vinyl Chloride	0.05000	107	95	49-139	12	0-47	









Cardno ERI 601 North McDowell Blvd.

Petaluma, CA 94954-2312

Date Received: Work Order No: Preparation: Method: 01/20/12 12-01-1200 EPA 5030C EPA 8260B

Quality Control Sample ID	Matrix	Instrumen		Date Prepared		MS/MSD Batch Number	
12-01-1343-2	Solid	GC/MS XX	C 01/2	3/12	01/24/12	120124S01	
Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REÇ CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	101	106	61-127	5	0-20	
Toluene	0.05000	102	108	63-123	5	0-20	
Ethylbenzene	0.05000	91	97	57-129	6	0-22	
Methyl-t-Butyl Ether (MTBE)	0.05000	112	117	57-123	4	0-21	
Tert-Butyl Alcohol (TBA)	0.2500	88	93	30-168	5	0-34	
Diisopropyl Ether (DIPE)	0.05000	106	113	57-129	6	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	106	114	55-127	8	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	107	112	58-124	5	0-20	
Ethanol	0.5000	83	82	17-167	0	0-47	
1,1-Dichloroethene	0.05000	97	102	47-143	5	0-25	
1,2-Dibromoethane	0.05000	96	100	64-124	4	0-20	
1,2-Dichlorobenzene	0.05000	87	92	35-131	5	0-25	
1,2-Dichloroethane	0.05000	94	97	80-120	3	0-20	
Carbon Tetrachloride	0.05000	109	122	51-135	12	0-29	
Chlorobenzene	0.05000	90	96	57-123	6	0-20	
Trichloroethene	0.05000	99	106	44-158	6	0-20	
Vinyl Chloride	0.05000	95	104	49-139	9	0-47	







Cardno ERI

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

Work Order No:

Preparation:

12-01-1200

N/A

EPA 3050B

Method:

EPA 6010B

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-01-002-15,596	Solid	ICP 5300	01/20/12	01/21/12	120120L04

<u>Parameter</u>	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	25.00	108	107	80-120	0	0-20	







Cardno ERI 601 North McDowell Blvd.

Petaluma, CA 94954-2312

Date Received:

Work Order No:

Preparation:

Method:

N/A 12-01-1200

EPA 3550B EPA 8015B (M)

Quality Control Sample ID	Matrix	Instrument			ſu	LCS/LCSD Batch Number	
099-12-254-2,319	Solid	GC 46				120123B02	
<u>Parameter</u>	SPIKE A	DDED LCS %RE	C LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Motor Oil	400	.0 113	113	75-123	0	0-12	







Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received: Work Order No: Preparation: Method: N/A 12-01-1200 EPA 3550B EPA 8015B (M)

Quality Control Sample ID	Matrix	Matrix Instrument		Date Prepared	Date Analyzed		LCS/LCSD Batch Number	
099-12-275-4,348	Solid	GC 4	16	01/23/12	01/23/12		120123B01	
Parameter	SPIKE A	DDED LC	S %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Diesel	400	.0	112	122	75-123	9	0-12	







Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received: Work Order No: Preparation: Method: N/A 12-01-1200 EPA 5030C EPA 8015B (M)

Quality Control Sample ID	Matrix	Matrix Instrument		Date Analyzed		LCS/LCSD Batch Number	
099-14-571-154	Solid	GC 4	C 4 01/20/12			120120B02	
Parameter	SPIKE A	DDED LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	10.0	0 97	97	70-124	0	0-18	







Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received: Work Order No: Preparation: Method: N/A 12-01-1200 EPA 5030C EPA 8260B

Project: ExxonMobil 79374/022735C

Quality Control Sample ID	Matrix	Instrument	Date Prepared			LCS/LCSD Batch Number		h
099-12-882-1,258	Solid	GC/MS XX	01/20/1	2 01/2	20/12	120120L01		
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	101	103	78-120	71-127	2	0-20	
Toluene	0.05000	103	104	77-120	70-127	1	0-20	
Ethylbenzene	0.05000	95	95	76-120	69-127	0	0-20	
Methyl-t-Butyl Ether (MTBE)	0.05000	120	124	77-120	70-127	3	0-20	LQ,RU
Tert-Butyl Alcohol (TBA)	0.2500	94	91	68-122	59-131	4	0-20	
Diisopropyl Ether (DIPE)	0.05000	110	113	78-120	71-127	2	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	113	116	78-120	71-127	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	113	117	75-120	68-128	3	0-20	
Ethanol	0.5000	82	70	56-140	42-154	16	0-20	
1,1-Dichloroethene	0.05000	98	98	74-122	66-130	0	0-20	
1,2-Dibromoethane	0.05000	103	106	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	0.05000	92	92	75-120	68-128	0	0-20	
1,2-Dichloroethane	0.05000	96	98	80-120	73-127	2	0-20	
Carbon Tetrachloride	0.05000	118	119	49-139	34-154	1	0-20	
Chlorobenzene	0.05000	93	94	79-120	72-127	0	0-20	
Trichloroethene	0.05000	101	103	80-120	73-127	2	0-20	
Vinyl Chloride	0.05000	105	104	68-122	59-131	1	0-20	

o Contonis

Total number of LCS compounds: 17
Total number of ME compounds: 1
Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass





Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received: Work Order No: Preparation: Method: N/A 12-01-1200 EPA 5030C EPA 8260B

Project: ExxonMobil 79374/022735C

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date alyzed	LCS	S/LCSD Bato Number	:h
099-12-882-1,263	Solid	GC/MS XX	01/24/1	2 01/2	4/12	1	20124L02	
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	100	100	78-120	71-127	0	0-20	
Toluene	0.05000	102	102	77-120	70-127	0	0-20	
Ethylbenzene	0.05000	90	90	76-120	69-127	1	0-20	
Methyl-t-Butyl Ether (MTBE)	0.05000	121	117	77-120	70-127	3	0-20	LQ,RU
Tert-Butyl Alcohol (TBA)	0.2500	86	88	68-122	59-131	3	0-20	
Diisopropyl Ether (DIPE)	0.05000	111	110	78-120	71-127	1	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	114	112	78-120	71-127	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	114	111	75-120	68-128	2	0-20	
Ethanol	0.5000	70	76	56-140	42-154	8	0-20	
1,1-Dichloroethene	0.05000	98	98	74-122	66-130	0	0-20	
1,2-Dibromoethane	0.05000	99	97	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	0,05000	87	87	75-120	68-128	0	0-20	
1,2-Dichloroethane	0.05000	95	92	80-120	73-127	4	0-20	
Carbon Tetrachloride	0.05000	119	121	49-139	34-154	2	0-20	
Chlorobenzene	0.05000	90	90	79-120	72-127	0	0-20	
Trichloroethene	0.05000	99	99	80-120	73-127	0	0-20	
Vinyl Chloride	0.05000	97	97	68-122	59-131	0	0-20	

rn to Centents

Total number of LCS compounds: 17
Total number of ME compounds: 1
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass





Glossary of Terms and Qualifiers



Work Order Number: 12-01-1200

Qualifier	Definition
AZ	Surrogate compound recovery was out of control due to matrix interference. The
	associated method blank surrogate spike compound was in control and, therefore, the
	sample data was reported without further clarification.
В	Analyte was present in the associated method blank.
BA	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD
	was in control and, therefore, the sample data was reported without further clarification.
BB	Spike recovery and RPD control limits do not apply resulting from the parameter
	concentration in the sample exceeding the spike concentration by a factor of four or
BU"	greater.
DF	Sample analyzed after holding time expired. Reporting limits elevated due to matrix interferences.
E	·
ET	Concentration exceeds the calibration range.
GE	Sample was extracted past end of recommended max. holding time.
GE	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and.
	hence, the associated sample data was reported without further clarification.
HD	Chromat. profile inconsistent with pattern(s) of ref. fuel stnds.
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 and/or LCSD was in control
	and, therefore, the sample data was reported without further clarification.
IL	Relative percent difference out of control.
J	Analyte was detected at a concentration below the reporting limit and above the
	laboratory method detection limit. Reported value is estimated.
LD	Analyte presence was not confirmed by second column or GC/MS analysis.
LP	The LCS and/or LCSD recoveries for this analyte were above the upper control limit. The
	associated sample was non-detected. Therefore, the sample data was reported without
LQ	further clarification. LCS recovery above method control limits.
LR	LCS recovery above method control limits.
ND	Parameter not detected at the indicated reporting limit.
QO	Compound did not meet method-described identification guidelines. Identification was
QO	based on additional GC/MS characteristics.
RU	LCS/LCSD Recovery Percentage is within Marginal Exceedance (ME) Control Limit
	range.
SG	A silica gel cleanup procedure was performed.
SN	See applicable analysis comment.
U	Undetected at detection limit.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not
	corrected for % moisture. All QC results are reported on a wet weight basis.

MPN - Most Probable Number



Calscie .ce Environmental Laboratories, Inc.

7440 Lincoln Way

Garden Grove, CA 92841

P 3: 714-895-5494

Fax: 714-894-7501



Consultant Name	: Cardno	ERI															Ac	coun	t #:	NA					PO	课:			Direct	: Bill 1	to C	ardn	10 EF	રા
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5-SP1(1-4) Profile	1.18.12	1140	4		X		П		T	Т			x	T	Г	Т	П	X	T	П	X	X	1	_	1	_	1	X	_	Н	112	-to	X	
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Page 24 of 26



Package 1 of 1

Send Label To Printer

Print All

Edit Shipment

Finish

LABEL INSTRUCTIONS:

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

STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.

