

**ExxonMobil
Environmental Services Company**

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Jennifer C. Sedlachek
Project Manager

RECEIVED

5:02 pm, Apr 16, 2012

**Alameda County
Environmental Health**

ExxonMobil

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 *Air Sparge/Dual-Phase Extraction Testing*, 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 *Air Sparge/Dual-Phase Extraction Testing*, 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



Air Sparge and Dual-Phase Extraction Feasibility Testing

Former Exxon Service Station 79374

990 San Pablo Avenue, Albany, California

Alameda County Department of Environmental Health RO No. 2974

Job Number 2735C.R04

Prepared for ExxonMobil Environmental Services

April 12, 2012



Shaping the Future

Cardno ERI

A/C10-611383

601 N McDowell Boulevard

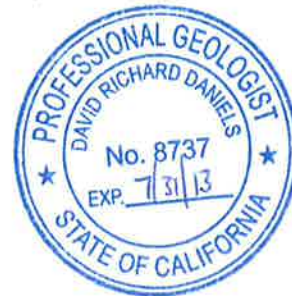
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A blue ink signature of Alexander G. Snyder, written in a cursive style.

SCANNED
IMAGE

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A blue ink signature of David Daniels, written in a cursive style.

SCANNED
IMAGE

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1.0 INTRODUCTION

At the request of ExxonMobil Environmental Services (EMES), on behalf of ExxonMobil Oil Corporation, Cardno ERI prepared this report detailing air sparge and dual-phase extraction feasibility tests at the subject site (Plate 1). The purpose of the work was to evaluate the feasibility of using AS/DPE as a remediation technology to remove hydrocarbons from soil and groundwater and to obtain engineering data for future remediation activities.

The work was proposed in the *Work Plan for Air Sparge and Soil Vapor Extraction Well Installation and Feasibility Testing* (Work Plan), dated July 5, 2011, approved by Alameda County Department of Environmental Health, in a letter dated December 14, 2011 (Appendix A). Based on the limited amount of screen exposed in the extraction wells, a DPE feasibility test was performed with the dip tubes set at approximately 10 feet to maintained exposed screen and avoid dewatering the AS well.

2.0 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 (Plates 2 and 3). 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).

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 location of the former USTs are shown on Plate 3.

3.0 GEOLOGY AND HYDROLOGY

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 has ranged from approximately 5 to 10 feet bgs with a variable groundwater flow direction. The distribution of dissolved-phase hydrocarbons suggests that the dominant groundwater flow direction is towards the west (Cardno ERI, 2011b).

4.0 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.

4.1 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).

4.2 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 from 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 below or near the laboratory reporting limits in the deeper water-bearing zones. In January 2012, Cardno ERI installed SVE wells SVE1 through SVE3, AS well AS1, and monitoring well MW3A (Cardno ERI, 2012).

4.3 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.

4.4 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 µg/L and 650 µg/L, respectively. Maximum dissolved-phase TPHg and benzene are located west of the former USTs.

5.0 AIR SPARGE/DUAL-PHASE EXTRACTION TEST

Operational data are summarized in Tables 4 and 5. Vapor sample results are presented in Table 6 and vapor-phase hydrocarbon removal is estimated in Table 7. Approximately 40 gallons of water were removed from well SVE1 during the testing. Analytical results for groundwater are presented in Table 1. Dissolved-phase mass removal was not calculated due to the low volume of water extracted.

5.1 Field Procedures

Cardno ERI performed the feasibility test in accordance with the Work Plan, Cardno ERI's standard field protocols (Appendix B), and a site-specific health and safety plan. The feasibility test consisted of three 4-hour events: a DPE only test, a combined air sparge and DPE test, and an air sparge only test.

5.2 Dual-Phase Extraction

To evaluate DPE as a remedial technology and obtain site-specific engineering data, one 4-hour feasibility test was performed on January 31, 2012. The test was conducted to assess the radius of influence (ROI) of subsurface vacuum, extracted subsurface airflow rates, and extracted hydrocarbon vapor concentrations. The tests were performed using a mobile extraction and treatment system equipped with a LRP and carbon canisters for vapor abatement. The system is capable of extracting up to 130 scfm of soil vapor and producing a vacuum of up to 29.5 inches of mercury (in Hg).

Well SVE1 was used as the extraction well for assessing the vacuum ROI during the first test. Vacuum was measured on surrounding wells SVE2, SVE3, MW3, MW3A, MW4, and AS1 which are located at varying radial distances from the extraction well. Groundwater elevation was measured before and after the test in wells SVE1, SVE2, SVE3, MW3, MW3A, and MW4 using a water level indicator.

5.3 Combined Air Sparge/Dual-Phase Extraction

To evaluate the feasibility of DPE remedial technology combined with air sparge technology, Cardno ERI conducted one 4-hour feasibility test on January 31, 2012. The test was performed using the same mobile extraction and treatment system and an air compressor capable of generating flows up to 6 cfm and pressures up to 100 psi; however, only 10 to 14 psi were used during the test. The airflow flow rate was measured using a rotometer located between the compressor and the wellhead.

Well SVE1 was used as the extraction well in the second test and AS1 was used as the air sparge well. Vacuum and/or pressure was measured on surrounding wells SVE2, SVE3, MW3, MW3A, MW4, and AS1 which are located at varying radial distances from the extraction well.

5.4 Air Sparge

To evaluate the feasibility of air sparge as a remedial technology and to obtain site-specific engineering data, one 4-hour AS test was conducted on February 1, 2012. The tests were conducted to assess the ROI of subsurface pressure while AS is being performed.

Well AS1 was used as the sparge well during the AS test. Pressure readings were measured in surrounding wells SVE1, SVE2, SVE3, MW3, MW3A, and MW4 to verify if a pressure ROI is present. DO was monitored in the observation wells to assess the effects of sparging (Table 5).

6.0 RESULTS

6.1 Dual-Phase Extraction

During the DPE only test, while extracting from well SVE1, a maximum induced vacuum of 18 inches of water (in H₂O) was observed in well SVE2 (approximately 7 feet away) and a maximum induced vacuum of 1 inch H₂O was observed in well MW4 (approximately 48 feet away). Measurable vacuum influence was also observed in wells MW3A and SVE3 at up to 8.5 and 2.2 inches H₂O, respectively. The screened interval of several wells at the site were submerged, indicating any vacuum readings were caused by a drop in groundwater elevation, not actual vacuum influence. An average vapor flow rate of 82 scfm was achieved (Table 4). An estimated 66 pounds of TPHg was removed during the test (Table 7).

6.2 Air Sparge/Dual-Phase Extraction

On January 31, 2012, air sparge was conducted through well AS1 while extracting from well SVE1 for four hours. An average injection pressure of approximately 11 psi and a maximum pressure of 14 psi was achieved during the test. Vacuum was observed in wells SVE2, SVE3, and MW3A. Based on vapor samples and a calculated average flow rate of 68.8 scfm, the test removed an estimated 27 pounds of vapor phase TPHg (Table 7). Due to the combined effects of pressure (AS) and vacuum (SVE), calculations related to the ROI were not performed.

6.3 Air Sparge

On February 1, 2012, an AS only test was conducted using well AS1 as an AS well for approximately 4 hours. Pressure and DO were monitored in wells SVE1, SVE2, SVE3, MW3, MW3A, and MW4. A maximum induced pressure of 5 inches of H₂O was observed in well SVE1 (Approximately 7.5 feet away). A maximum induced pressure of 0.26 inches of H₂O was observed in MW4 (approximately 42 feet away) (Table 5).

6.4 Laboratory Analysis

Groundwater and soil vapor influent and effluent samples were collected during the three tests. Laboratory analytical reports are provided in Appendix C. Analytical data is presented in Tables 1A and 1B and Table 6.

6.4.1 Soil Vapor

On January, 31, 2012, initial TPHg concentrations of 75,000 mg/m³ were reported in influent vapor samples collected while extracting from well SVE1. Concentrations decreased to 35,000 mg/m³ prior to the end of the 4-hour DPE only test. The maximum benzene concentration (46 mg/m³) was reported in the initial sample collected, which decreased to 40 mg/m³ prior to the end of the DPE only test. Concentrations of MTBE were not reported at or above the laboratory reporting limits. Data show a decreasing trend in concentrations during the test.

During the combined AS/DPE test, initial TPHg and benzene concentrations of 33,000 mg/m³ and 39 mg/m³, respectively, were reported while extracting from well SVE1. Concentrations of MTBE were not reported at or above the laboratory reporting limits during this test. Data shows relatively consistent concentrations of benzene throughout the tests and initially decreasing concentrations of TPHg that stabilized towards the end of the testing.

6.5 Waste Management

Extracted groundwater was stored in a holding tank on site. 275 gallons of water was transported to InStrat, Inc. for recycling on February 1, 2012. 40 gallons of water was generated during feasibility testing and the remainder was generated during well installation activities. Copies of the waste documentation for the groundwater and groundwater characterization are included in Appendix D.

7.0 EVALUATION OF TEST DATA

7.1 Radius of Influence

Based on the vacuum achieved during the DPE test, the radial distance of the observation wells, and assuming an effective vacuum of 0.1 inch H₂O, the estimated vacuum ROI was determined to be approximately 52 feet (Graph 1, Plate 4). Using the estimated pressures observed during the AS test, the radial distance of the observation wells, and an effective pressure of 0.1 inch H₂O, the estimated sparge ROI was determined to be approximately 42 feet (Graph 2, Plate 4).

7.2 Hydrocarbon Removal

Using Cardno ERI's standard operating procedure "Hydrocarbon Removal from a Vadose Well" (Appendix B), Cardno ERI estimated that the DPE only test resulted in the removal of approximately 66 pounds of TPHg and 0.05 pound of benzene during testing. The AS/DPE test is estimated to have removed approximately

27 pounds of TPHg and 0.04 pound of benzene. The estimated total hydrocarbon removal during the two 4-hour tests is approximately 93 pounds of TPHg and 0.09 pound of benzene (Table 7).

The total groundwater removed using DPE was approximately 40 gallons. Due to the low volume of water, total dissolved-phase hydrocarbon removal was not calculated.

8.0 CONCLUSIONS

Cardno ERI concludes that AS/DPE is a feasible method for remediation of residual, vapor-phase, and dissolved-phase hydrocarbons in soil and groundwater at the site.

Based on the data collected during the AS/DPE feasibility testing, Cardno ERI concludes that:

- The pressure and vacuum ROIs were 42 and 52 feet, respectively.
- Mass removal rates for AS/DPE were up to approximately 17 pounds of TPHg per hour.
- Sparging did not show a significant increase with the extracted vapor concentrations. Based on experience at similar sites, Cardno ERI believes sparging would partition dissolved-phase concentrations from groundwater to soil vapor.

9.0 RECOMMENDATIONS

Cardno ERI recommends the design, permitting, and installation of an AS/DPE system at the site to remediate hydrocarbon concentrations in soil, soil vapor, and groundwater

Cardno ERI recommends performing semi-annual monitoring and sampling during second and fourth quarters pending installation of an active remediation system.

10.0 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 A. Westrup, Cardno ERI, 601 North McDowell Boulevard, Petaluma, California, 94954. The agency contact is Ms. Barbara Jakub, Alameda County Environmental Health Services, 1131 Harbor Bay Parkway, Suite 250, Alameda, California, 94502.

11.0 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.

12.0 DOCUMENT DISTRIBUTION

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

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

13.0 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.*

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.

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

Cardno ERI. November 18, 2011b. *Groundwater Monitoring Report, Fourth Quarter 2011, Former Exxon Service Station 79374, 990 San Pablo Avenue, Albany, California , Alameda County #RO00002974.*

Cardno ERI. April 12, 2012. *Well Installation Report, Former Exxon Service Station 79374, 990 San Pablo Avenue, Albany, California , Alameda County #RO00002974.*

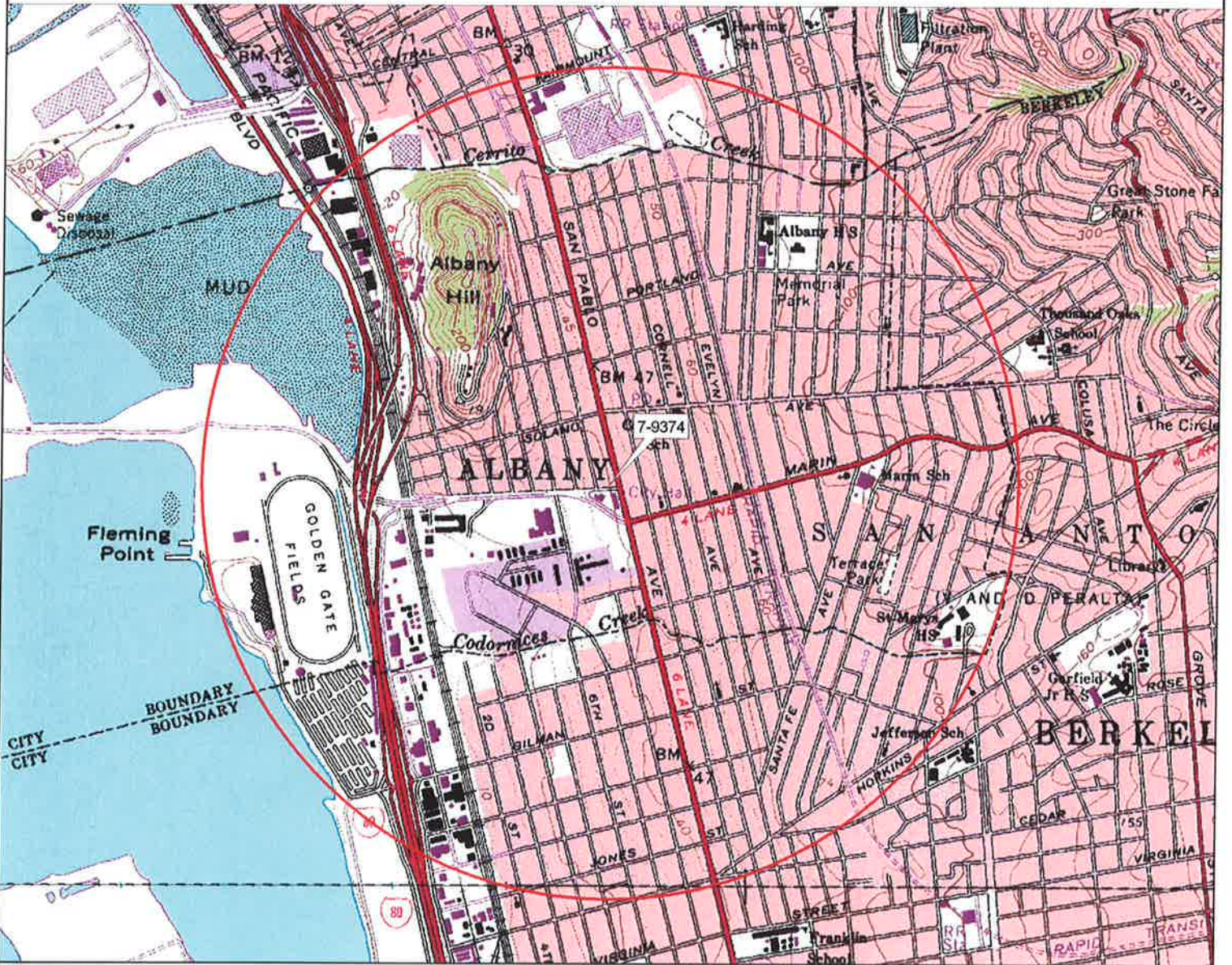
City of Albany. March 28, 1983. Building Permit 82-0708.

