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Jennifer C. Sedlachek
Project Manager

ExxonMobil

June 20, 2012

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

RECEIVED

9:45 am, Jul 12, 2012

Alameda County
Environmental Health

RE: Former Exxon RAS #70234/3450 35th Avenue, Oakland, California.

Dear Ms. Jakub:

Attached for your review and comment is a copy of the letter report entitled *Feasibility Test Report*, dated June 20, 2012, for the above-referenced site. The report was prepared by Cardno ERI of Petaluma, California, and details activities at the subject site.

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

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

Sincerely,



Jennifer C. Sedlachek
Project Manager

Attachment: Cardno ERI's *Feasibility Test Report*, dated June 20, 2012

cc: w/ attachment
Mr. Shay Wideman, The Valero Companies, Environmental Liability Management

w/o attachment
Ms. Janice A. Jacobson, Cardno ERI



Shaping the Future

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June 20, 2012
Cardno ERI 247603.R06

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

SUBJECT Feasibility Test Report
Former Exxon Service Station 70234
3450 25th Avenue, Oakland, California

Alameda Case RO#2515

Ms. Sedlachek:

At the request of ExxonMobil Environmental Services (EMES), on behalf of Exxon Mobil Corporation, Cardno ERI conducted feasibility testing at the subject site (Plate 1). The purpose of the work was to observe aquifer characteristics and to assess the feasibility of groundwater pump and treat as a remediation strategy for dissolved-phase petroleum hydrocarbon concentrations in groundwater underlying the site. The work was conducted in accordance with Cardno ERI's *Work Plan for Well Installation and Feasibility Testing* (Work Plan), dated December 5, 2011 (Cardno ERI, 2011).

SITE DESCRIPTION

Former Exxon Service Station 70234 is located at 3450 35th Avenue, on the eastern corner of the intersection of 35th Avenue and Quigley Street, in Oakland, California (Plate 1). The surrounding areas consist of residential and commercial properties. An active ConocoPhillips 76 Service Station (ConocoPhillips) is located southwest of the site directly across Quigley Street (Plate 2).

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The subject site is a former Exxon-branded service station, which was sold to Valero Energy Corporation (Valero) in 2000 and decommissioned with the removal of the underground fueling facilities in 2002 (TRC, 2002). The station building and canopy remain on site; however, the property is vacant and fenced, and the property redevelopment plans are not known at this time. The former UST cavity is filled with gravel and its surface is finished with cement.

GEOLOGY AND HYDROGEOLOGY

The site lies at an approximate elevation of 195 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 and Pleistocene alluvial fan and fluvial deposits (Graymer, 2000). The site is located approximately 650 feet southeast of Peralta Creek. The active northwest trending Hayward fault is located approximately ½ 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 Oakland Sub-Area, which is filled primarily by alluvial deposits that range from 300 to 700 feet thick without well-defined aquitards (CRWQCB, 1999). Under natural conditions, the direction of groundwater flow in the East Bay Plain is east to west.

The site is located approximately 2 miles northeast of the Oakland Estuary tidal canal, which connects to San Leandro Bay to the south and the Oakland Inner Harbor to the west, which connects to the San Francisco Bay. Groundwater flow direction is predominantly to the southwest towards the bay, consistent with site data. Groundwater recharge in the shallow aquifer occurs by infiltration from precipitation, irrigation, and stream flow.

Past assessment activities indicate that the soil beneath the site consists of clayey sand and sandy clay with varying amounts of silt and gravel to 45 feet bgs, the maximum depth investigated (ERI, 2009). Free groundwater occurs in a sandy gravel layer from approximately 29 to 40 feet bgs. During the November 23, 2011 groundwater monitoring and sampling event, the DTW in the wells ranged from 29.25 to 33.49 feet, and the groundwater flow direction was to the southwest with a horizontal gradient of 0.013 to 0.016 (Plate 3) (Cardno ERI, 2012a).

PREVIOUS WORK

Cumulative groundwater monitoring analytical results are summarized on Tables 1A and 1B. Cumulative soil analytical results are summarized in Tables 2A and 2B. Well construction details are presented on Table 3.

Fueling System Activities

In 1991, three 8,000-gallon gasoline USTs were excavated and removed from the site and replaced with three 12,000-gallon USTs (IT, 1992). In 2002, the service station was abandoned and the three 12,000-gallon USTs and associated product piping were excavated and removed from the site. The former UST cavity and product line trenches were backfilled with gravel (TRC, 2002).

Site Assessment Activities

Multiple phases of assessment were conducted from 1986 to 2000 (prior to the initial closure of the environmental case at the site), including the drilling of soil borings B1 through B10, EB1, EB2, SB1, and SB2 and the installation of groundwater monitoring wells MW1 through MW3 (HLA, 1988; Alton, 1991; IT, 1992; EA, 1997). Assessment results indicated maximum dissolved-phase TPHg, benzene, and MTBE concentrations of 75.0 µg/L, 6.6 µg/L, and 1.87 µg/L, respectively. The groundwater monitoring wells were destroyed in 2000 when the Alameda County Health Care Services Agency, Environmental Health Services (ACEH) closed the environmental case for the site (ERI, 2000).