STEP 2 - Fold this page in half.

STEP 3 - Securely attach this label to your package, do not cover the barcode.

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

ADDITIONAL OPTIONS:

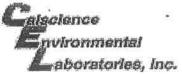
Send Label Via Email

Create Return Label

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all the service terms and conditions described in this section. Our liability for loss or damage to any package is limited to your actual damages or \$100 whichever is less, unless you pay for and declare a higher authorized value. If you declare a higher value and pay the additional charge, our liability will be the lesser of your declared value or the actual value of your loss or damage. In any event, we will not be liable for any damage, whether direct, incidental, special or consequential, in excess of the declared value of a shipment whether or not we had knowledge that such damage might be incurred including but not limited to loss of income or profit. We will not be liable for your acts or omissions, including but not limited to improper or insufficient packaging, securing, marking or addressing. Also, we will not be liable if you or the recipient violates any of the terms of our agreement. We will not be liable for loss, damage or delay caused by events we cannot control, including but not limited to acts of God, perils of the air, weather conditions, act of public enemies, war, strikes, or civil commotion. The highest declared value for our GSO Priority Letter or GSO Priority Package is \$500. For other shipments the highest declared value is \$10,000 unless your package contains items of "extraordinary value", in which case the highest declared value we allow is \$500. Items of "extraordinary value" include, but or not limited to, artwork, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.





WORK ORDER #: 12-01- 1 2 0 0

Cooler ___ of SAMPLE RECEIPT FORM CLIENT: Cardno ERI DATE: 01/20/12 TEMPERATURE: Thermometer ID: SC3 (Criteria: 0.0 °C - 6.0 °C, not frozen) Temperature 1.3 °C - 0.3 °C (CF) = 1.0 °C☑ Blank □ Sample ☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____). ☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling. ☐ Received at ambient temperature, placed on ice for transport by Courier. Initial: 12 L Ambient Temperature: ☐ Air ☐ Filter **CUSTODY SEALS INTACT:** 10, 6 Z Cooler □ Not Present ☐ No (Not Intact) □ N/A Initial: Not Present Initial: ☐ No (Not Intact) □ Sample SAMPLE CONDITION: Yes No N/A Chain-Of-Custody (COC) document(s) received with samples..... COC document(s) received complete..... ☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels. ☐ Not relinquished. ☐ No date/time relinquished. ☐ No analysis requested. Sampler's name indicated on COC..... Sample container label(s) consistent with COC...... Sample container(s) intact and good condition..... Proper containers and sufficient volume for analyses requested..... Analyses received within holding time..... pH / Res. Chlorine / Diss. Sulfide / Diss. Oxygen received within 24 hours... □ 2 Ø Proper preservation noted on COC or sample container..... □ ☐ Unpreserved vials received for Volatiles analysis Volatile analysis container(s) free of headspace...... □ **2** Tedlar bag(s) free of condensation..... **Z CONTAINER TYPE:** Solid: □4ozCGJ □8ozCGJ □16ozCGJ □Śleeve (Ś) □EnCores® □TerraCores® □ Water: □VOA □VOAh □VOAna2 □125AGB □125AGBh □125AGBp □1AGB □1AGBna2 □1AGBs □500AGB □500AGJ □500AGJs □250AGB □250CGB □250CGBs □1PB □1PBna □500PB

□250PB □250PBn □125PB □125PBznna □100PJ □100PJna₂ □ □ □

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

Air: ☐Tedlar® ☐Summa® Other: ☐_____ Trip Blank Lot#:____ Labeled/Checked by: 5

Preservative: h: HCL n: HNO3 na2:Na2S2O3 na: NaOH p: H3PO4 s: H2SO4 u: Ultra-pure znna: ZnAc2+NaOH f: Filtered Scanned by:

Reviewed by:

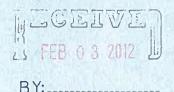




CALSCIENCE

WORK ORDER NUMBER: 12-01-1199

The difference is service





AIR SOIL WATER MARINE CHEMISTRY

Analytical Report For

Client: Cardno ERI

Client Project Name: ExxonMobil 79374/022735C

Attention: Paula Sime

601 North McDowell Blvd. Petaluma, CA 94954-2312

Cecile & ex Sain

Approved for release on 02/2/2012 by: Cecile deGuia Project Manager

oject Manager

ResultLink ▶

Email your PM >

Calscience Environmental Laboratories certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety. Note that the Chain-of-Custody Record and Sample Receipt Form are integral parts of this report.



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Work Order Number: 12-01-1199

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Cardno ERI

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

Work Order No: Preparation:

Method:

01/20/12

12-01-1199 EPA 3550B

EPA 8015B (M)

Project: ExxonMobil 79374/022735C

Page 1 of 3

Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-11.5-SVE1		12-01-1199-1-A	01/17/12 14:10	Solid	GC 46	01/23/12	01/23/12 19:52	120123B02
Parameter	Result	RL	DF	Qual	Units			
TPH as Motor Oil	ND	25	1	SG,U	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	127	61-145						
S-8.5-SVE1		12-01-1199-2-A	01/17/12 14:02	Solid	GC 46	01/23/12	01/23/12 20:08	120123B02
Parameter	Result	RL	DE	Qual	Units			
TPH as Motor Oil	ND	25	1	SG,U	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	114	61-145						
S-15-SVE3		12-01-1199-3-A	01/17/12 13:19	Solid	GC 46	01/23/12	01/23/12 20:23	120123B02
Parameter	Result	<u>RL</u>	<u>DF</u>	Qual	Units			
TPH as Motor Oil	ND	25	1	SG,U	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	125	61-145						
S-12.5-SVE3		12-01-1199-4-A	01/17/12 13:15	Solid	GC 46	01/23/12	01/23/12 20:38	120123B02
Parameter Parameter	Result	RL	DF	Qual	<u>Units</u>			
TPH as Motor Oil	57	25	1	SG,HD	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	112	61-145						



RL - Reporting Limit

DF - Dilution Factor

Qual - Qualifiers





Cardno ERI

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

Work Order No: Preparation:

Method:

01/20/12 12-01-1199

EPA 3550B

od: EPA 8015B (M)

Project: ExxonMobil 79374/022735C

Page 2 of 3

Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-14-SVE2		12-01-1199-5-A	01/17/12 12:20	Solid	GC 46	01/23/12	01/23/12 20:53	120123B02
Parameter	Result	<u>RL</u>	<u>DF</u>	Qual	Units			
TPH as Motor Oil	ND	25	1	SG,U	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	118	61-145						
S-10-SVE2		12-01-1199-6-A	01/17/12 12:15	Solid	GC 46	01/23/12	01/23/12 21:09	120123B02
Parameter	<u>Result</u>	<u>RL</u>	<u>DF</u>	Qual	Units			
PH as Motor Oil	53	25	1	SG,HD	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	112	61-145						
S-10-AS1		12-01-1199-7-A	01/18/12 09:44	Solid	GC 46	01/23/12	01/24/12 09:22	120123B02
'arameter	<u>Result</u>	<u>RL</u>	DF	Qual	Units			
PH as Motor Oil	ND	25	1	SG,U	mg/kg			
urrogates:	REC (%)	Control Limits		Qual				
ecachlorobiphenyl	110	61-145						
S-14.5-MW3A		12-01-1199-8-A	01/18/12 08:58	Solid	GC 46	01/23/12	01/23/12 21:54	120123B02
arameter	Result	RL	DF	Qual	<u>Units</u>			
PH as Motor Oil	ND	25	1	SG,U	mg/kg			
urrogates:	REC (%)	Control Limits		Qual				
ecachlorobiphenyl	112	61-145						



DF - Dilution Factor

Qual - Qualifiers







Cardno ERI

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

Work Order No:

Preparation:

Method:

01/20/12

12-01-1199

EPA 3550B

EPA 8015B (M)

Project: ExxonMobil 79374/022735C

Page 3 of 3

Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-8-MW3A		12-01-1199-9-A	01/18/12 08:45	Solid	GC 46	01/23/12	01/23/12 21:39	120123B02
<u>Parameter</u>	Result	RL	DF	Qual	<u>Units</u>			
TPH as Motor Oil	ND	25	1	SG,U	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	108	61-145						
Method Blank		099-12-254-2,319	N/A	Solid	GC 46	01/23/12	01/23/12 17:35	120123B02
Parameter	Result	RL	<u>DE</u>	Qual	<u>Units</u>			
TPH as Motor Oil	ND	25	1	U	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				







Cardno ERI

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

Work Order No:

Preparation:

Method:

01/20/12

12-01-1199 EPA 3550B

EPA 8015B (M)