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.

14.0 ACRONYM LIST

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



DELORME

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FN 2735 TOPO

EXPLANATION



1/2-mile radius circle

APPROXIMATE SCALE



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



SITE VICINITY MAP

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

PROJECT NO.

2735

PLATE

1



LEGEND

- C/I** Commercial / Industrial
- VAC** Vacant Lot
- P** Parking Lot
- R** Additional Residential

WELLS

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

WELLS (SPECIAL USE OR MUNICIPAL)

▲ Public wells are not located within a 300-meter radius.

RESIDENCES

- 1** 1041/1043 Buchanan Street (Duplex)
- 2** 973/975 Adams Street (Duplex)
- 3** 971 Adams Street
- 4** 970 Adams Street (Apartments)
- 5** 960/962 Adams Street (Duplex)

PUBLIC USE AREAS

- 1** 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



PROJECT NO.	2735
PLATE	2

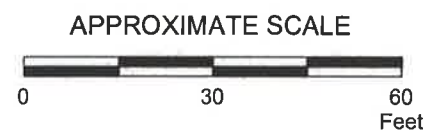
APPROXIMATE SCALE



FN 2735 12 R04 SRS AERIAL_SP



100-Meter and 300-Meter Radius



FN 2735 12 R04 GSP_SP





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

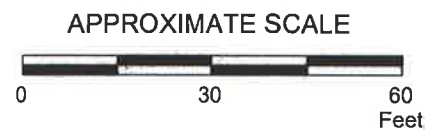
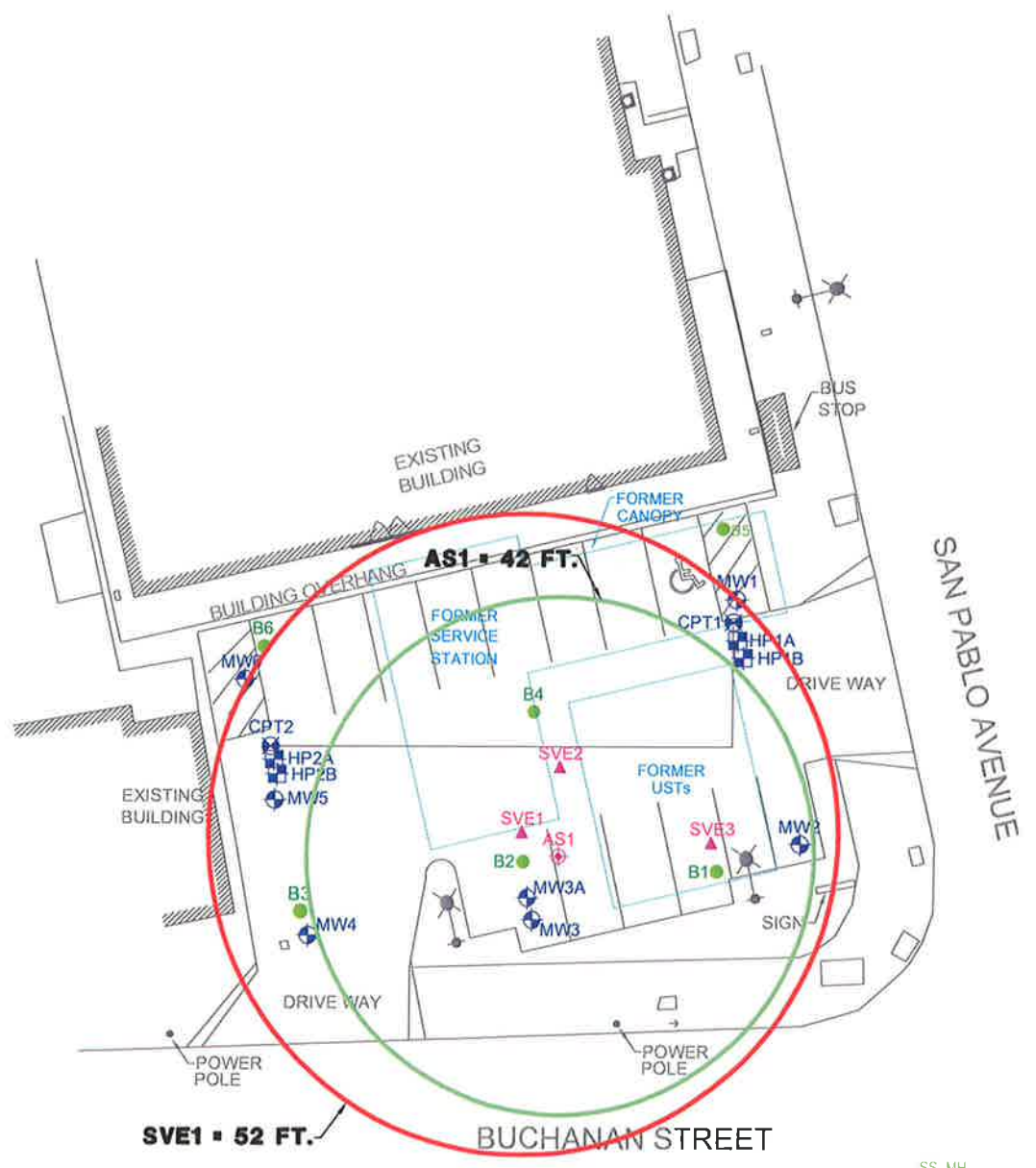
EXPLANATION

- | | | | | | |
|-----|-----------------------------|------|------------------------------|------|----------------------------|
| MW6 | Groundwater Monitoring Well | HP2B | Hydropunch Boring | AS1 | Air Sparge Well |
| B6 | Soil Boring | CPT2 | Cone Penetration Test Boring | SVE3 | Soil Vapor Extraction Well |

PROJECT NO.
2735

PLATE
3

-  **RADIUS OF INFLUENCE - VACUUM = 52 FEET**
-  **RADIUS OF INFLUENCE - AIR SPARGE = 42 FEET**









FN 2735 12 R04_SP



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

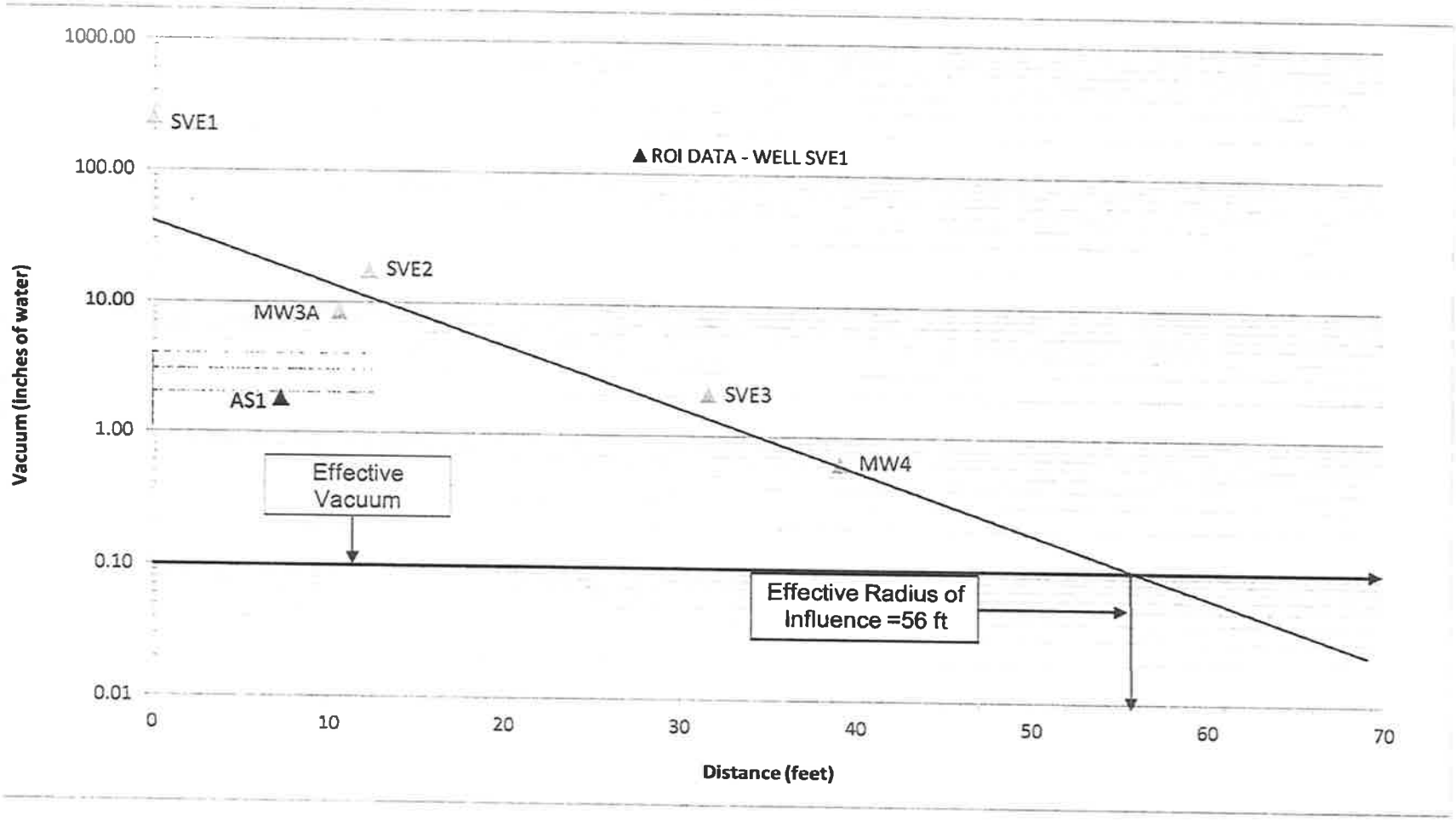
EXPLANATION

-  Groundwater Monitoring Well
-  Hydropunch Boring
-  Air Sparge Well
-  Soil Boring
-  Cone Penetration Test Boring
-  Soil Vapor Extraction Well

PROJECT NO.
2735

PLATE
4

GRAPH 1
AIR SPARGE/SOIL VAPOR EXTRACTION TEST,
VACUUM RADIUS OF INFLUENCE – WELL SVE1
 Former Exxon Service Station 79374
 990 San Pablo Avenue
 Albany, California



GRAPH 2
AIR SPARGE/SOIL VAPOR EXTRACTION TEST,
SPARGE PRESSURE RADIUS OF INFLUENCE – WELL AS1
Former Exxon Service Station 79374
990 San Pablo Avenue
Albany, California

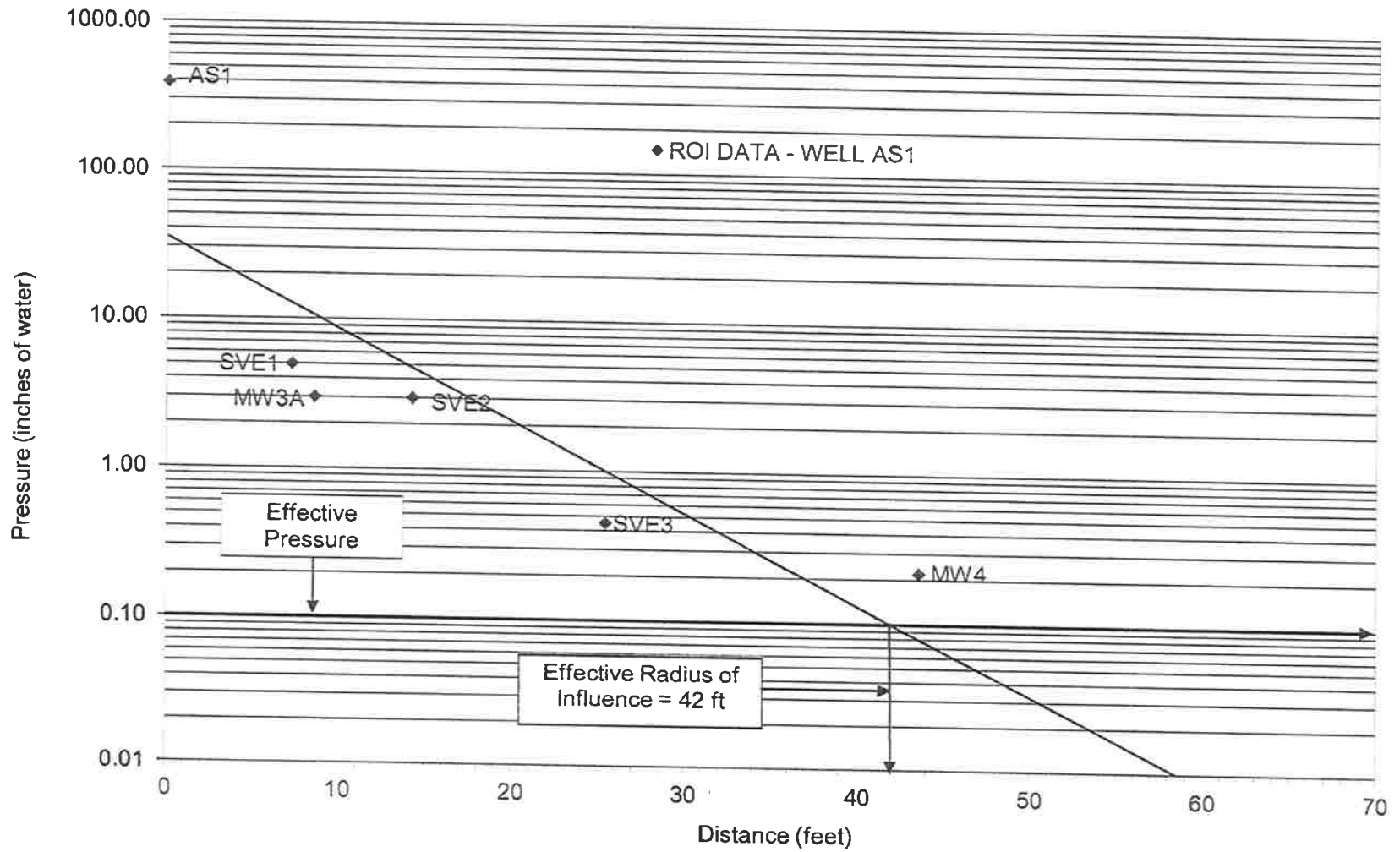


TABLE 1A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 79374
990 San Pablo Avenue
Albany, California

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)	T (µg/L)	E (µg/L)	X (µg/L)
Monitoring Well Samples															
MW1	11/04/10	---	Well installed.												
MW1	12/01/10	---	41.45	Well surveyed.											
MW1	12/16/10	---	41.45	9.18	32.27	No	---	<250	71a	54	<0.50	1.4	0.65	0.58	1.6
MW1	01/31/11	---	41.45	8.78	32.67	No	---	<250	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
MW1	04/07/11	---	41.45	8.45	33.00	No	---	<250	65a	160a	<0.50	2.9	0.92	<0.50	1.7
MW1	07/18/11	---	41.45	9.49	31.96	No	---	<250	<50	63a	<0.50	<0.50	<0.50	<0.50	<0.50
MW1	10/13/11	---	41.45	9.86	31.59	No	---	<250	54	<50	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	11/04/10	---	Well installed.												
MW2	12/01/10	---	41.25	Well surveyed.											
MW2	12/16/10	---	41.25	8.11	33.14	No	---	<250	110a	<50	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	01/31/11	---	41.25	9.29	31.96	No	---	<250	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	04/07/11	---	41.25	8.21	33.04	No	---	<250	<50	<50	0.51	<0.50	<0.50	<0.50	<0.50
MW2	07/18/11	---	41.25	9.52	31.73	No	---	<250	<50	54a	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	10/13/11	---	41.25	9.56	31.69	No	---	<250	98	75a	<0.50	<0.50	<0.50	<0.50	<0.50
MW3	11/08/10	---	Well installed.												
MW3	12/01/10	---	40.42	Well surveyed.											
MW3	12/16/10	---	40.42	8.18	32.24	No	---	<250	2,900a	19,000	<12	350	130	940	290
MW3	01/31/11	---	40.42	7.64	32.78	No	---	390	2,800a	17,000a	<12	540	140	700	270
MW3	04/07/11	---	40.42	5.88	34.54	No	---	<250	2,700a	14,000	<10	600	150	780	230
MW3	07/18/11	---	40.42	8.31	32.11	No	---	<250	1,700a	19,000	<10	650	140	660	220
MW3	10/13/11	---	40.42	8.76	31.66	No	---	<250	1,900a	16,000	<10	520	150	900	270
MW4	11/05/10	---	Well installed.												
MW4	12/01/10	---	39.30	Well surveyed.											
MW4	12/16/10	---	39.30	6.10	33.20	No	---	<250	2,000a	9,900	<5.0	440	40	170	380
MW4	01/31/11	---	39.30	6.84	32.46	No	---	260	3,900a	13,000	<10	500	59	320	740
MW4	04/07/11	---	39.30	5.29	34.01	No	---	<250	1,900a	9,600	<10	530	59	250	340
MW4	07/18/11	---	39.30	7.36	31.94	No	---	<250	2,800a	14,000	<10	570	66	320	510
MW4	10/13/11	---	39.30	7.83	31.47	No	---	320	7,200a	14,000	<10	350	43	340	690
MW5	11/11/10	---	Well installed.												
MW5	12/01/10	---	40.38	Well surveyed.											
MW5	12/16/10	---	40.38	7.69	32.69	No	---	<250	1,100a	6,200	<2.5	150	96	270	980
MW5	01/31/11	---	40.38	8.00	32.38	No	---	270	4,600a	15,000	<10	520	310	1,100	2,500
MW5	04/07/11	---	40.38	6.73	33.65	No	---	<250	610a	2,500	<2.5	61	32	180	390
MW5	07/18/11	---	40.38	7.63	32.75	No	---	<250	2,000a	11,000	<2.5	340	160	990	1,800
MW5	10/13/11	---	40.38	9.31	31.07	No	---	660	7,600a	23,000	<20	390	160	1,200	3,100

TABLE 1A
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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)	T (µg/L)	E (µg/L)	X (µg/L)
MW6	11/03/10	---	Well installed.												
MW6	12/01/10	---	41.06	Well surveyed.											
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	370a	890a	<0.50	2.8	<0.50	7.9	5.5
Grab Groundwater Samples															
B-1W	01/06/08	---	---	---	---	---	26r,s	<5,000	99,000o,n,r	76,000m,p,r	<50	<50	93	3,100	9,600
B-2W	01/06/08	---	---	---	---	---	---	310s	23,000o,r,s	77,000 l,r,s	<50	1,500	300	2,000	6,800
B-3W	01/06/08	---	---	---	---	---	---	<250s	2,000o,s	6,200 l,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	---	---	---	---	---	---	<250s	120o,s	120q,s	<0.5	<0.5	<0.5	<0.5	<0.5
B-6W	01/06/08	---	---	---	---	---	---	<250s	830o,s	1,700 l,s	<2.5	5.2	<2.5	100	8.6
DR-W	01/06/08	---	---	---	---	---	---	<250	96o	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	---	---	---	---	---	<420	<83	<50	<0.50	<0.50	<0.50	<0.50	<0.50
W-59-HP1B	10/27/10	59	---	---	---	---	---	<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	---	---	---	---	---	<250	62	<50	<0.50	<0.50	<0.50	<0.50	<0.50
W-10-SVE1-1	01/31/12	10	---	---	---	---	---	990a	1,900a	2,000	<2.0	87	2.1	13	23
W-10-SVE1-2	01/31/12	10	---	---	---	---	---	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	=	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.
a	=	Sample chromatographic pattern does not match that of the specified standard.
b	=	n-butylbenzene.
c	=	sec-butylbenzene.
d	=	Isopropylbenzene.
e	=	n-propylbenzene.
f	=	1,2,4-trimethylbenzene.
g	=	1,3,5-trimethylbenzene.
h	=	Naphthalene.
i	=	1-butanone.
j	=	1,2-dibromo-3-chloropropane.
k	=	2-methylnaphthalene.
l	=	Unmodified or weakly modified gasoline is significant.
m	=	Heavier gasoline range compounds are significant.
n	=	Diesel range compounds are significant; no recognizable pattern.
o	=	Gasoline range compounds are significant.
p	=	No recognizable pattern.
q	=	Strongly aged gasoline or diesel compounds are significant.
r	=	Lighter than water immiscible sheen/product is present.
s	=	Liquid sample that contains greater than approximately 1 volume % sediment.

TABLE 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)
Monitoring Well Samples										
MW1	12/16/10	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW1	01/31/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW1	04/07/11	---	<0.50	<0.50	<0.50	10	<0.50	<0.50	---	---
MW1	07/18/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW1	10/13/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW2	12/16/10	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW2	01/31/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW2	04/07/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW2	07/18/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW2	10/13/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW3	12/16/10	---	<12	<12	<12	<120	<12	<12	---	---
MW3	01/31/11	---	<12	<12	<12	<120	<12	<12	---	---
MW3	04/07/11	---	<10	<10	<10	<100	<10	<10	---	---
MW3	07/18/11	---	<10	<10	<10	<100	<10	<10	---	---
MW3	10/13/11	---	<10	<10	<10	<100	<10	<10	---	---
MW4	12/16/10	---	<5.0	<5.0	<5.0	<50	<5.0	<5.0	---	---
MW4	01/31/11	---	<10	<10	<10	<100	<10	<10	---	---
MW4	04/07/11	---	<10	<10	<10	<100	<10	<10	---	---
MW4	07/18/11	---	<10	<10	<10	<100	<10	<10	---	---
MW4	10/13/11	---	<10	<10	<10	<100	<10	<10	---	---
MW5	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	---	<2.5	<2.5	<2.5	<25	<2.5	<2.5	---	---
MW5	07/18/11	---	<2.5	<2.5	<2.5	<25	<2.5	<2.5	---	---
MW5	10/13/11	---	<20	<20	<20	<200	<20	<20	---	---
MW6	12/16/10	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW6	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	---	---
MW6	07/18/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW6	10/13/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
Grab Groundwater Samples										
B-1W	01/06/08	---	<50	<50	<50	<200	<50	<50	210b, 68c, 370d, 1,100e, 3,800f, 1,300g, 1,500h	4,000h, 3,900k
B-2W	01/06/08	---	<50	<50	<50	<200	<50	<50	110b, 140e, 440f, 2,400g, 730h, 610i, 32j	---
B-3W	01/06/08	---	<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)
B-4W	01/06/08	---	<10	<10	<10	<40	<10	<10	46b, 19c, 48d, 160e, 16f, 100h	---
B-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	---
B-6W	01/06/08	---	<2.5	<2.5	<2.5	<10	<2.5	<2.5	14b, 5.6c, 17d, 60e, 32f, 5.8g, 38h, 10i	---
DR-W	01/06/08	---	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	6.9b, 2.4c, 2.5d, 11e, 17f, 5.5g, 7.0h	---
W-27.5-HP1A	10/28/10	27.5	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
W-36-HP1A	10/28/10	36	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
W-46.5-HP1A	10/28/10	46.5	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
W-59-HP1B	10/27/10	59	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
W-27.5-HP2A	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	---	---
W-60.5-HP2B	10/27/10	60.5	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
W-10-SVE1-1	01/31/12	10	<2.0	<2.0	<2.0	62	<2.0	<2.0	---	---
W-10-SVE1-2	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

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

TABLE 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	---	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.

TABLE 2A
CUMULATIVE SOIL ANALYTICAL RESULTS
Former Exxon Service Station 79374
990 San Pablo Boulevard
Albany, California
(Page 1 of 3)

Sample ID	Sampling Date	Depth (feet bgs)	TPHmo (mg/kg)	TPHd (mg/kg)	TPHg (mg/kg)	MTBE (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	EDB (mg/kg)	1,2-DCA (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	Total Lead (mg/kg)
Soil Boring Samples																	
B-1	01/06/08	6.0	<5.0	3.7c	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--
B-1	01/06/08	10.5	<100	1,400b,c	7,200b,f	<5.0	2	51	110	400	--	--	--	--	--	--	--
B-2	01/06/08	5.5	<5.0	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--
B-2	01/06/08	10.5	<100	1,400d	4,500b,f	<5.0	13	35	100	380	--	--	--	--	--	--	--
B-3	01/06/08	5.5	<5.0	<1.0	<1.0	<0.50	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--
B-3	01/06/08	10.5	<5.0	53d	130e,f	<0.50	0.37	0.29	2.6	0.44	--	--	--	--	--	--	--
B-4	01/06/08	5.5	<5.0	62d	140e,f	<0.50	<0.005	1.0	0.066	0.094	--	--	--	--	--	--	--
B-4	01/06/08	10.5	<5.0	15d	140e,f	<0.50	0.25	1.5	1.3	0.11	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--
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	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	--
S-14.5-MW1	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	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	--
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	<0.050	<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	01/17/12	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	01/17/12	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	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	--
S-10-MW4	11/05/10	10.0	<25	<5.0	44a	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<1.0	<1.0	<1.0	--
S-15-MW4	11/05/10	15.0	<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-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	<0.050	<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	--

**TABLE 2A
CUMULATIVE SOIL ANALYTICAL RESULTS**

Former Exxon Service Station 79374
990 San Pablo Boulevard
Albany, California
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Sample ID	Sampling Date	Depth (feet bgs)	TPHmo (mg/kg)	TPHd (mg/kg)	TPHg (mg/kg)	MTBE (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	EDB (mg/kg)	1,2-DCA (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	Total Lead (mg/kg)
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	---
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	---
S-10-AS1	01/17/12	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-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	---
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	---
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	---	---	---	---	---	---	9.7
Soil Stockpile Samples																	
COMP(S-Profile-1-4)	11/08/10	---	<25	7.1a	14a	<0.0050	<0.0050	<0.0050	0.069	0.049	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	6.93
S-SP1 (1-4)	01/18/12	---	190a	39a	230.0	<0.0050	0.2	0.66	4.3	14	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	37.6

- Notes:
- S-15-MW4 = Soil - depth - monitoring well 4.
 - TPHmo = Total petroleum hydrocarbons as motor oil analyzed using EPA Method 8015B.
 - TPHd = Total petroleum hydrocarbons as diesel analyzed using EPA Method 8015B.
 - TPHg = Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015B.
 - MTBE = Methyl tertiary butyl ether analyzed using EPA Method 8260B; analyzed isong EPA Method 8020 in 2008.
 - 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.
 - TBA = Tertiary butyl alcohol analyzed using EPA Method 8260B.
 - DIPE = Di-isopropyl ether analyzed using EPA Method 8260B.
 - ETBE = Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
 - TAME = Tertiary amyl methyl ether analyzed using EPA Method 8260B.
 - Total Lead = Total lead analyzed using EPA Method 6010B.
 - 1,2,4-trimethylbenzene = 1,2,4-Trimethylbenzene analyzed using EPA Method 8260B.
 - 1,3,5-trimethylbenzene = 1,3,5-Trimethylbenzene analyzed using EPA Method 8260B.
 - Isopropyltoluene = Isopropyltoluene analyzed using EPA Method 8260B.
 - Naphthalene = Naphthalene analyzed using EPA Method 8260B.
 - n-Butylbenzene = n-Butylbenzene analyzed using EPA Method 8260B.