Project: ExxonMobil 79374/022735C

Page 1 of 3

Project. Exxonivioui 7.	331410221330						1 0	age 1 01 3
Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-11.5-SVE1		12-01-1199-1-A	01/17/12 14:10	Solid	GC 46	01/23/12	01/23/12 19:52	120123B01
<u>Parameter</u>	Result	RL	<u>DF</u>	Qual	<u>Units</u>			
TPH as Diesel	ND	5.0	1	SG,U	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	127	61-145						
S-8.5-SVE1		12-01-1199-2-A	01/17/12 14:02	Solid	GC 46	01/23/12	01/23/12 20:08	120123B01
Parameter	Result	RL	<u>DF</u>	Qual	<u>Units</u>			
TPH as Diesel	87	5.0	1	HD,SG	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	114	61-145						
S-15-SVE3		12-01-1199-3-A	01/17/12 13:19	Solid	GC 46	01/23/12	01/23/12 20:23	120123B01
Paramete <u>r</u>	Result	<u>RL</u>	DF	Qual	Units			
TPH as Diesel	ND	5.0	1	SG,U	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	125	61-145						
S-12.5-SVE3		12-01-1199-4-A	01/17/12 13:15	Solid	GC 46	01/23/12	01/23/12 20:38	120123B01
Parameter	Result	RL	DE	Qual	<u>Units</u>			
TPH as Diesel	760	5.0	1	HD,SG	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	112	61-145						

PL - Reporting Limit

DF - Dilution Factor

Qual - Qualifier







Cardno ERI

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

Work Order No: Preparation:

Method:

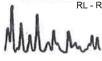
01/20/12 12-01-1199

EPA 3550B EPA 8015B (M)

Project: ExxonMobil 79374/022735C

Page 2 of 3

Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-14-SVE2		12-01-1199-5-A	01/17/12 12:20	Solid	GC 46	01/23/12	01/23/12 20:53	120123B01
Parameter	Result	RL	DF	Qual	Units			
TPH as Diesel	ND	5.0	1	SG,U	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	118	61-145						
S-10-SVE2		12-01-1199-6-A	01/17/12 12:15	Solid	GC 46	01/23/12	01/23/12 21:09	120123B01
<u>Parameter</u>	Result	RL	DE	Qual	Units			
TPH as Diesel	37	5.0	1	HD,SG	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	112	61-145						
S-10-AS1		12-01-1199-7-A	01/18/12 09:44	Solid	GC 46	01/23/12	01/24/12 09:22	120123B01
<u>Parameter</u>	Result	RL	DF	Qual	<u>Units</u>			
TPH as Diesel	800	5.0	1	HD,SG	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	110	61-145						
S-14.5-MW3A		12-01-1199-8-A	01/18/12 08:58	Solid	GC 46	01/23/12	01/23/12 21:54	120123B01
Parameter	Result	RL	DE	Qual	Units			
TPH as Diesel	ND	5.0	1	SG,U	mg/kg			
Surrogates;	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	112	61-145						



- Reporting Limit

DF - Dilution Factor ,

Qual - Qualifiers

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









Cardno ERI

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

Work Order No:

Preparation:

Method:

01/20/12

12-01-1199 EPA 3550B

EPA 8015B (M)

Project: ExxonMobil 79374/022735C

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Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-8-MW3A		12-01-1199-9-A	01/18/12 08:45	Solid	GC 46	01/23/12	01/23/12 21:39	120123B01
Parameter	Result	RL	<u>DF</u>	Qual	Units			
TPH as Diesel	ND	5.0	1	SG,U	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	108	61-145						
Method Blank		099-12-275-4,348	N/A	Solid	GC 46	01/23/12	01/23/12 17:35	120123B01
<u>Parameter</u>	Result	RL	DF	Qual	<u>Units</u>			
TPH as Diesel	ND	5.0	1	U	mg/kg			
Surrogates:	<u>REC (%)</u>	Control Limits		Qual				
Decachlorobiphenyl	114	61-145						



g Limit DF - Dilution Factor

Qual - Qualifiers





Cardno ERI

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

Work Order No:

Preparation:

Method:

01/20/12

12-01-1199

EPA 5030C

EPA 8015B (M)

Project: ExxonMobil 79374/022735C

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Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-11.5-SVE1		12-01-1199-1-A	01/17/12 14:10	Solid	GC 4	01/20/12	01/21/12 00:03	120120B01
Parameter	Result	RL	DF	Qual	Units			
TPH as Gasoline	18	0.50	1		mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
1,4-Bromofluorobenzene - FID	92	42-126						
S-8.5-SVE1		12-01-1199-2-A	01/17/12 14:02	Solid	GC 4	01/24/12	01/24/12 17:58	120124B02
Parameter	Result	RL	DF	Qual	Units			
TPH as Gasoline	480	40	80	HD	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
1,4-Bromofluorobenzene - FID	104	42-126						
S-15-SVE3		12-01-1199-3-A	01/17/12 13:19	Solid	GC 4	01/20/12	01/20/12 22:30	120120B01
Parameter	Result	RL	DF	Qual	Units			
TPH as Gasoline	ND	0.50	1	U	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
1,4-Bromofluorobenzene - FID	72	42-126						
S-12.5-SVE3		12-01-1199-4-A	01/17/12 13:15	Solid	GC 4	01/24/12	01/24/12 18:29	120124B02
Parameter	Result	RL	DE	Qual	<u>Units</u>			
ΓPH as Gasoline	1900	40	80	HD	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
1,4-Bromofluorobenzene - FID	93	42-126						



RL - Reporting Limit ,

DF - Dilution Factor ,

Qual - Qualifiers

Robbin to Contends





Cardno ERI

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

Work Order No:

Preparation:

Method:

01/20/12

12-01-1199

EPA 5030C

EPA 8015B (M)

Project: ExxonMobil 79374/022735C

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1 Tojoot: Exxeminosii Too	. 110221000							190 2 01 0
Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-14-SVE2		12-01-1199-5-A	01/17/12 12:20	Solid	GC 4	01/20/12	01/20/12 21:59	120120B01
<u>Parameter</u>	Result	RL	<u>DF</u>	Qual	Units			
TPH as Gasoline	ND	0.50	1.	U	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
1,4-Bromofluorobenzene - FID	73	42-126						
S-10-SVE2		12-01-1199-6-A	01/17/12 12:15	Solid	GC 4	01/24/12	01/24/12 19:00	120124B02
Parameter	Result	<u>RL</u>	DF	Qual	<u>Units</u>			
TPH as Gasoline	390	40	80	HD	mg/kg			
Surrogates:	<u>REC (%)</u>	Control Limits		Qual				
1,4-Bromofluorobenzene - FID	84	42-126						
S-10-AS1		12-01-1199-7-A	01/18/12 09:44	Solid	GC 4	01/24/12	01/24/12 19:31	120124B02
Parameter	Result	RL	<u>DF</u>	Qual	Units			
TPH as Gasoline	2900	40	80	Store	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
1,4-Bromofluorobenzene - FID	113	42-126						
S-14.5-MW3A		12-01-1199-8-A	01/18/12 08:58	Solid	GC 4	01/20/12	01/20/12 23:01	120120B01
Parameter	Result	RL	DF	Qual	<u>Units</u>			
FPH as Gasoline	ND	0.50	1	U	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
,4-Bromofluorobenzene - FID	75	42-126						



DF - Dilution Factor ,

Qual - Qualifiers







Cardno ERI

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

Work Order No:

Preparation:

01/20/12 12-01-1199

EPA 5030C

Method:

EPA 8015B (M)

Project: ExxonMobil 79374/022735C

Page 3 of 3

Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-8-MW3A		12-01-1199-9-A	01/18/12 08:45	Solid	GC 4	01/20/12	01/20/12 23:32	120120B01
Parameter	Result	RL	DF	Qual	<u>Units</u>			
TPH as Gasoline	ND	0.50	1	U	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
1,4-Bromofluorobenzene - FID	74	42-126						
Method Blank		099-14-571-153	N/A	Solid	GC 4	01/20/12	01/20/12 12:44	120120B01
Parameter	Result	RL	DF	Qual	Units			
TPH as Gasoline	ND	0.50	1	U	mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
1,4-Bromofluorobenzene - FID	76	42-126						
Method Blank		099-14-571-156	N/A	Solid	GC 4	01/24/12	01/24/12 15:25	120124B02
Parameter	Result	<u>RL</u>	DE	Qual	Units			
PH as Gasoline	ND ND	4.0	8	U	mg/kg			
urrogates;	<u>REC (%)</u>	Control Limits		Qual				
,4-Bromofluorobenzene - FID	78	42-126						







Cardno ERI

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

01/20/12

Work Order No:

12-01-1199 EPA 5030C

Preparation: Method:

EPA 8260B

Units:

PA 8260B mg/kg

Project: ExxonMobil 79374/022735C

Page 1 of 4

80-120

Project: Exxoniviobil /9	3374/02273	55C								Pa	ge 1 of 4
Client Sample Number				ab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared		Time yzed	QC Batch ID
S-11.5-SVE1			12-01-	1199-1-A	01/17/12 14:10	Solid	GC/MS UU	01/20/12		3/12 :46	120123L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	DF	Qual
Benzene	ND	0.50	100	U	Diisopropyl Eth	ner (DIPE)		ND	0.010	1	U
Toluene	0.010	0.0050	1		Ethyl-t-Butyl E	ther (ETBE	Ξ)	ND	0.010	1	U
Ethylbenzene	0.084	0.0050	1		Tert-Amyl-Met	hyl Ether (*	TAME)	ND	0.010	1	U
Xylenes (total)	0.11	0.0050	1		1,2-Dibromoet	nane		ND	0.0050	1	U
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	U	1,2-Dichloroeth	nane		ND	0.0050	1	U
Tert-Butyl Alcohol (TBA)	ND	0.050	1	U							
Surrogates:	REC (%)	Control Limits	Qua	<u>l</u>	Surrogates:			REC (%)	Control Limits	<u>C</u>	Qual
1,4-Bromofluorobenzene	109	60-132			Dibromofluoror	nethane		95	63-141		
1,2-Dichloroethane-d4	110	62-146			Toluene-d8			122	80-120		AZ
S-8.5-SVE1			12-01-	1199-2-A	01/17/12 14:02	Solid	GC/MS UU	01/20/12	01/2: 16:		120123L02
Comment(s): -BH Reporting lim Parameter	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	<u>DF</u>	Qual
Benzene	ND	0.50	100	U	Diisopropyl Eth	er (DIPE)		ND	1.0	100	U
Toluene	ND	0.50	100	U	Ethyl-t-Butyl Et	her (ETBE)	ND	1.0	100	U
Ethylbenzene	ND	0.50	100	U	Tert-Amyl-Meth	nyl Ether (1	ΓAME)	ND	1.0	100	U
Xylenes (total)	ND	0.50	100	Ų	1,2-Dibromoeth	ane		ND	0.50	100	U
Methyl-t-Butyl Ether (MTBE)	ND	0.50	100	U	1,2-Dichloroeth	ane		ND	0.50	100	U
Tert-Butyl Alcohol (TBA)	ND	5_0	100	U							
Surrogates:	<u>REC (%)</u>	Control Limits	Qua	1	Surrogates:			REC (%)	Control Limits	Ω	ual
1,4-Bromofluorobenzene	106	60-132			Dibromofluoron	nethane		91	63-141		
1,2-Dichloroethane-d4	104	62-146			Toluene-d8			102	80-120		
S-15-SVE3			12-01-1	199-3-A	01/17/12 13:19	Solid	GC/MS UU	01/20/12	01/23 15:		120123L01
Parameter	Result	RL	DE	Qual	Parameter			Result	RL	DE	Qual
	ND.			U		or (DIDE)		ND			U
Benzene	ND	0.0050	1	U	Diisopropyl Ether Ethyl-t-Butyl Eth	, ,	\		0.010	1	U
Toluene	0.015	0.0050	1	U	Tert-Amyl-Meth		•	ND ND	0.010 0.010	1	U
Ethylbenzene	0.033	0.0050	1 1		1,2-Dibromoeth	,	CIVIE)	ND	0.010	1	U
Xylenes (total)	0.033 ND		1	U	1,2-Dichloroeth			ND		1	U
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	U	1,2-DICHIOROEUR	ane		IAD	0.0050	1	U
Tert-Butyl Alcohol (TBA) <u>Surrogates:</u>	REC (%)	0.050 Control Limits	Qual	_	Surrogates:			REC (%)	Control Limits	Q	<u>ual</u>
1,4-Bromofluorobenzene	96	60-132			Dibromofluorom	ethane		99	63-141		



DF - Dilution Factor ,

62-146

112

Qual - Qualifiers



1,2-Dichloroethane-d4

Toluene-d8





Cardno ERI

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

Work Order No:

Preparation:

Method:

Units:

01/20/12

12-01-1199 **EPA 5030C**

EPA 8260B

mg/kg

Project: ExxonMobil 79374/022735C

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Project: Exxonivionii 7937	7702210										ge 2 01 4
Client Sample Number			L	ab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/ Analy		QC Batch II
S-12.5-SVE3			12-01	1199-4-A	01/17/12 13:15	Solid	GC/MS UU	01/20/12	01/2: 17:		120123L02
Comment(s): -BH Reporting limits	aised due to	o high leve	el of non	-target anal	ytes.						
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	DF	Qual
Benzene	ND	2.5	500	U	Diisopropyl Eth	ner (DIPE)		ND	5.0	500	U
Toluene	ND	2.5	500	U	Ethyl-t-Butyl El	ther (ETBE	:)	ND	5.0	500	U
Ethylbenzene	ND	2.5	500	U	Tert-Amyl-Met	hyl Ether (ΓAME)	ND	5.0	500	U
Xylenes (total)	ND	2.5	500	Ų	1,2-Dibromoeti	nane		ND	2.5	500	U
Methyl-t-Butyl Ether (MTBE)	ND	2.5	500	U	1,2-Dichloroeth	nane		ND	2.5	500	U
Tert-Butyl Alcohol (TBA)	ND	25	500	U							
Surrogates:	REC (%)	Control Limits	<u>Qu</u>	<u>al</u>	Surrogates:			REC (%)	Control Limits	C	<u>lual</u>
1.4-Bromofluorobenzene	100	60-132			Dibromofluoror	nethane		93	63-141		
1.2-Dichloroethane-d4	98	62-146			Toluene-d8			101	80-120		
S-14-SVE2			12-01-	1199-5-A	01/17/12 12:20	Solid	GC/MS UU	01/20/12	01/20 17:0		120120L01
Parameter	Result	RL	DE	Qual	<u>Parameter</u>			Result	RL	DF	Qual
Benzene	ND	0.0050	1	U	Diisopropyl Eth	er (DIPE)		ND	0.010	1	U
Foluene	ND	0.0050	1	Ū	Ethyl-t-Butyl Et)	ND	0.010	1	Ū
Ethylbenzene	ND	0.0050	1	Ü	Tert-Amyl-Meth	,	,	ND	0.010	1	Ū
(ylenes (total)	ND	0.0050	1	Ū	1,2-Dibromoeth		,	ND	0.0050	1	U
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	Ū	1,2-Dichloroeth			ND	0.0050	1	Ū
Tert-Butyl Alcohol (TBA)	ND	0.050	1	U							
Surrogates:	REC (%)	Control Limits	Qua	<u>al</u>	Surrogates:			REC (%)	Control Limits	Q	<u>ual</u>
.4-Bromofluorobenzene	88	60-132			Dibromofluoron	nethane		98	63-141		
.2-Dichloroethane-d4	112	62-146			Toluene-d8			100	80-120		
S-10-SVE2			12-01-	1199-6-A	01/17/12 12:15	Solid	GC/MS UU	01/20/12	01/23 19:2		120123L02
Comment(s): -BH Reporting limits ra	aised due to	high leve	of non-	target analy	rtes.						



DF - Dilution Factor

ND

ND

ND

ND

ND

ND

102

105

REC (%)

0.50

0.50

0.50

0.50

0.50

Control

Limits

60-132

62-146

5.0

100

100

100

100

100

100

Qual

U

U

U

U

U

U

Surrogates:

Toluene-d8

Diisopropyl Ether (DIPE)

1,2-Dibromoethane

1,2-Dichloroethane

Dibromofluoromethane

Ethyl-t-Butyl Ether (ETBE)

Tert-Amyl-Methyl Ether (TAME)

1.0

1.0

1.0

0.50

0.50

Limits

63-141

80-120

REC (%) Control

ND

ND

ND

ND

ND

94

91

100

100

100

100

100

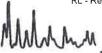
Qual

Ų

U

U

U



Benzene

Toluene

Ethylbenzene

Xylenes (total)

Surrogates:

Methyl-t-Butyl Ether (MTBE)

Tert-Butyl Alcohol (TBA)

1,4-Bromofluorobenzene

1,2-Dichloroethane-d4





Cardno ERI

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

Work Order No:

Preparation: Method: Units:

01/20/12

12-01-1199

EPA 5030C

EPA 8260B

mg/kg

Project: ExxonMobil 79374/022735C

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Client Sample Number				ib Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepare		/Time lyzed	QC Batch ID
S-10-AS1			12-01-	1199-7-A	01/18/12 09:44	Solid	GC/MS UL	01/20/12		23/12 :53	120123L02
Parameter	<u>Result</u>	RL	<u>DF</u>	Qual	<u>Parameter</u>			Result	RL	DF	Qual
Benzene	ND	2.5	500	U	Diisopropyl Etl	her (DIPE)		ND	5.0	500	n U
Toluene	ND	2.5	500	U	Ethyl-t-Butyl E	ther (ETBE)	ND	5.0	500	
Ethylbenzene	47	2.5	500		Tert-Amyl-Met	hyl Ether (T	AME)	ND	5.0	500	
Xylenes (total)	ND	2.5	500	U	1,2-Dibromoet	hane	•	ND	2.5	500	
Methyl-t-Butyl Ether (MTBE)	ND	2.5	500	U	1,2-Dichloroetl	hane		ND	2.5	500	U
Tert-Butyl Alcohol (TBA)	ND	25	500	U							
Surrogates:	REC (%)	Control Limits	Qua	<u> </u>	Surrogates:			REC (%)	Control Limits	. 9	<u>Qual</u>
1,4-Bromofluorobenzene	101	60-132			Dibromofluoro	methane		92	63-141		
1,2-Dichloroethane-d4	105	62-146			Toluene-d8			105	80-120		
S-14.5-MW3A			12-01-1	199-8-A	01/18/12 08:58	Solid	GC/MS UU	01/20/12	01/2 18:		120120L01
Parameter	Result	RL	DF	Qual	Parameter			Result	RL	DE	Qual
Benzene	ND	0.0050	1	U	Diisopropyl Eth	or (DIDE)		ND		_	
Toluene	ND	0.0050	1	U	Ethyl-t-Butyl Et			ND	0.010 0.010	1	U
Ethylbenzene	0.015	0.0050	1	O	Tert-Amyl-Meth			ND		4.0	-
Xylenes (total)	0.0052	0.0050	1		1,2-Dibromoeth		AIVIL)	ND	0.010	1	U
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	U	1,2-Dichloroeth			ND	0.0050	1	U
Tert-Butyl Alcohol (TBA)	ND	0.050	1	Ü	TIZ BIOTHOTOGET	idilo		140	0.0050		U
Surrogates:	REC (%)	Control Limits	Qual	_	Surrogates:			REC (%)	Control Limits	<u>Q</u>	ual
1,4-Bromofluorobenzene	98	60-132		22	Dibromofluoron	nethane		97	63-141		
1,2-Dichloroethane-d4	107	62-146			Toluene-d8	icarano		101	80-120		
S-8-MW3A		<u> </u>	12-01-1	199-9-A	01/18/12 08:45	Solid	GC/MS UU		01/20 19:1		120120L01
Parameter	Result	RL	DF	Qual	Parameter			Result	RL	DE	Ougl
Benzene	ND	0.0050		U Adam		(DIDE)			_		<u>Qual</u>
Foluene	ND		1	U	Diisopropyl Ethe			ND	0.010	1	U
Ethylbenzene	ND	0.0050	3	U	Ethyl-t-Butyl Eth			ND	0.010	1	U
(vlenes (total)	ND	0.0050	1	U	Tert-Amyl-Meth 1,2-Dibromoeth		NVIE)	ND	0.010	1	U
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	Ü	1,2-Dishorhoeth			ND	0.0050	1	U
Tert-Butyl Alcohol (TBA)	ND	0.050	1	U	1,4-DIGNIO106(N	ane		ND	0.0050	1	U
Surrogates:	REC (%)	Control Limits	Qual	U	Surrogates:			REC (%)	Control Limits	Qı	<u>ual</u>
.4-Bromofluorobenzene	94	60-132			Dibromofluorom	ethana		99	63-141		
.2-Dichloroethane-d4	113	62-146			Toluene-d8	Culane			80-120		
,					. 0.30110 00				00-120		



DF - Dilution Factor ,





Cardno ERI

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

Work Order No:

Preparation:

Method: Units: 01/20/12

12-01-1199 EPA 5030C

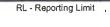
EPA 8260B

mg/kg

Project: ExxonMobil 79374/022735C

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Toject. Exxoniviobil 73	3314/02213	,,,,,								1 0	96 4 01 4
Client Sample Number				b Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	117	Time yzed	QC Batch IE
Method Blank				-882-1,259	9 N/A	Solid	GC/MS UU	01/20/12	01/2 11:		120120L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	DF	Qual
Benzene	ND	0.0050	1	U	Diisopropyl Etl	her (DIPE)		ND	0.010	1	U
Toluene	ND	0.0050	1	U	Ethyl-t-Butyl E	ther (ETB	Ξ)	ND	0.010	4	U
Ethylbenzene	ND	0.0050	1	U	Tert-Amyl-Met			ND	0.010	1	Ū
Xylenes (total)	ND	0.0050	1	U	1,2-Dibromoet	hane	·	ND	0.0050	1	U
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	U	1,2-Dichloroet	hane		ND	0.0050	1	U
Tert-Butyl Alcohol (TBA)	ND	0.050	1	U							
Surrogates:	REC (%)	Control Limits	Qua	<u>l</u>	Surrogates:			REC (%)	Control Limits	<u>(</u>	<u>Qual</u>
1,4-Bromofluorobenzene	99	60-132			Dibromofluoro	methane		103	63-141		
1.2-Dichloroethane-d4	121	62-146			Toluene-d8			97	80-120		
Method Blank			099-12-	882-1,260	N/A	Solid	GC/MS UU	01/23/12	01/23 12:		120123L01
Parameter	Result	RL	DE	Qual	Parameter			Result	RL	DE	Qual
	-					(5)55				_	
Benzene	ND	0.0050	1	U	Diisopropyl Eth		• \	ND	0.010	7	U
Toluene	ND	0.0050	1	U	Ethyl-t-Butyl Et		,	ND	0.010	1	U
Ethylbenzene	ND	0.0050	1	U	Tert-Amyl-Meth	,	AME)	ND	0.010	1	U
Xylenes (total)	ND	0.0050	1	U	1,2-Dibromoeth			ND	0.0050	1	U
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	U	1,2-Dichloroeth	iane		ND	0.0050	1	U
Tert-Butyl Alcohol (TBA) Surrogates:	ND <u>REC (%)</u>	0.050 Control	1 <u>Qual</u>	U	Surrogates:			REC (%)	Control	<u> </u>	ual
	00	<u>Limits</u>			D.1			00	<u>Limits</u>		
1,4-Bromofluorobenzene	96	60-132			Dibromofluoron	nethane		98	63-141		
1,2-Dichloroethane-d4	107	62-146			Toluene-d8			100	80-120		
Method Blank			099-12-	882-1,261	N/A	Solid	GC/MS UU	01/23/12	01/23 13:0		12 0123 L02
Parameter	Result	RL.	DF	Qual	Parameter			Result	RL	DE	Qual
Benzene	ND	0.50	100	U	Diisopropyl Eth	er (DIPE)		ND	1.0	100	U
Foluene	ND	0.50	100	Ū	Ethyl-t-Butyl Eti	. ,)	ND	1.0	100	Ü
Ethylbenzene	ND	0.50	100	Ŭ	Tert-Amyl-Meth		,	ND	1.0	100	Ü
(vlenes (total)	ND	0.50	100	Ü	1.2-Dibromoeth	,	,		0.50	100	Ü
Methyl-t-Butyl Ether (MTBE)	ND	0.50	100	Ū	1,2-Dichloroeth				0.50	100	Ü
ert-Butyl Alcohol (TBA)	ND	5.0	100	Ū		_		_		,00	=
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:				Control Limits	Q	<u>ual</u>
,4-Bromofluorobenzene	96	60-132			Dibromofluorom	nethane			63-141		
,2-Dichloroethane-d4	104	62-146			Toluene-d8				80-120		
,2-Diotiloroculario-u-	10 1	J2 170			i olucite-do				50-120		



DF - Dilution Factor ,

Qual - Qualifiers







Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received: Work Order No: Preparation: Method: 01/20/12 12-01-1199 EPA 3550B EPA 8015B (M)

Quality Control Sample ID	Matrix	Instrument	Date It Prepared		Date Analyzed		MSD Batch lumber
S-14.5-MW3A	Solid	GC 46	01/2	3/12	01/23/12	120)123S02
Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Motor Oil	400.0	106	108	64-130	2	0-15	







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

Date Received: Work Order No: Preparation: Method:

01/20/12 12-01-1199 EPA 3550B EPA 8015B (M)

Quality Control Sample ID	Matrix	Instrument		Date Prepared			/ISD Batch lumber
S-14.5-MW3A	Solid	GC 46	01/23/12		01/23/12	120	123501
<u>Parameter</u>	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Diesel	400.0	106	110	64-130	4	0-15	







Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received: Work Order No: Preparation: Method: 01/20/12 12-01-1199 EPA 5030C EPA 8015B (M)

Quality Control Sample ID	Matrix	Instrumen	. –	Date Prepared			ASD Batch lumber
12-01-1112-1	Solid	GC 4	01/20/12		01/20/12	120120801	
<u>Parameter</u>	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	10.00	93	92	48-114	1	0-23	







Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received: Work Order No: Preparation: Method: 01/20/12 12-01-1199 EPA 5030C EPA 8260B

Quality Control Sample ID	Matrix	Instrumen		Date Prepared		MS/MSD Batch Number	
12-01-1112-1	Solid	GC/MS U	U 01/1	9/12	01/20/12	120	120S01
Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	90	78	61-127	14	0-20	
Toluene	0.05000	92	79	63-123	15	0-20	
Ethylbenzene	0.05000	91	77	57-129	16	0-22	
Methyl-t-Butyl Ether (MTBE)	0.05000	84	64	57-123	28	0-21	BA
Tert-Butyl Alcohol (TBA)	0.2500	82	70	30-168	16	0-34	
Diisopropyl Ether (DIPE)	0.05000	81	66	57-129	21	0-20	BA
Ethyl-t-Butyl Ether (ETBE)	0.05000	78	62	55-127	23	0-20	BA
Tert-Amyl-Methyl Ether (TAME)	0.05000	79	63	58-124	23	0-20	BA
Ethanol	0.5000	149	119	17-167	22	0-47	
1,1-Dichloroethene	0.05000	93	83	47-143	11	0-25	
1,2-Dibromoethane	0.05000	88	67	64-124	27	0-20	BA
1,2-Dichlorobenzene	0.05000	83	67	35-131	21	0-25	
1,2-Dichloroethane	0.05000	102	80	80-120	25	0-20	BA
Carbon Tetrachloride	0.05000	97	87	51-135	11	0-29	
Chlorobenzene	0.05000	87	74	57-123	17	0-20	
Trichloroethene	0.05000	95	82	44-158	15	0-20	
Vinyl Chloride	0.05000	122	119	49-139	2	0-47	