TABLE 2A
CUMULATIVE SOIL ANALYTICAL RESULTS

Former Exxon Service Station 79374
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Albany, California
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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'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.
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
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Sample ID	Sampling Date	Depth (feet bgs)	1,2,4-trimethyl-benzene (mg/kg)	1,3,5-trimethyl-benzene (mg/kg)	Isopropyl-benzene (mg/kg)	Naphthalene (mg/kg)	n-Butyl-benzene (mg/kg)	p-Isopropyl-toluene (mg/kg)	sec-Butyl-benzene (mg/kg)	t-Butyl-benzene (mg/kg)	Add'l HVOCs (mg/kg)
Soil Boring Samples											
Not analyzed for these analytes.											
Monitoring Well Samples											
Not analyzed for these analytes.											
Drum Samples											
Not analyzed for these analytes.											
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	0.1	<5.0	0.20	2.5	0.051	<0.0050	ND

Notes:

S-15-MW4	=	Soil - depth - monitoring well 4.
TPHmo	=	Total petroleum hydrocarbons as motor oil analyzed using EPA Method 8015B.
TPHd	=	Total petroleum hydrocarbons as diesel analyzed using EPA Method 8015B.
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015B.
MTBE	=	Methyl tertiary butyl ether analyzed using EPA Method 8260B; analyzed isong EPA Method 8020 in 2008.
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-Dicholoroethane analyzed using EPA Method 8260B.
TBA	=	Tertiary butyl alcohol analyzed using EPA Method 8260B.
DIPE	=	Di-isopropyl ether analyzed using EPA Method 8260B.
ETBE	=	Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
TAME	=	Tertiary amyl methyl ether analyzed using EPA Method 8260B.
Total Lead	=	Total lead analyzed using EPA Method 6010B.
1,2,4-trimethylbenzene	=	1,2,4-Trimethylbenzene analyzed using EPA Method 8260B.
1,3,5-trimethlynemzene	=	1,3,5-Trimethlynemzene analyzed using EPA Method 8260B.
Isopropyltoluene	=	Isopropyltoluene analyzed using EPA Method 8260B.

TABLE 2B
ADDITIONAL CUMULATIVE SOIL ANALYTICAL RESULTS - HVOCs
Former Exxon Service Station 79374
990 San Pablo Boulevard
Albany, California
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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.
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 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	40.95	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	41.07	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.

TABLE 4
AIR SPARGE/DUAL-PHASE EXTRACTION TEST- EXTRACTION WELL DATA
Former Exxon Service Station 79374
990 San Pablo Avenue
Albany, California
(Page 1 of 1)

Date	Time	Well Vacuum (in Hg)	Blower Vacuum (in Hg)	Air Flow from Well (fpm)	Air Flow from Well (scfm)	Vapor Temp (deg F)	Vapor Pressure (in H2O)	Sparge Flow (scfm)	Sparge Pressure (psi)	PID Influent (ppm)	PID Effluent (ppm)	Totalizer Reading (gallons)
Well SVE1 (DPE Only)												
01/31/12	8:05	18.0	21.0	2,050	103.4	60	4.0	---	---	3,230	0.0	804,700
01/31/12	8:40	19.0	21.5	1680	83.2	68	3.0	---	---	3,850	0.0	804,700
01/31/12	9:00	19.0	21.5	1,620	79.4	74	3.0	---	---	7,600	0.0	804,700
01/31/12	9:30	18.5	21.0	1,620	79.1	76	3.0	---	---	>9,000	0.0	804,710
01/31/12	10:15	18.5	20.5	1,615	78.2	79	2.0	---	---	>9,000	0.0	804,720
01/31/12	11:00	18.5	20.0	1,560	75.3	81	2.0	---	---	>9,000	0.0	804,720
01/31/12	11:50	18.5	21.0	1,510	72.7	82	2.0	---	---	>9,000	0.0	804,720
Wells AS1 and SVE1 (Combined AS/DPE)												
01/31/12	13:00	18.4	18.5	1,510	72.8	81	2.0	5.0	14	>9,000	0.0	804,720
01/31/12	13:30	18.5	18.5	1,500	72.0	84	2.0	5.0	13	>9,000	0.0	804,720
01/31/12	14:15	21.0	19.0	1,410	67.4	85	1.5	5.2	12	>9,000	0.0	804,720
01/31/12	15:15	19.2	21.0	1,410	68.5	77	2.0	5.2	11	>9,000	0.0	804,740
01/31/12	16:45	19.0	21.0	1,370	65.8	83	2.0	5.5	10	>9,000	0.0	804,740
Well AS1 (Sparge Only)												
02/01/12	8:05	---	---	---	---	---	---	5.3	14.0	---	---	---
02/01/12	8:45	---	---	---	---	---	---	5.2	12.0	---	---	---
02/01/12	9:30	---	---	---	---	---	---	5.2	11.0	---	---	---
02/01/12	10:15	---	---	---	---	---	---	5.5	11.0	---	---	---
02/01/12	11:00	---	---	---	---	---	---	5.5	10.0	---	---	---
02/01/12	11:45	---	---	---	---	---	---	5.5	10.0	---	---	---
Total Groundwater Generated =												40

- Notes:
- Time = Time on a twenty-four hour clock.
 - Temp = Temperature.
 - PID = Photo-ionization detector.
 - in Hg = Inches of mercury vacuum.
 - in H2O = Inches of water vacuum.
 - fpm = Feet per minute.
 - scfm = Standard cubic feet per minute.
 - deg F = Degrees Fahrenheit.
 - psi = Pounds per square inch.
 - ppm = Parts per million.
 - > = Greater than the stated value.
 -

TABLE 5
AR SPARGE/DUAL-PHASE EXTRACTION TEST - OBSERVATION WELL DATA
 Former Exxon Service Station 79374
 990 San Pablo Avenue
 Albany, California
 (Page 1 of 1)

Date	Time (hrs)	Elapsed Time (hr:min)	Observation Wells																									
			SVE1 (0' - 0")				SVE2 (12' - 3")				SVE3 (31' - 7")				MW3A (10' - 7")				MW3 (14' - 2")				MW4 (39' - 1")				AS1 (7' - 3")	
			Vacuum (in Hg)	Pressure (in H ₂ O)	D.O.	DTW (feet)	Vacuum (in H ₂ O)	Pressure (in H ₂ O)	D.O.	DTW (feet)	Vacuum (in H ₂ O)	Pressure (in H ₂ O)	D.O.	DTW (feet)	Vacuum (in H ₂ O)	Pressure (in H ₂ O)	D.O.	DTW (feet)	Vacuum (in H ₂ O)	Pressure (in H ₂ O)	D.O.	DTW (feet)	Vacuum (in H ₂ O)	Pressure (in H ₂ O)	D.O.	DTW (feet)	Vacuum (in H ₂ O)	Pressure (PSI)
Pre Test Readings																												
01/30/12	13:30	0:00	--	--	2.71	8.54	--	--	2.16	8.97	--	--	0.78	8.84	--	--	0.45	8.75	--	--	1.30	8.28	--	--	0.31	6.96	--	--
Well SVE1 (DPE Only)																												
01/31/12	8:30	0:30	19.0	--	--	--	10.0	--	--	--	1.0	--	--	--	6.0	--	--	--	3.0	--	--	--	1.00	--	--	--	2.0	--
01/31/12	9:30	1:30	18.5	--	--	--	15.0	--	--	--	2.1	--	--	--	8.1	--	--	--	4.5	--	--	--	0.63	--	--	--	1.8	--
01/31/12	10:15	2:15	18.5	--	--	--	15.0	--	--	--	2.0	--	--	--	8.2	--	--	--	4.5	--	--	--	0.45	--	--	--	1.6	--
01/31/12	11:00	3:00	18.5	--	--	--	18.0	--	--	--	2.0	--	--	--	8.5	--	--	--	5.0	--	--	--	0.34	--	--	--	1.6	--
01/31/12	11:50	3:50	18.5	--	--	--	17.5	--	--	--	2.2	--	--	--	8.5	--	--	--	5.0	--	--	7.33	0.29	--	--	7.33	1.6	--
01/31/12	12:15	4:15	--	--	0.55	11.51	--	--	1.68	9.42	--	--	0.70	8.97	--	--	0.67	8.73	--	--	1.40	8.75	--	--	0.40	7.26	--	--
Wells AS1 and SVE1 (Combined AS/DPE)																												
01/31/12	13:00	5:00	18.4	--	0.60	11.57	13.0	--	1.55	9.51	1.2	--	0.70	8.98	5.5	--	0.90	8.96	1.2	--	0.70	9.13	0.22	--	0.75	7.25	--	14
01/31/12	14:15	6:15	19.0	--	--	--	10.0	--	--	--	1.0	--	--	--	4.5	--	--	--	2.2	--	--	--	0.08	--	--	--	--	12
01/31/12	15:15	7:15	19.2	--	--	--	10.4	--	--	--	1.1	--	--	--	5.0	--	--	--	1.6	--	--	--	0.18	--	--	--	--	11
01/31/12	16:15	8:15	19.0	--	--	--	10.1	--	--	--	1.0	--	--	--	5.0	--	--	--	1.9	--	--	--	0.20	--	--	--	--	10
Well AS1 (AS Only)																												
02/01/12	7:30	0:00	--	--	0.20	9.25	--	--	1.22	9.25	--	--	0.59	8.96	--	--	0.36	8.51	--	--	0.39	8.94	--	--	0.60	7.20	--	--
02/01/12	8:15	0:15	--	5.0	--	--	--	3.0	--	--	--	0.45	--	--	--	3.0	--	--	--	0.12	--	--	--	0.1	--	--	--	--
02/01/12	8:45	0:45	--	5.0	--	--	--	3.0	--	--	--	0.45	--	--	--	3.0	--	--	--	0.24	--	--	--	0.1	--	--	--	--
02/01/12	9:00	1:00	--	--	0.25	8.98	--	--	1.17	9.27	--	--	0.67	8.89	--	--	0.73	8.49	--	--	0.70	8.95	--	--	0.30	7.17	--	--
02/01/12	9:30	1:30	--	5.0	--	--	--	3.0	--	--	--	0.43	--	--	--	3.0	--	--	--	0.78	--	--	--	0.1	--	--	--	--
02/01/12	10:00	2:00	--	--	0.30	8.99	--	--	0.96	9.26	--	--	0.44	8.83	--	--	0.75	8.49	--	--	0.55	8.98	--	--	0.26	7.18	--	--
02/01/12	10:15	2:15	--	5.0	--	--	--	3.0	--	--	--	0.45	--	--	--	3.0	--	--	--	1.10	--	--	--	0.1	--	--	--	--
02/01/12	11:00	3:00	--	5.0	0.30	9.01	--	3.0	1.00	9.28	--	0.44	0.40	8.85	--	3.0	0.70	8.45	--	0.80	0.80	8.94	--	0.26	0.18	7.19	--	--
02/01/12	11:45	3:45	--	5.0	--	--	--	3.0	--	--	--	0.44	--	--	--	3.0	--	--	--	0.70	--	--	--	0.22	--	--	--	--
02/01/12	12:00	4:00	--	--	0.36	9.01	--	--	0.75	9.26	--	--	0.43	8.81	--	--	0.70	8.40	--	--	0.68	8.91	--	--	0.45	7.17	--	--

- Notes:
- Time = Time presented using a 24-hour clock.
 - DTW = Depth to water.
 - (68ft 11in) = Distance from extraction well.
 - hrs = Hours.
 - min = Minutes.
 - in Hg = Inches of mercury vacuum.
 - in H₂O = Inches of water column.
 - ft = Feet.
 - in = Inches.
 - = Reading not taken.

TABLE 6
AIR SPARGE/DUAL-PHASE EXTRACTION TEST - SOIL VAPOR ANALYTICAL RESULTS

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

Extraction Well	Sample ID	Sampling Date	Time	TPHg (mg/m ³)	MTBE (mg/m ³)	B (mg/m ³)	T (mg/m ³)	E (mg/m ³)	X (mg/m ³)
Well SVE1 (DPE Only)									
SVE1	V-INF-VC0-1	01/31/12	8:45	75,000	<3.6	46	<9.4	9.9	13
SVE1	V-INF-VC0-2	01/31/12	11:00	40,000	<3.6	41	<9.4	8.3	10
SVE1	V-INF-VC0-3	01/31/12	12:00	35,000	<3.6	40	<9.4	7.9	8.9
SVE1	V-DSCHG-1	01/31/12	8:40	8.2	<0.0072	<0.0016	<0.019	<0.0022	<0.0087
SVE1	V-DSCHG-2	01/31/12	11:55	10	<0.0072	<0.0016	<0.019	<0.0022	<0.0087
Well AS1 and SVE1 (Combined AS/DPE)									
SVE1	V-INF-VC0-4	01/31/12	13:20	33,000	<3.6	39	<9.4	19	12
SVE1	V-INF-VC0-1	01/31/12	15:20	29,000	<9.0	46	<24	29	24
SVE1	V-INF-VC0-2	01/31/12	16:45	27,000	<7.2	42	<19	35	26
SVE1	V-DSCHG-3	01/31/12	13:15	10	<0.0072	<0.0016	0.021	<0.0022	<0.0087
SVE1	V-DSCHG	01/31/12	16:40	<7.0	<0.0072	<0.0016	<0.019	<0.0022	<0.0087

Notes:

- V-INF-VC0 = Soil vapor sample collected at the influent sample port.
- V-DSCHG = Soil vapor sample collected at the effluent sample port.
- TPHg = Total petroleum hydrocarbons as gasoline analyzed using EPA Method TO-3M.
- BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method TO-15M.
- MTBE = Methyl tertiary butyl ether analyzed using EPA Method TO-15M.
- (mg/m³) = Milligrams per cubic meter.
- < = Less than the stated laboratory reporting limit.

TABLE 7
AIR SPARGE/DUAL-PHASE EXTRACTION TEST - VAPOR-PHASE HYDROCARBON REMOVAL
Former Exxon Service Station 79374
990 San Pablo Avenue
Albany, California
(Page 1 of 1)

Date	Time	Sample ID	Field Measurements						Laboratory Analytical Results			TPH _g Removal		MTBE Removal		Benzene Removal			
			Hours of Operation	Temp (deg F)	Press (in H ₂ O)	Flow (fpm)	Flow (scfm)	PID (ppmv)	TPH _g (mg/m ³)	MTBE (mg/m ³)	Benzene (mg/m ³)	Per Period (lbs)	Cumulative (lbs)	Per Period (lbs)	Cumulative (lbs)	Per Period (lbs)	Cumulative (lbs)		
SVE Feasibility Test - SVE1 (DPE Only)																			
01/31/12	8:45	V-INF-VC0-1	0.8	68	3.0	1,680	83.2	3,850	75,000	<3.6	46	17.50	17,504	<	0.0008	<	0.0008	0.0107	0.0107
01/31/12	11:00	V-INF-VC0-2	3.0	81	2.0	1,560	75.3	>9,000	40,000	<3.6	41	38.35	55,851	<	0.0024	<	0.0032	0.0290	0.0397
01/31/12	12:00	V-INF-VC0-3	4.0	82	2.0	1,510	72.7	>9,000	35,000	<3.6	40	10.38	66,229	<	0.0010	<	0.0042	0.0112	0.0510
TOTALS:													66.229	<	0.0042	0.0510			
AS/SVE Feasibility Test - AS1 and SVE1 (Combined AS/DPE)																			
01/31/12	13:20	V-INF-VC0-4	0.3	84	2.0	1,500	72.0	>9,000	33,000	<3.6	39	2.93	2,933	<	0.0003	<	0.0003	0.0035	0.0035
01/31/12	15:20	V-INF-VC0-1	2.3	77	2.0	1,410	68.5	>9,000	29,000	<9.0	46	16.29	19,222	<	0.0033	<	0.0036	0.0223	0.0258
01/31/12	16:45	V-INF-VC0-2	3.4	83	2.0	1,370	65.8	>9,000	27,000	<7.2	42	7.67	26,887	<	0.0022	<	0.0058	0.0120	0.0378
TOTALS:													26.887	<	0.0058	0.0378			
CUMULATIVE TOTALS:													93.117	<	0.0101	0.0888			

Notes:

- V-INF-OX0 = Influent soil vapor sample (collected prior to vapor abatement).
- TPH_g = Total petroleum hydrocarbons as gasoline analyzed using EPA Method TO-3M.
- MTBE = Methyl tertiary butyl ether analyzed using EPA Method TO-15M.
- Benzene = Benzene analyzed using EPA Method TO-15M.
- deg F = Degrees Fahrenheit.
- psi = Pounds per square inch.
- in H₂O = Inches of water column.
- fpm = Feet per minute.
- scfm = Standard cubic feet per minute.
- mg/m³ = Milligrams per cubic meter.
- lbs = Pounds.
- ppmv = Parts per million by volume.
- < = Less than the stated laboratory reporting limit.

Removal rates are calculated using SOP-25: "Hydrocarbons Removed from A Vadose Well."



Appendix A

Correspondence



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. **Future Maps** – 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

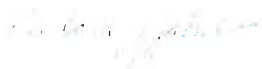
TECHNICAL REPORT REQUEST

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
DN: cn=Barbara J. Jakub, o, ou,
email=barbara.jakub@acgov.org,
c=US
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 Momingside 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: barbara.jakub@acgov.org)
GeoTracker, file

Attachment 1

Responsible Party(ies) Legal Requirements/Obligations

REPORT REQUESTS

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

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "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." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	REVISION DATE: July 20, 2010
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010
SECTION: Miscellaneous Administrative Topics & Procedures	SUBJECT: Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- **Please do not submit reports as attachments to electronic mail.**
- Entire report including cover letter must be submitted to the ftp site as a **single portable document format (PDF) with no password protection.**
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- **Signature pages and perjury statements must be included and have either original or electronic signature.**
- **Do not password protect the document.** Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:

RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Submission Instructions

- 1) Obtain User Name and Password
 - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
 - i) Send an e-mail to deh.loptoxic@acgov.org
 - b) In the subject line of your request, be sure to include "**ftp PASSWORD REQUEST**" and in the body of your request, include the **Contact Information, Site Addresses, and the Case Numbers (RO# available in Geotracker) you will be posting for.**

- 2) Upload Files to the ftp Site
 - a) Using Internet Explorer (IE4+), go to <ftp://alcoftp1.acgov.org>
 - (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
 - b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
 - c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
 - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
 - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
 - a) Send email to deh.loptoxic@acgov.org notify us that you have placed a report on our ftp site.
 - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
 - c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
 - d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.



Appendix B

Field Protocols

**Cardno ERI
Air Sparge/Soil Vapor Extraction Feasibility Test
Field Protocol**

Procedure

The purpose of the test is to measure the effect of air sparging on extracted soil vapor concentrations and to obtain data regarding engineering design parameters. The test uses a sparge/extraction and treatment system as specified by the permit for air sparge/soil vapor extraction (AS/SVE). The fieldwork is performed in accordance with the site-specific safety plan, which is available at the job site during field activities.

The test is conducted in three phases. The first phase is conducted in two parts to obtain an extracted air flow rate versus applied vacuum curve, and to obtain the extraction radius of influence (ROI) and extracted hydrocarbon concentrations. The second phase is conducted to obtain the AS pressure ROI. The third phase is conducted to evaluate the change in hydrocarbon vapor concentrations with AS as opposed to SVE alone.

Prior to the application of vacuum, several parameters are recorded to establish baseline test data. These include static groundwater levels in groundwater observation wells, dissolved oxygen in groundwater observation wells, and initial vacuum, if any, in observation and extraction wells.

Phase I

A vacuum is applied to the extraction SVE well, which is located within the area of interest. Induced vacuum is monitored at the surrounding SVE observation wells, which are located at various distances from the extraction well. One observation well is located outside the expected influence of the test to monitor changes in barometric pressure. Magnehelic gauges are attached to the wells and set to read zero vacuum.

Phase I, Part I – SVE Step Test

1. Starting from a low vacuum, the vacuum applied at the wellhead is increased approximately every 5 minutes in 5 to 10 steps until the maximum applied vacuum has been achieved.
2. Photo-ionization detector (PID) readings are recorded during each step at the extraction unit and/or the wellhead.
3. The applied vacuum and flow reading in standard cubic feet per minute (scfm) are recorded for each step at the extraction unit and/or the wellhead.
4. An influent soil vapor sample may be collected during the test and submitted for laboratory analysis.

The procedure may be repeated for additional extraction wells located in other areas of the site.

Phase I, Part II – SVE Radius of Influence

1. Vacuum readings in inches of water are recorded a minimum of every ½ hour at the vapor extraction unit and wellhead.
2. PID readings are recorded a minimum of every ½ hour at the extraction unit and wellhead.
3. Flow readings in scfm are recorded a minimum of every ½ hour at the extraction unit and wellhead.
4. At a minimum, influent soil vapor samples are collected at the beginning and end of the test and submitted for laboratory analysis.
5. Induced vacuum readings in the SVE observation wells are recorded every 15 minutes for the first hour and every 30 minutes thereafter.

The vacuum unit is connected to the extraction well for a period of 4 hours for each ROI vacuum, or until induced vacuum has stabilized, whichever comes first. The procedure is performed for at least three different wellhead vacuums in increasing order for the initial test well and may be repeated for additional extraction wells located in other areas of the site.

Phase II – Air Sparge Radius of Influence

Air is injected into the sparge well, which is located within the area of interest. Induced pressure is monitored at the surrounding AS or groundwater observation wells, which are located at various distances from the injection well. One observation well is located outside the expected influence of the test to monitor changes in barometric pressure. Magnehelic gauges are attached to the wells and set to read zero vacuum. The test will be started at an applied pressure of 5 pounds per square inch (psi). Pressure is incrementally increased by 5 psi until 30 psi are reached or until a flow rate of 10 scfm can be sustained.

1. Compressor pressure and flow are recorded every 15 minutes for the first hour and then every 30 minutes thereafter.
2. Positive pressure measurements are recorded from select observation wells at 15-minute intervals for the first hour and every 30 minutes thereafter.
3. Depth to water measurements are recorded hourly from perimeter groundwater monitoring wells located at varying distances from the AS test area to determine if groundwater mounding is occurring.
4. Dissolved oxygen measurements are collected periodically from perimeter monitoring wells.

The sparge unit is connected to the injection well for a period of 4 hours, or until induced pressure has stabilized, whichever comes first. If desired, the procedure can be performed for different wellhead pressures in increasing order for the initial test well and may be repeated for additional injection wells located in other areas of the site.

Phase III – Combined Air Sparge and Soil Vapor Extraction

1. Vacuum readings in inches of water are recorded every 15 minutes, then every 30 minutes thereafter at the vapor extraction unit and extraction wellhead.
2. PID readings are recorded every hour at the vapor extraction unit and extraction wellhead.
3. Flow readings in scfm are recorded every hour at the vapor extraction unit and extraction wellhead.
4. Positive pressure and flow are measured periodically at the compressor.
5. Positive pressure is measured in several observation wells located at varying distances from the AS/SVE test area.
6. Dissolved oxygen measurements are recorded periodically from perimeter wells.
7. Influent vapor samples are collected at the beginning, middle and end of the test and submitted for laboratory analysis.

Appendix C

Laboratory Analytical Reports



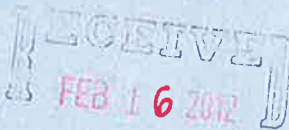
CALSCIENCE

WORK ORDER NUMBER: 12-02-0109

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY



BY:

Analytical Report For

Client: Cardno ERI

Client Project Name: ExxonMobil 79374/022735C

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

Cecile de Guia

Approved for release on 02/10/2012 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.



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Work Order Number: 12-02-0109

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Analytical Report



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

Date Received: 02/02/12
Work Order No: 12-02-0109
Preparation: EPA 3510C
Method: EPA 8015B (M)

Project: ExxonMobil 79374/022735C

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-10-SVE1-1	12-02-0109-1-H	01/31/12 09:45	Aqueous	GC 43	02/03/12	02/06/12 20:05	120203B15

Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	1900	50	1	SG,HD	ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	111	68-140			

W-10-SVE1-2	12-02-0109-2-H	01/31/12 15:00	Aqueous	GC 43	02/03/12	02/06/12 20:25	120203B15
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Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	1500	50	1	SG,HD	ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	110	68-140			

Method Blank	099-12-330-2,137	N/A	Aqueous	GC 43	02/03/12	02/06/12 18:25	120203B15
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Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	ND	50	1	U	ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	125	68-140			

Please see Comments

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



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

Date Received: 02/02/12
Work Order No: 12-02-0109
Preparation: EPA 3510C
Method: EPA 8015B (M)

Project: ExxonMobil 79374/022735C

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-10-SVE1-1	12-02-0109-1-H	01/31/12 09:45	Aqueous	GC 43	02/03/12	02/06/12 20:05	120203B16

Parameter	Result	RL	DF	Qual	Units
TPH as Motor Oil	990	250	1	SG,HD	ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	111	68-140			

W-10-SVE1-2	12-02-0109-2-H	01/31/12 15:00	Aqueous	GC 43	02/03/12	02/06/12 20:25	120203B16
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Parameter	Result	RL	DF	Qual	Units
TPH as Motor Oil	890	250	1	SG,HD	ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	110	68-140			

Method Blank	099-12-234-1,025	N/A	Aqueous	GC 43	02/03/12	02/06/12 18:25	120203B16
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Parameter	Result	RL	DF	Qual	Units
TPH as Motor Oil	ND	250	1	U	ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	125	68-140			

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

Analytical Report



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

Date Received: 02/02/12
Work Order No: 12-02-0109
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project: ExxonMobil 79374/022735C

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-10-SVE1-1	12-02-0109-1-E	01/31/12 09:45	Aqueous	GC 57	02/03/12	02/03/12 15:11	120203B01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	2000	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	103	38-134			

W-10-SVE1-2	12-02-0109-2-D	01/31/12 15:00	Aqueous	GC 57	02/03/12	02/03/12 15:42	120203B01
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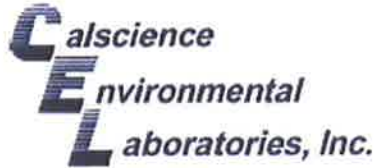
Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	1400	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	92	38-134			

Method Blank	099-12-436-7,094	N/A		Aqueous	GC 57	02/03/12 12:03	120203B01
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1	U	ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	86	38-134			