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

Date Received: Work Order No: Preparation: Method: 01/20/12 12-01-1199 EPA 5030C EPA 8260B

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-01-1236-1	Solid	GC/MS UU	01/20/12	01/23/12	120123\$01

					01720712	120120001	
Parameter Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	<u>RPD</u>	RPD CL	Qualifiers
Benzene	0.05000	89	90	61-127	2	0-20	
Toluene	0.05000	86	90	63-123	4	0-20	
Ethylbenzene	0.05000	88	87	57-129	1	0-22	
Methyl-t-Butyl Ether (MTBE)	0.05000	86	86	57-123	0	0-21	
Tert-Butyl Alcohol (TBA)	0.2500	101	101	30-168	0	0-34	
Diisopropyl Ether (DIPE)	0.05000	85	84	57-129	1	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	85	84	55-127	0	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	85	89	58-124	4	0-20	
Ethanol	0.5000	127	125	17-167	1	0-47	
1,1-Dichloroethene	0.05000	87	90	47-143	3	0-25	
1,2-Dibromoethane	0.05000	100	100	64-124	0	0-20	
,2-Dichlorobenzene	0.05000	81	81	35-131	1	0-25	
,2-Dichloroethane	0.05000	100	99	80-120	1	0-20	
Carbon Tetrachloride	0.05000	89	87	51-135	3	0-29	
Chlorobenzene	0.05000	89	89	57-123	1	0-20	
richloroethene	0.05000	89	90	44-158	1	0-20	
/inyl Chloride	0.05000	96	96	49-139	1	0-47	







Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received: Work Order No: Preparation: Method: N/A 12-01-1199 EPA 3550B EPA 8015B (M)

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed		LCS/LCSD Batch Number	
099-12-254-2,319	Solid	GC 46	01/23/12	01/23/12		120123B02	
<u>Parameter</u>	SPIKE AD	DED LCS %REG	C LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Motor Oil	400 (113	113	75-123	0	0-12	







Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received: Work Order No: Preparation: Method: N/A 12-01-1199 EPA 3550B EPA 8015B (M)

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	ř.	LCS/LCSD Batch Number	
099-12-275-4,348	Solid	GC 46	01/23/12	01/23/12		120123B01	
<u>Parameter</u>	SPIKE A	DDED LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Diesel	400	.0 112	122	75-123	9	0-12	





Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received: Work Order No: Preparation: Method: N/A 12-01-1199 EPA 5030C EPA 8015B (M)

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed		LCS/LCSD Batch Number	
099-14-571-156	Solid	GC 4	01/24/12	01/24/12		120124B02	
<u>Parameter</u>	SPIKE AL	DDED LCS %REG	C LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	10.00	95	95	70-124	0	0-18	







Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received: Work Order No: Preparation: Method: N/A 12-01-1199 EPA 5030C EPA 8015B (M)

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	l	LCS/LCSD Batch Number	
099-14-571-153	Solid	GC 4	01/20/12	01/20/12		120120B01	
<u>Parameter</u>	<u>SPIKE A</u>	DDED LCS %REG	C LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	10.0	0 97	97	70-124	0	0-18	







Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received: Work Order No: Preparation: Method: N/A 12-01-1199 EPA 5030C EPA 8260B

Project: ExxonMobil 79374/022735C

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date alyzed	LCS	LCSD Batch Number	
099-12-882-1,259	Solid	GC/MS UU	01/20/12	2 01/2	0/12	1	20120L01	
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	90	92	78-120	71-127	2	0-20	
Toluene	0.05000	90	90	77-120	70-127	0	0-20	
Ethylbenzene	0.05000	92	92	76-120	69-127	0	0-20	
Methyl-t-Butyl Ether (MTBE)	0.05000	87	88	77-120	70-127	2	0-20	
Tert-Butyl Alcohol (TBA)	0.2500	96	93	68-122	59-131	4	0-20	
Diisopropyl Ether (DIPE)	0.05000	87	89	78-120	71-127	2	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	88	90	78-120	71-127	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	90	87	75-120	68-128	3	0-20	
Ethanol	0.5000	126	117	56-140	42-154	7	0-20	
1,1-Dichloroethene	0.05000	95	93	74-122	66-130	1	0-20	
1,2-Dibromoethane	0.05000	100	103	80-120	73-127	3	0-20	
1,2-Dichlorobenzene	0.05000	89	89	75-120	68-128	0	0-20	
1,2-Dichloroethane	0.05000	105	107	80-120	73-127	2	0-20	
Carbon Tetrachloride	0.05000	96	97	49-139	34-154	2	0-20	
Chlorobenzene	0.05000	93	91	79-120	72-127	1	0-20	
Trichloroethene	0.05000	95	94	80-120	73-127	1	0-20	
Vinyl Chloride	0.05000	113	116	68-122	59-131	3	0-20	

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed:

LCS ME CL validation result: Pass







Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received: Work Order No: Preparation: Method: N/A 12-01-1199 EPA 5030C EPA 8260B

Project: ExxonMobil 79374/022735C

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date alyzed	LCS	/LCSD Bato Number	ch .
099-12-882-1,260	Solid	GC/MS UU	01/23/1	2 01/2	3/12	1	20123L01	
<u>Parameter</u>	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	<u>RPD</u>	RPD CL	Qualifiers
Benzene	0.05000	91	96	78-120	71-127	5	0-20	
Toluene	0.05000	93	96	77-120	70-127	3	0-20	
Ethylbenzene	0.05000	95	96	76-120	69-127	0	0-20	
Methyl-t-Butyl Ether (MTBE)	0.05000	97	93	77-120	70-127	4	0-20	
Tert-Butyl Alcohol (TBA)	0.2500	108	100	68-122	59-131	8	0-20	
Diisopropyl Ether (DIPE)	0.05000	93	90	78-120	71-127	4	0-20	
Ethyl-t-Butyl Ether (ETBE)	0,05000	95	90	78-120	71-127	6	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	93	92	75-120	68-128	1	0-20	
Ethanol	0.5000	149	125	56-140	42-154	17	0-20	LQ,RU
1,1-Dichloroethene	0.05000	95	93	74-122	66-130	3	0-20	
1,2-Dibromoethane	0.05000	109	≅ 111	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	0.05000	101	94	75-120	68-128	7	0-20	
1,2-Dichloroethane	0.05000	107	102	80-120	73-127	5	0-20	
Carbon Tetrachloride	0.05000	99	95	49-139	34-154	4	0-20	
Chlorobenzene	0.05000	94	99	79-120	72-127	5	0-20	
Trichloroethene	0.05000	91	92	80-120	73-127	1	0-20	
Vinyl Chloride	0.05000	119	105	68-122	59-131	13	0-20	



Total number of LCS compounds: 17
Total number of ME compounds: 1
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass







Cardno ERI 601 North McDowell Blvd. Petaluma, CA 94954-2312 Date Received: Work Order No: Preparation: Method: N/A 12-01-1199 EPA 5030C EPA 8260B

Project: ExxonMobil 79374/022735C

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date alyzed	LCS	S/LCSD Bato Number	:h
099-12-882-1,261	Solid	GC/MS UU	01/23/12	2 01/2	3/12	1	20123L02	
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	91	96	78-120	71-127	5	0-20	
Toluene	0.05000	93	96	77-120	70-127	3	0-20	
Ethylbenzene	0.05000	95	96	76-120	69-127	0	0-20	
Methyl-t-Butyl Ether (MTBE)	0.05000	97	93	77-120	70-127	4	0-20	
Tert-Butyl Alcohol (TBA)	0.2500	108	100	68-122	59-131	8	0-20	
Diisopropyl Ether (DIPE)	0.05000	93	90	78-120	71-127	4	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	95	90	78-120	71-127	6	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	93	92	75-120	68-128	1	0-20	
Ethanol	0.5000	149	125	56-140	42-154	17	0-20	LQ,RU
1,1-Dichloroethene	0.05000	95	93	74-122	66-130	3	0-20	
1,2-Dibromoethane	0.05000	109	111	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	0.05000	101	94	75-120	68-128	7	0-20	
1,2-Dichloroethane	0.05000	107	102	80-120	73-127	5	0-20	
Carbon Tetrachloride	0.05000	99	95	49-139	34-154	4	0-20	
Chlorobenzene	0.05000	94	99	79-120	72-127	5	0-20	
Trichloroethene	0.05000	91	92	80-120	73-127	1	0-20	
Vinyl Chloride	0.05000	119	105	68-122	59-131	13	0-20	

Total number of LCS compounds: 17

Total number of ME compounds: 1

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD - Relative Percent Difference,