INCLIP IS CONTINUING

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



Analytical Report



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

Date Received: 02/02/12
Work Order No: 12-02-0109
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 79374/022735C

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-10-SVE1-1	12-02-0109-1-B	01/31/12 09:45	Aqueous	GC/MS L	02/06/12	02/07/12 06:01	120206L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	87	2.0	4		Diisopropyl Ether (DIPE)	ND	2.0	4	U
Toluene	2.1	2.0	4		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	4	U
Ethylbenzene	13	2.0	4		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	4	U
Xylenes (total)	23	2.0	4		1,2-Dibromoethane	ND	2.0	4	U
Methyl-t-Butyl Ether (MTBE)	ND	2.0	4	U	1,2-Dichloroethane	ND	2.0	4	U
Tert-Butyl Alcohol (TBA)	62	20	4						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	102	68-120			Dibromofluoromethane	102	80-127		
1,2-Dichloroethane-d4	111	80-128			Toluene-d8	100	80-120		

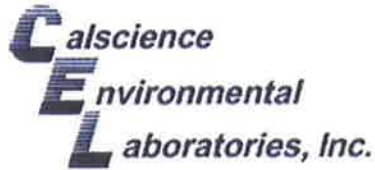
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-10-SVE1-2	12-02-0109-2-B	01/31/12 15:00	Aqueous	GC/MS L	02/06/12	02/07/12 06:28	120206L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	46	1.0	2		Diisopropyl Ether (DIPE)	ND	1.0	2	U
Toluene	2.0	1.0	2		Ethyl-t-Butyl Ether (ETBE)	ND	1.0	2	U
Ethylbenzene	24	1.0	2		Tert-Amyl-Methyl Ether (TAME)	ND	1.0	2	U
Xylenes (total)	23	1.0	2		1,2-Dibromoethane	ND	1.0	2	U
Methyl-t-Butyl Ether (MTBE)	ND	1.0	2	U	1,2-Dichloroethane	ND	1.0	2	U
Tert-Butyl Alcohol (TBA)	57	10	2						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	101	68-120			Dibromofluoromethane	103	80-127		
1,2-Dichloroethane-d4	108	80-128			Toluene-d8	104	80-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-884-780	N/A	Aqueous	GC/MS L	02/06/12	02/07/12 00:04	120206L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1	U	Diisopropyl Ether (DIPE)	ND	0.50	1	U
Toluene	ND	0.50	1	U	Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	U
Ethylbenzene	ND	0.50	1	U	Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	U
Xylenes (total)	ND	0.50	1	U	1,2-Dibromoethane	ND	0.50	1	U
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	U	1,2-Dichloroethane	ND	0.50	1	U
Tert-Butyl Alcohol (TBA)	ND	5.0	1	U					
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	93	68-120			Dibromofluoromethane	112	80-127		
1,2-Dichloroethane-d4	116	80-128			Toluene-d8	100	80-120		

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



Quality Control - Spike/Spike Duplicate



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

Date Received: 02/02/12
Work Order No: 12-02-0109
Preparation: EPA 5030C
Method: EPA 8015B (M)

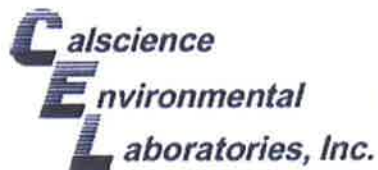
Project ExxonMobil 79374/022735C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-02-0094-1	Aqueous	GC 57	02/03/12	02/03/12	120203S01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	2000	98	100	68-122	1	0-18	



RPD - Relative Percent Difference, CL - Control Limit



Quality Control - Spike/Spike Duplicate



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

Date Received: 02/02/12
Work Order No: 12-02-0109
Preparation: EPA 5030C
Method: EPA 8260B

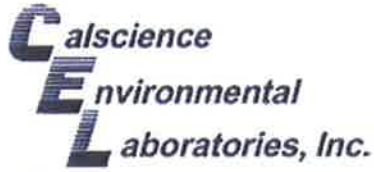
Project ExxonMobil 79374/022735C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-02-0220-3	Aqueous	GC/MS L	02/06/12	02/07/12	120206S02

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	10.00	102	99	76-124	3	0-20	
Toluene	10.00	105	101	80-120	4	0-20	
Ethylbenzene	10.00	102	99	78-126	2	0-20	
Methyl-t-Butyl Ether (MTBE)	10.00	120	119	67-121	1	0-49	
Tert-Butyl Alcohol (TBA)	50.00	109	113	36-162	4	0-30	
Diisopropyl Ether (DIPE)	10.00	122	117	60-138	4	0-45	
Ethyl-t-Butyl Ether (ETBE)	10.00	113	110	69-123	2	0-30	
Tert-Amyl-Methyl Ether (TAME)	10.00	102	102	65-120	0	0-20	
Ethanol	100.0	112	108	30-180	4	0-72	
1,2-Dibromoethane	10.00	101	102	80-120	2	0-20	
1,2-Dichloroethane	10.00	106	101	80-120	5	0-20	

RPD - Relative Percent Difference, CL - Control Limit

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Quality Control - LCS/LCS Duplicate



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

Date Received: N/A
Work Order No: 12-02-0109
Preparation: EPA 3510C
Method: EPA 8015B (M)

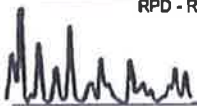
Project: ExxonMobil 79374/022735C

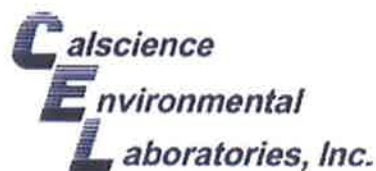
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-234-1,025	Aqueous	GC 43	02/03/12	02/06/12	120203B16

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Motor Oil	2000	104	104	75-117	0	0-13	

Supplies Center

RPD - Relative Percent Difference . CL - Control Limit





Quality Control - LCS/LCS Duplicate



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

Date Received: N/A
Work Order No: 12-02-0109
Preparation: EPA 3510C
Method: EPA 8015B (M)

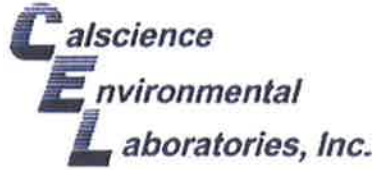
Project: ExxonMobil 79374/022735C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-330-2,137	Aqueous	GC 43	02/03/12	02/08/12	120203B15

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Diesel	2000	102	99	75-117	3	0-13	


 12-02-0109

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate



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

Date Received: N/A
Work Order No: 12-02-0109
Preparation: EPA 5030C
Method: EPA 8015B (M)

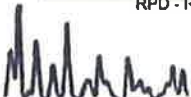
Project: ExxonMobil 79374/022735C

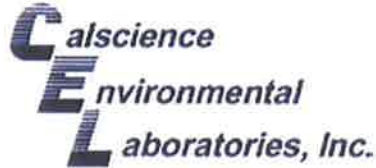
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-436-7,094	Aqueous	GC 57	02/03/12	02/03/12	120203B01

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	2000	94	95	78-120	0	0-10	



RPD - Relative Percent Difference . CL - Control Limit





Quality Control - LCS/LCS Duplicate



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

Date Received: N/A
Work Order No: 12-02-0109
Preparation: EPA 5030C
Method: EPA 8260B

Project: ExxonMobil 79374/022735C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-884-780	Aqueous	GC/MS L	02/06/12	02/06/12	120206L02			
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	10.00	105	108	80-120	73-127	2	0-20	
Toluene	10.00	107	105	80-120	73-127	2	0-20	
Ethylbenzene	10.00	100	100	80-120	73-127	1	0-20	
Methyl-t-Butyl Ether (MTBE)	10.00	118	121	69-123	60-132	2	0-20	
Tert-Butyl Alcohol (TBA)	50.00	105	96	63-123	53-133	9	0-20	
Diisopropyl Ether (DIPE)	10.00	122	121	59-137	46-150	1	0-37	
Ethyl-t-Butyl Ether (ETBE)	10.00	118	118	69-123	60-132	0	0-20	
Tert-Amyl-Methyl Ether (TAME)	10.00	107	110	70-120	62-128	3	0-20	
Ethanol	100.0	110	102	28-160	6-182	7	0-57	
1,2-Dibromoethane	10.00	103	108	79-121	72-128	5	0-20	
1,2-Dichloroethane	10.00	109	110	80-120	73-127	1	0-20	

Total number of LCS compounds : 11
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

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Work Order Number: 12-02-0109

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

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



0109

		< WebShip > >>>> 800-322-5555 www.gso.com	
Ship From: ALAN KEMP CAL SCIENCE- CONCORD 5063 COMMERCIAL CIRCLE #H CONCORD, CA 94520		Tracking #: 518367215 	NPS
Ship To: SAMPLE RECEIVING CEL 7440 LINCOLN WAY GARDEN GROVE, CA 92841		ORC GARDEN GROVE	
COD: \$0.00		D92841A  98239472	
Reference: CARDNO ERI, LD XXXXXXXXXX NTAL			
Delivery Instructions:			
Signature Type: SIGNATURE REQUIRED		Print Date : 02/01/12 15:25 PM	

Package 1 of 1

Print All

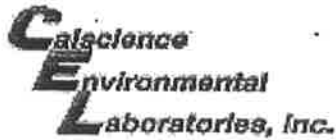
LABEL INSTRUCTIONS:

- Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
- STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.
- STEP 2 - Fold this page in half.
- STEP 3 - Securely attach this label to your package, do not cover the barcode.
- STEP 4 - Request an on-call pickup for your package, if you do not have scheduled daily pickup service or Drop-off your package at the nearest GSO drop box. Locate nearest GSO dropbox locations using this link.

ADDITIONAL OPTIONS:

TERMS AND CONDITIONS:

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



WORK ORDER #: 12-02-0109

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Cardno ERI

DATE: 02/02/12

TEMPERATURE: Thermometer ID: SC3 (Criteria: 0.0°C - 6.0°C, not frozen)

Temperature 2.7 °C - 0.3°C (CF) = 2.4 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____).

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter

Initial: [Signature]

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Initial: [Signature]

Sample _____ No (Not Intact) Not Present Initial: [Signature]

SAMPLE CONDITION:

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

CONTAINER TYPE:

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

Water: VOA VOA_h VOA_{na2} 125AGB 125AGB_h 125AGB_p 1AGB 1AGB_{na2} 1AGB_s

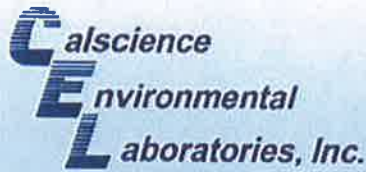
500AGB 500AGJ 500AGJ_s 250AGB 250CGB 250CGB_s 1PB 1PB_{na} 500PB

250PB 250PB_n 125PB 125PB_{znna} 100PJ 100PJ_{na2} _____ _____ _____

Air: Tedlar® Summa® Other: _____ Trip Blank Lot#: _____ Labeled/Checked by: [Signature]

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

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



CALSCIENCE

WORK ORDER NUMBER: 12-02-0115

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

RECEIVED
FEB 07 2012

BY:.....

Analytical Report For

Client: Cardno ERI

Client Project Name: ExxonMobil 79374/022735C

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

Cecile de Guia

Approved for release on 02/3/2012 by:
Cecile deGuia
Project Manager

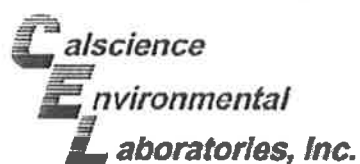
ResultLink ▶

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: 12-02-0115

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

Date Received: 02/02/12
Work Order No: 12-02-0115
Preparation: N/A
Method: EPA TO-15M
Units: mg/m3

Project: ExxonMobil 79374/022735C

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V-INF-VC0-1	12-02-0115-1-A	01/31/12 15:20	Air	GC/MS II	N/A	02/02/12 16:26	120202L01

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

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	46	2.0	1250		Xylenes (total)	24	11	1250	
Toluene	ND	24	1250	U	Methyl-t-Butyl Ether (MTBE)	ND	9.0	1250	U
Ethylbenzene	29	2.7	1250						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	102	57-129			1,2-Dichloroethane-d4	87	47-137		
Toluene-d8	64	78-156	AZ						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V-INF-VC0-2	12-02-0115-2-A	01/31/12 16:45	Air	GC/MS II	N/A	02/02/12 17:13	120202L01

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

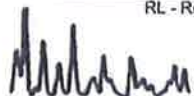
Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	42	1.6	1000		Xylenes (total)	26	8.7	1000	
Toluene	ND	19	1000	U	Methyl-t-Butyl Ether (MTBE)	ND	7.2	1000	U
Ethylbenzene	35	2.2	1000						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	103	57-129			1,2-Dichloroethane-d4	86	47-137		
Toluene-d8	63	78-156	AZ						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V-DSCHG	12-02-0115-3-A	01/31/12 16:40	Air	GC/MS II	N/A	02/02/12 14:44	120202L01

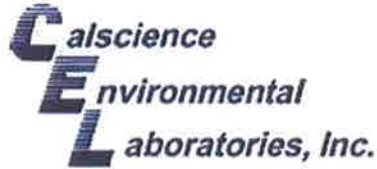
Comment(s): -The method has been modified to use Tedlar Bags instead of Summa canisters and is not NY NELAC accredited.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1	U	Xylenes (total)	ND	0.0087	1	U
Toluene	ND	0.019	1	U	Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	U
Ethylbenzene	ND	0.0022	1	U					
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	85	57-129			1,2-Dichloroethane-d4	90	47-137		
Toluene-d8	84	78-156							

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



Return to Contents



Analytical Report



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

Date Received: 02/02/12
Work Order No: 12-02-0115
Preparation: N/A
Method: EPA TO-15M
Units: mg/m3

Project: ExxonMobil 79374/022735C

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-983-2,105	N/A	Air	GC/MS II	N/A	02/02/12 13:44	120202L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1	U	Xylenes (total)	ND	0.0087	1	U
Toluene	ND	0.019	1	U	Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	U
Ethylbenzene	ND	0.0022	1	U					
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>	
1,4-Bromofluorobenzene	99	57-129			1,2-Dichloroethane-d4	89	47-137		
Toluene-d8	91	78-156							

Return to Contents

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

Analytical Report



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

Date Received: 02/02/12
Work Order No: 12-02-0115
Preparation: N/A
Method: EPA TO-3M

Project: ExxonMobil 79374/022735C

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V-INF-VC0-1	12-02-0115-1-A	01/31/12 15:20	Air	GC 53	N/A	02/02/12 15:42	120202L02

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	29000	350	50		mg/m3

V-INF-VC0-2	12-02-0115-2-A	01/31/12 16:45	Air	GC 53	N/A	02/02/12 16:09	120202L02
-------------	----------------	-------------------	-----	-------	-----	-------------------	-----------

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	27000	350	50		mg/m3

V-DSCHG	12-02-0115-3-A	01/31/12 16:40	Air	GC 53	N/A	02/02/12 13:14	120202L02
---------	----------------	-------------------	-----	-------	-----	-------------------	-----------

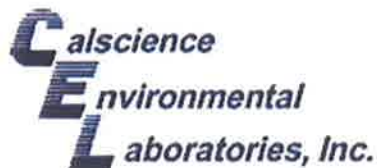
Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	7.0	1	U	mg/m3

Method Blank	098-01-005-3,677	N/A		Air	GC 53	N/A	02/02/12 10:40	120202L02
--------------	------------------	-----	--	-----	-------	-----	-------------------	-----------

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	7.0	1	U	mg/m3

Return to Contents

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



Quality Control - Duplicate



Cardno ERI	Date Received:	02/02/12
601 North McDowell Blvd.	Work Order No:	12-02-0115
Petaluma, CA 94954-2312	Preparation:	N/A
	Method:	EPA TO-3M

Project: ExxonMobil 79374/022735C

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
12-02-0116-8	Air	GC 53	N/A	02/02/12	120202D02

<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP. Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
TPH as Gasoline	10.22	11.37	11	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate



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

Date Received: N/A
Work Order No: 12-02-0115
Preparation: N/A
Method: EPA TO-15M

Project: ExxonMobil 79374/022735C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-983-2,105	Air	GC/MS II	N/A	02/02/12	120202L01

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	0.07987	102	104	60-158	2	0-40	
Toluene	0.09421	107	114	56-146	7	0-43	
Ethylbenzene	0.1086	112	119	52-154	6	0-38	
Xylenes (total)	0.3257	112	119	42-156	6	0-41	
Methyl-t-Butyl Ether (MTBE)	0.09013	98	100	50-150	2	0-25	

Return to Contents

RPD - Relative Percent Difference, CL - Control Limit





Work Order Number: 12-02-0115

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

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

Return to Contents



Sandy Tat

From: Judy Hutton [judy.hutton@cardno.com]
Sent: Friday, February 03, 2012 11:33 AM
To: Sandy Tat
Subject: RE: ExxonMobil 79374/022735C (12-02-0115)
Attachments: 2735 Revised COC Jan 2012 (2).pdf

Hi Sandy,

I have attached the revised COC for 79374/022735C (12-02-0115). Please let me know if you have any questions.

Thank you,
Judy

Judy Hutton

Operations & Maintenance Administrator
Cardno ERI

601 North McDowell Blvd., Petaluma, CA 94954

Phone: 707 766 2000 Direct: 707 766 2016 Mobile: 707 338 8399 Fax: 707 789 0414

From: Sandy Tat [<mailto:stat@calscience.com>]
Sent: Thursday, February 02, 2012 4:44 PM
To: Judy Hutton
Subject: ExxonMobil 79374/022735C (12-02-0115)
Importance: High

Hi Judy,

For Geotracker purposes, please make the sample IDs different from each other. Thanks!

Best Regards,

Sandy Tat
Project Manager Assistant
Calscience Environmental Laboratories, Inc.
7440 Lincoln Way
Garden Grove, CA 92841-1427
Phone: 714-895-5494 x220
Fax: 714-894-7501
stat@calscience.com

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Laboratories, Inc.**

7440 Lincoln Way
Garden Grove, CA 92841

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

ExxonMobil
12-02-0115

Consultant Name: Corono ERI Account #: NA PO#: Direct Bill Corono ERI
 Consultant Address: 601 N. McDowell Boulevard Invoice To: Direct Bill Corono ERI
 Consultant City/State/Zip: Petaluma, California, 94954 Report To: Paula Sime
 ExxonMobil Project Mgr: Jennifer Sedlachek Project Name: 02 2735 C
 Consultant Project Mgr: Paula Sime ExxonMobil Site #: 79374 Major Project (AFE #):
 Consultant Telephone Number: 707-765-2000 Fax No.: 707-789-0414 Site Address: 550 San Pablo Avenue
 Sampler Name (Print): GREG BRUSKI Site City, State, Zip: Albany, California
 Sampler Signature: *Greg Bruski* Oversight Agency: Alameda County Environmental Health Department

Sample ID	Field Point Name	Date Sampled	Time Sampled	No. of Containers Shipped	Trial	Composit	Field Filtered	Preservative										Other Unspecified	Matrix		Other (specify Date of Water)	Analyte For:				RUSH TAT (Pre-Schedule)	5-day TAT	Standard 10-day TAT	Date Date of Report						
								Methylene Chloride	None	None	None	None	None	None	None	None	None		None	None		None	None	None	None					None	None	None	None		
1 V-INF-VCO -1	VCO	1.31.12	1520	1	X														1			TPH by 8016M													
2 V-INF-VCO -2	VCO	1.31.12	1645	1	X																	X	X	by EPA 8216B 70-15											
V-INF-VCO	VCO																						X	X	BTEX B260B										
V-INF-VCO	VCO																						X	X	7 Oxygenates B260B										
3 V-DSCHG	VEFF	1.31.12	1645	1	X																		X	X											
V-DSCHG	VEFF																						X	X											
V-DSCHG	VEFF																						X	X											
V-DSCHG	VEFF																						X	X											
V-DSCHG	VEFF																						X	X											

Comments/Special Instructions:
PLEASE E-MAIL ALL PDF FILES TO
ROICollado@eri-us.com ERI-EIN:LABS@eri-us.com
GLOBAL ID # T0519716673

Laboratory Comments:
Temperature Upon Receipt: _____
Sample Containers Labeled? _____
VOCs Free of Headspace? _____
QC Checkables (check all that apply):
Level 2 _____
Level 3 _____
Level 4 _____
Site Specific: if yes, please attach pre-schedule w/ TestAmerica
Project Manager or attach specific instructions.

Requested by: <u>Bruski</u>	Date: <u>2/1/12</u>	Time: <u>1015</u>	Received by: <u>To-O'Malley CEC</u>	Date: <u>2/1/12</u>	Time: <u>1015</u>
Requested by: <u>To-O'Malley TO 650</u>	Date: <u>2/1/12</u>	Time: <u>1730</u>	Received by (Lab personnel): <u>Priscilla A. Co.</u>	Date: <u>2/2/12</u>	Time: <u>10:00</u>



Calscience Environmental Laboratories, Inc.

7440 Lincoln Way
Garden Grove, CA 92841

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

ExxonMobil

12-02-0115

Consultant Name: Cardno ERI **Account #:** NA **PO#:** Direct Bill Cardno ERI
Consultant Address: 801 N. McDowell Boulevard **Invoice To:** Direct Bill Cardno ERI
Consultant City/State/Zip: Petaluma, California, 94954 **Report To:** Paula Sims
ExxonMobil Project Mgr: Jennifer Sedlacek **Project Name:** 02 2735 C
Consultant Project Mgr: Paula Sims **ExxonMobil Site #:** 79374 **Major Project (AFE #):**
Consultant Telephone Number: 707-788-2000 **Fax No.:** 707-789-0414 **Site Address:** 890 San Pablo Avenue
Sampler Name (Print): GREG BRUSKI **Site City, State, Zip:** Albany, California
Sampler Signature: Greg Bruski **Oversight Agency:** Alameda County Environmental Health Department

Sample ID	Field Point Name	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Preservative												Matrix										Analyze For:							Due Date of Report
								Methanol	Sodium Bisulfite	HCl	NaOH	H ₂ SO ₄ Plastic	H ₂ SO ₄ Glass	HNO ₃	Ice	Other: Unpreserved	None	Groundwater	Wastewater	Drinking Water	Sludge	Soil	Air	Other (specify): Distilled Water	TPHg 8015M	by-EPA 8015B-T-3M	BTEX MTBE TO-15	BTEX 8260B	7 Oxygenates 8260B	RUSH TAT (Pre-Schedule)	5-day TAT	Standard 10-day TAT					
1 V-INF-VC0	VC0	1.31.12	1520	1	X																																
2 V-INF-VC0	VC0	1.31.12	1645	1	X																																
V-INF-VC0	VC0			1																																	
V-INF-VC0	VC0			1																																	
3 V-DSCHG	VEFF	1.31.12	1640	1	X																																
V-DSCHG	VEFF			1																																	
V-DSCHG	VEFF			1																																	
V-DSCHG	VEFF			1																																	

Comments/Special Instructions:
 PLEASE E-MAIL ALL PDF FILES TO
norcallabs@eri-us.com; ERI-EIMLABS@eri-us.com
 GLOBAL ID # T8619716673

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

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
<u>Bruski</u>	2/1/12	1015	<u>To-O'Mally C&E</u>	2/1/12	1015
Relinquished by:	Date:	Time:	Received by (Lab personnel):	Date:	Time:
<u>To-O'Mally TO 650</u>	2/1/12	1730	<u>greg / n. ca</u>	2/2/12	10:40



0115

		< WebShip > >>>> 800-322-5555 www.gso.com	
Ship From: ALAN KEMP CAL SCIENCE- CONCORD 5063 COMMERCIAL CIRCLE #H CONCORD, CA 94520		Tracking #: 518365483 	NPS
Ship To: SAMPLE RECEIVING CEL 7440 LINCOLN WAY GARDEN GROVE, CA 92841		ORC GARDEN GROVE	
COD: \$0.00		D92841A  98237015	
Reference: CARDNO ERI, 000			
Delivery Instructions:			
Signature Type: SIGNATURE REQUIRED		Print Date : 02/01/12 14:27 PM	

Package 1 of 1

Send Label To Printer	<input checked="" type="checkbox"/> 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 are not limited to, artwork, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.



WORK ORDER #: 12-02-0175

SAMPLE RECEIPT FORM

Cooler 0 of 0

CLIENT: CARDNO ERI

DATE: 02/02/12

TEMPERATURE: Thermometer ID: **SC3** (Criteria: 0.0°C – 6.0°C, not frozen)

Temperature _____ °C - 0.3°C (CF) = _____ °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____).

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter Initial: PS

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Initial: PS

Sample _____ No (Not Intact) Not Present Initial: PS

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

CONTAINER TYPE:

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

Water: VOA VOAh VOAn₂ 125AGB 125AGBh 125AGBp 1AGB 1AGBna₂ 1AGBs

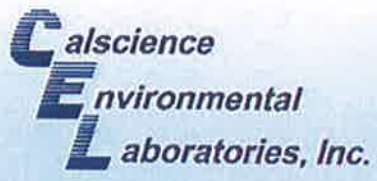
500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 1PBna 500PB

250PB 250PBn 125PB 125PBzanna 100PJ 100PJna₂ _____ _____ _____

Air: Tedlar® Summa® Other: _____ Trip Blank Lot#: _____ Labeled/Checked by: PS

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

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



CALSCIENCE

WORK ORDER NUMBER: 12-02-0116

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

RECEIVED
FEB 07 2012

BY:

Analytical Report For
Client: Cardno ERI
Client Project Name: ExxonMobil 79374/022735C
Attention: Paula Sime
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Cecile de Guia

Approved for release on 02/3/2012 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

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Work Order Number: 12-02-0116

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

Date Received: 02/02/12
Work Order No: 12-02-0116
Preparation: N/A
Method: EPA TO-15M
Units: mg/m3

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
V-INF-VC0-1	12-02-0116-1-A	01/31/12 08:45	Air	GC/MS HH	N/A	02/02/12 20:47	120202L01

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

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	46	0.80	500		Xylenes (total)	13	4.3	500	
Toluene	ND	9.4	500	U	Methyl-t-Butyl Ether (MTBE)	ND	3.6	500	U
Ethylbenzene	9.9	1.1	500						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	127	57-129			1,2-Dichloroethane-d4	100	47-137		
Toluene-d8	42	78-156		AZ					

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V-INF-VC0-2	12-02-0116-2-A	01/31/12 11:00	Air	GC/MS HH	N/A	02/02/12 21:40	120202L01

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

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	41	0.80	500		Xylenes (total)	10	4.3	500	
Toluene	ND	9.4	500	U	Methyl-t-Butyl Ether (MTBE)	ND	3.6	500	U
Ethylbenzene	8.3	1.1	500						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	122	57-129			1,2-Dichloroethane-d4	97	47-137		
Toluene-d8	42	78-156		AZ					

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V-INF-VC0-3	12-02-0116-3-A	01/31/12 12:00	Air	GC/MS HH	N/A	02/02/12 22:34	120202L01

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

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	40	0.80	500		Xylenes (total)	8.9	4.3	500	
Toluene	ND	9.4	500	U	Methyl-t-Butyl Ether (MTBE)	ND	3.6	500	U
Ethylbenzene	7.9	1.1	500						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	118	57-129			1,2-Dichloroethane-d4	96	47-137		
Toluene-d8	42	78-156		AZ					

Return to Contents

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



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

Date Received: 02/02/12
Work Order No: 12-02-0116
Preparation: N/A
Method: EPA TO-15M
Units: mg/m3

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
V-INF-VC0-4	12-02-0116-4-A	01/31/12 13:20	Air	GC/MS HH	N/A	02/02/12 23:29	120202L01