CL - Control Limit





Glossary of Terms and Qualifiers



Work Order Number: 12-01-1199

Qualifier	Definition
AZ	Surrogate compound recovery was out of control due to matrix interference. The
	associated method blank surrogate spike compound was in control and, therefore, the
	sample data was reported without further clarification.
В	Analyte was present in the associated method blank.
BA	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD
	was in control and, therefore, the sample data was reported without further clarification.
BB	Spike recovery and RPD control limits do not apply resulting from the parameter
	concentration in the sample exceeding the spike concentration by a factor of four or
BU	greater. Sample analyzed after holding time expired.
DF	Reporting limits elevated due to matrix interferences.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
GE	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control
GL	due to a matrix interference effect. The associated batch LCS/LCSD was in control and,
	hence, the associated sample data was reported without further clarification.
HD	Chromat. profile inconsistent with pattern(s) of ref. fuel stnds.
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 and/or LCSD was in control
	and, therefore, the sample data was reported without further clarification.
IL	Relative percent difference out of control.
J	Analyte was detected at a concentration below the reporting limit and above the
LD	laboratory method detection limit. Reported value is estimated. 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
LP	associated sample was non-detected. Therefore, the sample data was reported without
	further clarification.
LQ	LCS recovery above method control limits.
LR	LCS recovery below method control limits.
ND	Parameter not detected at the indicated reporting limit.
QO	Compound did not meet method-described identification guidelines. Identification was
	based on additional GC/MS characteristics.
RU	LCS/LCSD Recovery Percentage is within Marginal Exceedance (ME) Control Limit
	range.
SG	A silica gel cleanup procedure was performed.
SN	See applicable analysis comment.
U	Undetected at detection limit.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not
	corrected for % moisture. All QC results are reported on a wet weight basis.
	MPN - Most Probable Number



Sandy Tat

From: Sent:

Jennifer Lacy [jennifer.lacy@cardno.com] Monday, January 23, 2012 8:38 AM

To:

Sandy Tat

Subject:

COCs

Attachments:

79374_20120123114030.pdf; 99105_20120123112652.pdf



Hi Sandy,

Jake asked me to forward these COCs to you. His computer is not working right this morning.

Please refer all questions/correspondence regarding these projects to Jake.

Thanks!

Jennifer L. Lacy **Senior Staff Scientist LPS Coordinator** Cardno ERI

601 North McDowell Blvd., Petaluma, CA 94954

Phone: 707 766 2000 Direct: 707 766 2017 Mobile: 707 338 6998 Fax: 707 789 0414

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Cardno Web: www.cardno.com

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Calscit ice Environmental Laboratories, Inc.

7440 Lincoln Way

F 3: 714-895-549

Garden Grove, CA 92841

Fax: 714-894-7501



Con	sultant Name:	Cardno E	RI					_			_						_ Ac	cor	int #:	NA	į.					PO	k:		Dire	ct Bill	to C	ardn	o ER	1
Consu	Itant Address:	801 North	McDow	rell B	vd.			_									lm	roic	e To:	Din	ect B	ill to	Carc	ina	ERI									
Consultant	City/State/Zip:	Petaluma	. Califor	nia 9	4954			_									R	por	t To:	Pa	ula S	ime												
ExxonMob	il Project Mgr:	Jennifer	Sodiach	nek				_								_ P	roje	ct N	ame:	02	27350	0												
Consultar	nt Project Mgr:					Paula	Sime							_	Ex	xon	Mobi	I SK	la dit				793	74		*		Melo	r Projec	t (AFE	#):			
Consultant Telep	hone Number:	(707) 768	-2000			_	Fat	E No	.:_							_	Site	Add	ress;	39) Sar	Pat	olo A	ven	ue			5						
	r Name (Print):				75				_					_	SII	e C	ity, S	عادا	, Zip:	Alb	апу,	CA												
Samp	oler Signature	220	2	21_										_	0	Yen	elght	Ag	ency:	Ala	med	e Co	unty	He	alth (Cere	Sen	vices /	Agency					
									_	Pr	9591	vativ	e	_	I		Matr	ìχ							A	naiy	ze Fo	oft			L			
ample ID	Field Point Name	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Fleld Filtered	Methanol	Sodium Blaufato	NaOH	H ₂ SO ₂ Plestic	H,SO, Glass	los	Other	None	Groundwaler	Vrastewater Orloking Water	Studge	Soll	Other (specify): Distilled Water	TOUR and TOUG hy	EPA 8015B	TPHmo 8015B	BTEX by EPA 8280B	7 Oxys by EPA 8260B						RUSH TAT (Pre-Schedule)	3-day TAT	Standard 10-day TAT	Due Date of Report
5-11.5-SVE7	SVEZ	1.17-12	1412	1	x			П	T	T	П	П	Ix		T	T	Т	П	x	T	$\overline{}$	x	×	1	x	T	П			\top	1	1	x	
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Calscic ice Environmental Laboratories, Inc.

7440 Lincoln Way

Garden Grove, CA 92841

F >: 714-895-549

Fax: 714-894-7501



Co	nsultant Name:	Cardno	ERI															_ A	cco	unt	#: <u>N</u>	Α						PO	#:			Direc	t Bill	to C	ardr	10 E	RI
Cons	ultant Address:	601 Nor	th McDo	well E	Blvd.													_ In	vole	ce To	o: D	irec	t Bill	to C	ard	no l	ERI			_							
Consultant	t City/State/Zip:	Petalum	a, Califo	rnia :	94954													R	epo	ort To	o: P	aula	Sin	ne										_			
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Consultant Tele	phone Number	(707) 76	6-2000				Fa	x No	o.; _								3	Site	Add	ires	s: 99	90 8	San F	able	o Av	ent	ie										
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Sample ID	Field Point Name	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Methanol	Sodium Bisulfate	NaOH	H,SO, Plastic	H ₂ SO ₄ Glass	HNO ₃	80	Other	None	Washwater	Drinking Water	Sludge	Soil	Air Other (enacity): Diefflad Water	ouer (obeany). Demised Meter	TPHg and TPHd by	EPA 8015B	TPHmo 8015B	BTEX by EPA 8260B	7 Oxys by EPA 8260B							RUSH TAT (Pre-Schedule)	5-day TAT	Standard 10-day TAT	Due Date of Report
S-11.5-SVE7	SVEZ	1-17-12	1410	1	x			П	7	\dagger	T	T	Н	x	+	Ť	+	t		х	+	+	X	$\overline{}$		X	X	Н	Н	-			+	×	rç.		
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Comments/Special Instructions:			MTBE, 2-DCA,		ETB	E, TA	ME,	Γ			1		PLI	FASI	E E-A	MAH	ALI	PDF	FII	ES T		Т	emp Samp	erat	ure	Upo	n R	ece						<u> </u>	_		
GLOBAL ID # T0619716673				_			MLA		@er	i-us	s.cc									co			/OCs											Υ Υ		N N	
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Print Date: 01/19/12 15:39 PM Package 1 of 1

Send Label To Printer

Delivery Instructions:

Signature Type: SIGNATURE REQUIRED

Print All

Edit Shipment

Finish

LABEL INSTRUCTIONS:

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

STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.

STEP 2 - Fold this page in half.

STEP 3 - Securely attach this label to your package, do not cover the barcode.

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

ADDITIONAL OPTIONS:

Send Label Via Email

Create Return Label

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all the service terms and conditions described in this section. Our liability for loss or damage to any package is limited to your actual damages or \$100 whichever is less, unless you pay for and declare a higher authorized value. If you declare a higher value and pay the additional charge, our liability will be the lesser of your declared value or the actual value of your loss or damage. In any event, we will not be liable for any damage, whether direct, incidental, special or consequential, in excess of the declared value of a shipment whether or not we had knowledge that such damage might be incurred including but not limited to loss of income or profit. We will not be liable for your acts or omissions, including but not limited to improper or insufficient packaging, securing, marking or addressing. Also, we will not be liable if you or the recipient violates any of the terms of our agreement. We will not be liable for loss, damage or delay caused by events we cannot control, including but not limited to acts of God, perils of the air, weather conditions, act of public enemies, war, strikes, or civil commotion. The highest declared value for our GSO Priority Letter or GSO Priority Package is \$500. For other shipments the highest declared value is \$10,000 unless your package contains items of "extraordinary value", in which case the highest declared value we allow is \$500. Items of "extraordinary value" include, but or not limited to, artwork, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.





WORK ORDER #: 12-01-1

SAMPLE RECEIPT FORM

Cooler of	_
-----------	---

Initial: 84

CLIENT: Cardno ERI DATE: 01/20/12 TEMPERATURE: Thermometer ID: SC3 (Criteria: 0.0 °C - 6.0 °C, not frozen) $\frac{1.3}{0.3}$ °C - 0.3 °C (CF) = $\frac{1.0}{0.0}$ °C Temperature ☐ Sample ☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____). ☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling. ☐ Received at ambient temperature, placed on ice for transport by Courier. Ambient Temperature:

Air □Filter Initial: 12C **CUSTODY SEALS INTACT:** __ · ☑ Cooler □ No (Not Intact) □ Not Present □ N/A □ Sample

☐ No (Not Intact)

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples			
COC document(s) received complete	🗹		
\square Collection date/time, matrix, and/or # of containers logged in based on sample lab	els.		
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	🗹		
Sample container label(s) consistent with COC	🏚		
Sample container(s) intact and good condition	Þ		
Proper containers and sufficient volume for analyses requested	P		
Analyses received within holding time			
pH / Res. Chlorine / Diss. Sulfide / Diss. Oxygen received within 24 hours	s 🗆		
Proper preservation noted on COC or sample container	🗆		1
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	🗆		
Tedlar bag(s) free of condensation CONTAINER TYPE:	🗆		右
Solid: □4ozCGJ □8ozCGJ □16ozCGJ ☑Sleeve (S) □EnCor	es® □Ten	aCores [®] □_	
Water: □VOA □VOAh □VOAna₂ □125AGB □125AGBh □125AGB	D1AGB	□1AGBna₂ i	□1AGBs
□500AGB □500AGJ □500AGJs □250AGB □250CGB □250CGE	s 🗆 1PB	□1PBna □	1500PB
□250PB □250PBn □125PB □125PBznna □100PJ □100PJna ₂ □_			
Air: □Tedlar® □Summa® Other: □ Trip Blank Lot#: Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E		d/Checked by: Reviewed by:	-