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

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	39	0.80	500		Xylenes (total)	12	4.3	500	
Toluene	ND	9.4	500	U	Methyl-t-Butyl Ether (MTBE)	ND	3.6	500	U
Ethylbenzene	19	1.1	500						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	121	57-129			1,2-Dichloroethane-d4	96	47-137		
Toluene-d8	42	78-156		AZ					

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V-DSCHG-1	12-02-0116-5-A	01/31/12 08:40	Air	GC/MS HH	N/A	02/02/12 14:48	120202L01

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

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1	U	Xylenes (total)	ND	0.0087	1	U
Toluene	ND	0.019	1	U	Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	U
Ethylbenzene	ND	0.0022	1	U					
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	102	57-129			1,2-Dichloroethane-d4	101	47-137		
Toluene-d8	99	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V-DSCHG-2	12-02-0116-6-A	01/31/12 11:55	Air	GC/MS HH	N/A	02/02/12 15:42	120202L01

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

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1	U	Xylenes (total)	ND	0.0087	1	U
Toluene	ND	0.019	1	U	Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	U
Ethylbenzene	ND	0.0022	1	U					
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	100	57-129			1,2-Dichloroethane-d4	102	47-137		
Toluene-d8	100	78-156							

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

Return to Contents



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

Date Received: 02/02/12
Work Order No: 12-02-0116
Preparation: N/A
Method: EPA TO-15M
Units: mg/m3

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
V-DSCHG-3	12-02-0116-7-A	01/31/12 13:15	Air	GC/MS HH	N/A	02/02/12 16:37	120202L01

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

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1	U	Xylenes (total)	ND	0.0087	1	U
Toluene	0.021	0.019	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	U
Ethylbenzene	ND	0.0022	1	U					
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>	
1,4-Bromofluorobenzene	102	57-129			1,2-Dichloroethane-d4	103	47-137		
Toluene-d8	100	78-156							

Method Blank	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
	099-12-983-2,106	N/A	Air	GC/MS HH	N/A	02/02/12 13:53	120202L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1	U	Xylenes (total)	ND	0.0087	1	U
Toluene	ND	0.019	1	U	Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	U
Ethylbenzene	ND	0.0022	1	U					
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>	
1,4-Bromofluorobenzene	99	57-129			1,2-Dichloroethane-d4	100	47-137		
Toluene-d8	99	78-156							

Return to Contents

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



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

Date Received: 02/02/12
Work Order No: 12-02-0116
Preparation: N/A
Method: EPA TO-3M

Project: ExxonMobil 79374/022735C

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V-INF-VC0-1	12-02-0116-1-A	01/31/12 08:45	Air	GC 53	N/A	02/02/12 17:02	120202L02

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	75000	700	100		mg/m3

V-INF-VC0-2	12-02-0116-2-A	01/31/12 11:00	Air	GC 53	N/A	02/02/12 16:27	120202L02
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	40000	350	50		mg/m3

V-INF-VC0-3	12-02-0116-3-A	01/31/12 12:00	Air	GC 53	N/A	02/02/12 18:37	120202L02
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	35000	350	50		mg/m3

V-INF-VC0-4	12-02-0116-4-A	01/31/12 13:20	Air	GC 53	N/A	02/02/12 18:49	120202L02
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	33000	350	50		mg/m3

V-DSCHG-1	12-02-0116-5-A	01/31/12 08:40	Air	GC 53	N/A	02/02/12 13:24	120202L02
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	8.2	7.0	1		mg/m3

V-DSCHG-2	12-02-0116-6-A	01/31/12 11:55	Air	GC 53	N/A	02/02/12 13:46	120202L02
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	10	7.0	1		mg/m3

Return to Comments

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

Analytical Report



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

Date Received: 02/02/12
 Work Order No: 12-02-0116
 Preparation: N/A
 Method: EPA TO-3M

Project: ExxonMobil 79374/022735C

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V-DSCHG-3	12-02-0116-7-A	01/31/12 13:15	Air	GC 53	N/A	02/02/12 14:19	120202L02

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	10	7.0	1		mg/m3

Method Blank	098-01-005-3,677	N/A	Air	GC 53	N/A	02/02/12 10:40	120202L02
--------------	------------------	-----	-----	-------	-----	-------------------	-----------

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	7.0	1	U	mg/m3

Katherine Condeelis

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



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

Date Received: 02/02/12
 Work Order No: 12-02-0116
 Preparation: N/A
 Method: EPA TO-3M

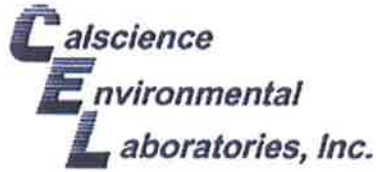
Project: ExxonMobil 79374/022735C

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
V-DSCHG-2	Air	GC 53	N/A	02/02/12	120202D02

<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
TPH as Gasoline	10.22	11.37	11	0-20	

Return to Comments

RPD - Relative Percent Difference . CL - Control Limit



Quality Control - LCS/LCS Duplicate



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

Date Received: N/A
Work Order No: 12-02-0116
Preparation: N/A
Method: EPA TO-15M

Project: ExxonMobil 79374/022735C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-983-2,106	Air	GC/MS HH	N/A	02/02/12	120202L01

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	0.07987	101	102	60-156	1	0-40	
Toluene	0.09421	103	102	56-148	0	0-43	
Ethylbenzene	0.1086	105	106	52-154	1	0-38	
Xylenes (total)	0.3257	108	107	42-156	1	0-41	
Methyl-t-Butyl Ether (MTBE)	0.09013	101	101	50-150	0	0-25	

Return to Customer

RPD - Relative Percent Difference, CL - Control Limit

Work Order Number: 12-02-0116

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

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

MPN - Most Probable Number



Return to Contents



Sandy Tat

From: Judy Hutton [judy.hutton@cardno.com]
Sent: Friday, February 03, 2012 11:32 AM
To: Sandy Tat
Subject: RE: ExxonMobil 79374/022735C (12-02-0116)
Attachments: 2735 Revised COC Jan 2012.pdf

Hi Sandy,

Please find attached the revised COC for 79374/022735C (12-02-0116). Let me know if you have any questions.

Thank you,
Judy

Judy Hutton

Operations & Maintenance Administrator
Cardno ERI
601 North McDowell Blvd., Petaluma, CA 94954
Phone: 707 766 2000 **Direct:** 707 766 2016 **Mobile:** 707 338 8399 **Fax:** 707 789 0414

From: Sandy Tat [<mailto:stat@calscience.com>]
Sent: Thursday, February 02, 2012 4:38 PM
To: Judy Hutton
Subject: ExxonMobil 79374/022735C (12-02-0116)
Importance: High

Hi Judy,

For Geotracker purposes, please make the sample IDs different from each other. Thanks!

Best Regards,

Sandy Tat
Project Manager Assistant
Calscience Environmental Laboratories, Inc.
7440 Lincoln Way
Garden Grove, CA 92841-1427
Phone: 714-895-5494 x220
Fax: 714-894-7501
stat@calscience.com



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Fax: 714-894-7501

ExxonMobil
12-02-0116

Consultant Name: Cardno ERI Account #: NA PO#: Direct Bill Cardno ERI
 Consultant Address: 601 N. McDowell Boulevard Invoice To: Direct Bill Cardno ERI
 Consultant City/State/Zip: Petaluma, California, 94954 Report To: Paula Sims
 ExxonMobil Project Mgr: Jennifer Bedlachek Project Name: 02 2735 C
 Consultant Project Mgr: Paula Sims ExxonMobil Site #: 79374 Major Project (AFE #):
 Consultant Telephone Number: 707-766-2000 Fax No.: 707-769-0414 Site Address: 890 San Pablo Avenue
 Sampler Name (Print): GREG BRUSKI Site City, State, Zip: Albany, California
 Sampler Signature: Bruski Oversight Agency: Alameda County Environmental Health Department

Sample ID	Field Point Name	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Preservative										Matrix					Analyze For:							RUSH TAT (Pre-Schedule)	5-day TAT	Standard 10-day TAT	Due Date of Report																				
								Methanol	Sodium Bisulfite	HCl	NaOH	H ₂ SO ₄ Plastic	H ₂ SO ₄ Glass	HNO ₃	Ice	Other: Unpreserved	None	Groundwater	Wastewater	Drinking Water	Sludge	Soil	Air	Other (specify):	Distilled Water	TPHg 8015M	by EPA-8015B TO-3M	BTEX MTBE TO-15	BTEX 8260B					7 Oxygenates 8260B																			
1 V-INF-VC0	VC0	1.31.12	0845	1																																																	
2 V-INF-VC0	VC0	1.31.12	1100	1																																					X	X									X		
3 V-INF-VC0	VC0	1.31.12	1200	1																																											X						
4 V-INF-VC0	VC0	1.31.12	1320	1																																												X					
5 V-DSCHG	VEFF	1.31.12	0840	1																																												X					
6 V-DSCHG	VEFF	1.31.12	1155	1																																													X				
7 V-DSCHG	VEFF	1.31.12	1315	1																																													X				
8 V-DSCHG	VEFF	1.31.12	1315	1																																																	X

Comments/Special Instructions:
PLEASE E-MAIL ALL PDF FILES TO
norcallabs@eri-us.com; ERI-EIMLABS@eri-us.com
GLOBAL ID # T0618716673

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

Relinquished by: <u>Bruski</u>	Date: <u>2/1/12</u>	Time: <u>1015</u>	Received by: <u>Tom O'Malley, DEC</u>	Date: <u>2/1/12</u>	Time: <u>1015</u>
Relinquished by: <u>Tom O'Malley TO GSC</u>	Date: <u>2/1/12</u>	Time: <u>1730</u>	Received by (Lab personnel): <u>Juan R - wa</u>	Date: <u>2/2/12</u>	Time: <u>10:40</u>

Return to Contractor

		< WebShip > > > > 800-322-5555 www.gso.com		(0116)
Ship From: ALAN KEMP CAL SCIENCE- CONCORD 5063 COMMERCIAL CIRCLE #H CONCORD, CA 94520		Tracking #: 518365483 		
Ship To: SAMPLE RECEIVING CEL 7440 LINCOLN WAY GARDEN GROVE, CA 92841		ORC GARDEN GROVE		NPS A
COD: \$0.00		D92841A  98237015		
Reference: CARDNO ERI, 00A				
Delivery Instructions:				
Signature Type: SIGNATURE REQUIRED				

Print Date : 02/01/12 14:27 PM

Package 1 of 1

Print All

LABEL INSTRUCTIONS:

- Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
- STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.
 - STEP 2 - Fold this page in half.
 - STEP 3 - Securely attach this label to your package, do not cover the barcode.
 - STEP 4 - Request an on-call pickup for your package, if you do not have scheduled daily pickup service or Drop-off your package at the nearest GSO drop box. Locate nearest GSO dropbox locations using this link.

ADDITIONAL OPTIONS:

TERMS AND CONDITIONS:

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

Return to Contents



WORK ORDER #: 12-02-0776

SAMPLE RECEIPT FORM

Cooler 0 of 0

CLIENT: CARUNO ERI

DATE: 02/02/12

TEMPERATURE: Thermometer ID: **3C3** (Criteria: 0.0°C – 6.0°C, not frozen)

Temperature _____ °C - 0.3°C (CF) = _____ °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____).

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter Initial: RS

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Initial: RS

Sample _____ No (Not Intact) Not Present Initial: RS

SAMPLE CONDITION:

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

CONTAINER TYPE:

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

Water: VOA VOAh VOAna₂ 125AGB 125AGBh 125AGBp 1AGB 1AGBna₂ 1AGBs

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

250PB 250PBn 125PB 125PBzanna 100PJ 100PJna₂ _____ _____ _____

Air: Tedlar® Summa® Other: _____ Trip Blank Lot#: _____ Labeled/Checked by: RS

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

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

Return to Container

Appendix D

Waste Disposal Documents

NON-HAZARDOUS WASTE MANIFEST

(Form designed for use on electronic (PDF) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No		Manifest Document No. BR12735	2. Page 1 of 1			
3. Generator's Name and Mailing Address		EM# 79374 990 SAN PABLO AVE ALBANY, CA		CARONO ERI				
4. Generator's Phone ()								
5. Transporter 1 Company Name		6. US EPA ID Number		A. State Transporter's ID				
INSTRAT INC				B. Transporter 1 Phone 707-374-3834				
7. Transporter 2 Company Name		8. US EPA ID Number		C. State Transporter's ID				
				D. Transporter 2 Phone				
9. Designated Facility Name and Site Address		10. US EPA ID Number		E. State Facility's ID				
INSTRAT INC 1105-C AIRPORT RD RIO VISTA, CA		CAROC01SD579		F. Facility's Phone 707-374-3834				
11. WASTE DESCRIPTION			12. Containers		13. Total Quantity	14. Unit Wt./Vol.		
			No	Type				
			a. NON-HAZ PURGE WATER				275	GAL
			b.					
			c.					
d.								
G. Additional Descriptions for Materials Listed Above			H. Handling Codes for Wastes Listed Above					
COLOR - BROWN CODR - X SOLIDS - X								
15. Special Handling Instructions and Additional Information								
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.								
Printed/Typed Name			Signature		Date			
					Month Day Year			
17. Transporter 1 Acknowledgement of Receipt of Materials					Date			
Printed/Typed Name			Signature		Month Day Year			
Carroll Sibert			<i>[Signature]</i>		2/1/12			
18. Transporter 2 Acknowledgement of Receipt of Materials					Date			
Printed/Typed Name			Signature		Month Day Year			
19. Discrepancy Indication Space								
20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in Item 19.								
Printed/Typed Name			Signature		Date			
INSTRAT INC MICHAEL WHITEHEAD			<i>[Signature]</i>		Month Day Year 2/1/12			

NON-HAZARDOUS WASTE GENERATOR

TRANSPORTER

FACILITY