Preservative: h: HCL n: HNO3 na2:Na2S2O3 na: NaOH p: H3PO4 s: H2SO4 u: Ultra-pure znna: ZnAc2+NaOH f: Filtered Scanned by:

APPENDIX G WASTE DISPOSAL DOCUMENTATION

	Manifest			FE O n-Hazard			100	CAPTING OF THE SECOND STATES OF THE PROPERTY O	lfest# V	THE RESERVE OF THE PARTY OF THE		
1	Date of Shipment:	Responsible for	Payment:	Transport	Truck #: // 73;	Ն .	Facility #: 500	Approval Num	ber: 135	Load #		
	Generator's Name and Billing EXXONMOBIL OIL CO ATTN: EMES ADMINIS	ORP. STRATOR			Generato	's Phone 212-29	#:		MI.			
	2666 W. 190TH ST.#1 TORRANCE, CA 906		*	*	FAX#:			Customer Acco	sunt Number			
	Consultant's Name and Billing Cardno ERI - Pa	; Address: taluma			Consulta	nt's Phon	ie #:					
					Person to	Contact						
					FAX#:			Customer Acco	unt Number			
	Generation Site (Transport from EXXONMQBIL 79	,		3	Site Phon Person to							
ritant-	990 SAN PABLO ALBANY, CA 947				FAX#:	Commen	iller Verti					
Consu	Designated Facility (Transport	to): (name & address)	<u> </u>		Facility P	hone #:		_	-			
nd/or	SOIL SAFE 12328 HIBISCUS	e ⁴³	120		(800 Person to	002-1						
Generator and/or Consultant	ADELÁNTO, CA				FAX#:	LENA) 246-	JEFFREY 8004	3				
- Ge	Transporter Name and Mailing BELSHIRE	g Address:				460-63	200	C	AR000183	913		
	25971 TOWNE C FOOTHILL RANG		ĐEŚI: 20198	i Res	FAX#:	RY MO	OTHART	450647 Customer Account Number				
	Description of Sail	Moisture Content	Contaminated 1			460-52 Descri	210 ption of Delivery	/ Gross Weight	Tare Weight	Net Weight		
	Sand Organic C	0-10% D 10-20% D 20%-over D	Gas C Diesel C Other C	3 1	id	80	il	45520	37600	7920		
	Sand O Organic O Clay O Other O List any exception to items liste	0 - 10% [] 10 - 20% [] 20% - over [] ed above:	Gas C Diesel C Other C	1			Scale Ticket #	100	022	3.96		
	Generator's and/or consult Sheet completed and certif in any way.	tant's certification: fied by me/us for the	I/We certify tha Generation Si	t the soil r te shown i	eferenced above and	herein nothin	is taken entirely g lıas been adde	from those soils and or done to such	lescried in the soil that w	he Soil Data ould alter it		
.!	Print or Type Name: Gene Paula Sime	/Cardno				410lm	200-	Exxunllabi	131	Day Year		
Transporter	Transporter's certification condition as when received without off-loading, adding	d. I/We further cert	ify that the soil	l is being 1y delayin	directly t g delivery	to such	ted from the G	soil is being delive eneration Site to	red in exact the Designa	tly the same nted Facility		
Tran		av/()		Sig	mature and	date:	-A	-	Month	Day Year		
acility	79374 740050	2	ex.			vēs	×					
Recycling Facility	Recycling Facility certifies Print or Type Name:	the receipt of the so	oil covered by th		st except a		l above:					
Recj		EY/J. PROVAN	5AL	515	mid	Y.			3-1-1	12		
Pleas	e print or type.		× .				\vee	\supset				
	38		, TŖA	NSPORT	ER COP	Υ	47 (9) (440)	61 m m m		(2)		

NON-HAZARDOUS WASTE MANIFEST

	Pa	ase com critice (Form designed for use on elite (12 pitch) typewriter)									
	1500	NON-HAZARDOUS WASTE MANIFEST 1. Generator's US E	Manifest Document No	nifest current No.							
		3. Generator's Name and Mailing Address ENF 79379									
	OWN.	990 SAN	CARDNO ERI								
		4. Generator's Phone () ALBAM, CA									
		5. Transporter 1 Company Name	6. US EPA ID Number		A. State Trans						
	8	INSTRAT INC			B. Transporter		3. 14. Unit unitity Wt./Vol.				
		7. Transporter 2 Company Name	8. US EPA ID Number		C. State Trans						
	ita	Designated Facility Name and Site Address	10. US EPA ID Number		D. Transporter						
	B,	INSTRAT INC	IO. US EPA ID Nulliber		E. State Facili	iys iD					
		1105-C AIRPORT RO	CAROCCISO579	- 6	F. Facility's Ph	none					
		RIO VISTA I CA	1		11.700	707-374-3834	/				
		11. WASTE DESCRIPTION	- t ₁	12. Co	ontainers	13. Total	14.				
	100	×		No.	Туре	Quantity	Wt./Vol.				
		a,									
		NON-HAZ PURCE WATER			Pory	275	GAL				
	G	b.									
	田乙田										
- 1	ER	C.									
- 1	A										
- 1	0										
шl	R	d.									
WASTE											
3	0000	G. Additional Descriptions for Materials Listed Above			H. Handling Co	odes for Wastes Listed Above					
				Th. Harding Go	dos los tradas maior racto						
2	S.	COLAR- BROWN COCR- B									
ō		305182 - A									
문		25C165.7" /D									
NON-HAZARDOUS	io.										
A		15. Special Handling Instructions and Additional Information									
포네	10										
8											
ž	Shi										
-	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.										
	Ţ.				Date						
i i		Printed/Typed Name	Signature			Month	Day Year				
-	7	17. Transporter 1 Acknowledgement of Receipt of Materials					Date				
- 11	R -	Printed/Typed Name	Signature .			Month					
	AN SPO	Ganoth Sibort	Comment !	1.6	1:	2	11/1/2				
- I	5	18. Transporter 2 Acknowledgement of Receipt of Materials					Date				
	THE	Printed/Typed Name	Signature			Month	Day Year				
- 1	T	19. Discrepancy Indication Space									
	F										
1.	1	20. Facility Owner or Operator, Certification of receipt of the waste materials of									
	ĭ Į.	INSTRAT INC	Date								
	7	Printed/Typed Name	Signature	1 0	. /	Month	Day Year				
	1	MICHAEL WITHTEHEAD		NI	ـــــــــــــــــــــــــــــــــــ	2	11112				

APPENDIX H

SURVEY DATA

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

GLOBAL_ID	FIELD_PT_NAME	ELEV_SURVEY_DATE	ELEVATION	ELEV_METHOD	ELEV_DATUM	ELEV_ACC_VAL	ELEV_SURVEY_ORG	RISER HT	ELEV DESC	EFF DATE
T0619716673	MW-3A	2/6/2012	40.68	DIG	88	0,3	MORROW SURVEYING, MATT MORROW LS 8501	_	TOP OF CASING	
T0619716673	SVE-1	2/6/2012	40,58	DIG	88	0.3	MORROW SURVEYING, MATT MORROW LS 8501		TOP OF CASING	
T0619716673	SVE-2	2/6/2012	40 94	DIG	88	0,3	MORROW SURVEYING, MATT MORROW LS 8501		TOP OF CASING	
T0619716673	SVE-3	2/6/2012	40.93	DIG	88	0,3	MORROW SURVEYING, MATT MORROW LS 8501		TOP OF CASING	

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

GLOBAL_ID T0619716673	FIELD_PT_NAME FIELD_PT_CLASS MW-3A	XY_SURVEY_DATE 2/6/2012	LATITUDE 37.8879037	LONGITUDE -122.2985623	XY_METHOD CGPS	XY_DATUM NAD83	XY_ACC_VAL 30	XY_SURVEY_ORG MORROW SURVEYING, MATT MORROW LS 8501	GPS_EQUIP_TYPE TR	XY_SURVEY_DESC TOP OF BOX
T0619716673	SVE-1	2/6/2012	37.8879326	-122.2985668	CGPS	NAD83	30	MORROW SURVEYING, MATT MORROW LS 8501	TR	TOP OF BOX
T0619716673	SVE-2	2/6/2012	37.8879620	-122.2985456	CGPS	NAD83	30	MORROW SURVEYING, MATT MORROW LS 8501	TR	TOP OF BOX
T0619716673	SVE-3	2/6/2012	37.8879296	-122.2984573	CGPS	NAD83	30	MORROW SURVEYING, MATT MORROW LS 8501	TR	TOP OF BOX
T0619716673	AS-1	2/6/2012	37.8879226	-122.2985448	CGPS	NAD83	30	MORROW SURVEYING, MATT MORROW LS 8501	TR	TOP OF BOX