The ACEH re-opened the environmental case for the site in March 2007 based on the discovery of dissolved-phase MTBE in groundwater samples collected from the UST cavity during its excavation and removal in 2002 (TRC, 2002). In September and November 2007, Environmental Resolutions, Inc. (ERI) observed the drilling of borings B11 through B18 (ERI, 2007).

In March 2009, ERI observed the drilling of borings B19 through B21 and the installation of monitoring wells MW4 through MW9 (ERI, 2009). Maximum dissolved-phase TPHg and MTBE concentrations of 4,400 µg/L and 7,100 µg/L, respectively, were reported in grab groundwater samples collected at 35 feet bgs from boring B19, located on the southwestern edge of the former UST cavity. Concentrations of TPHg, BTEX, and MTBE were reported in soil samples collected from boring B19, MW5, and MW6.

In December 2011, Cardno ERI observed the installation of recovery well RW1 to a depth of 40 feet bgs (Cardno ERI, 2012b). Groundwater was first encountered at 29 feet bgs. Concentrations of TPHg, toluene, ethylbenzene, total xylenes, TBA, and MTBE were reported in soil samples collected from boring RW1.

Remediation Activities

In 1991, International Technology Corporation (IT) excavated approximately 1,200 cubic yards of fill material and native soil when the gasoline USTs, dispensers, and product lines were removed and the UST pit was enlarged to accommodate larger new USTs (IT, 1992). Concentrations of TPHg and benzene were reported at up to 5 mg/kg and 0.36 mg/kg, respectively, in soil samples collected from the limits of the overexcavation.

In 2002, approximately 170 cubic yards of pea gravel and native soil were excavated and removed during the removal of the 12,000-gallon USTs (TRC, 2002). Petroleum hydrocarbons were not reported in the four soil samples collected from the sidewalls of the excavation. Residual TPHg (24 mg/kg), benzene (0.057 mg/kg), toluene (0.11 mg/kg), ethylbenzene (0.12 mg/kg), total xylenes (1.2 mg/kg), and MTBE (0.020 mg/kg) were reported at 4.9 feet bgs in soil sample B, collected from beneath the northeastern dispenser island.

Groundwater Monitoring Activities

Groundwater monitoring was conducted quarterly at the site from 1992 to 1995, and once in 1999. NAPL was not encountered. Dissolved-phase TPHg, benzene, and MTBE were reported in groundwater samples from well MW1, located west of the northern corner of the UST cavity, and well MW3, located upgradient of the fueling system. Groundwater monitoring wells MW1 through MW3 were destroyed in 2000 when the ACEH closed the environmental case for the site (ERI, 2000).

Groundwater monitoring wells MW4 through MW9 have been monitored since installation in March 2009. Maximum dissolved-phase TPHg, benzene, and MTBE concentrations have been reported in well MW5, located southeast of the former UST pit, and well MW6, located southwest of the former UST pit.

PUMP TEST

In accordance with the Work Plan, Cardno ERI proposed feasibility testing at the subject site to observe aquifer characteristics and to assess the feasibility of groundwater pump and treat as a remediation strategy for dissolved-phase petroleum hydrocarbon concentrations in groundwater underlying the site.

Pre-Field Activities

Cardno ERI performed the fieldwork in accordance with the Work Plan, Cardno ERI's standard field protocol (Appendix A), a site-specific health and safety plan, and applicable regulatory guidelines under the advisement of a professional geologist.

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Prior to field activities, Cardno ERI installed recovery well RW1, to be used for extraction and observation during the pump draw down test. Details of the well installation are provided in Cardno ERI's *Well Installation Report*, dated March 9, 2012 (Cardno ERI, 2012b).

Field Work and Methods

On February 10, 2012, Cardno ERI installed pressure transducers in wells MW4, MW5, MW6, MW9, and RW1 and connected the transducers to a data logging device. The wells were allowed to equilibrate for two days to obtain the static head level variations in each well.

On February 13, 2012, Cardno ERI performed a step-drawdown test on well RW1. Wells MW4, MW5, MW6, MW7, MW8, and MW9 were used as observation wells during the step-drawdown test.

Between February 14 and 17, 2012, Cardno ERI performed constant-rate tests on well RW1. Wells MW4, MW5, MW6, MW7, MW8, and MW9 were used as observation wells.

The pumping tests were performed with a 3-inch diameter Grundfos® submersible pump connected to a variable speed controller. InSitu® MiniTroll Pro pressure transducer/data loggers were installed in the extraction and select observation wells to record water level measurements. Data was recorded by the submerged pressure transducers continuously during the testing.

Step-Drawdown Test on well RW1

Water was pumped from well RW1 at increasing rates to assess the optimum pumping rate. The well was pumped at 0.14, 0.20, 0.31, 0.37, and 0.44 gpm. Each pumping rate was sustained for 20 to 80 minutes until a linear trend in the drawdown became evident. The step test was continued for approximately six hours, at which time the well dewatered at a pumping rate of 0.44 gpm (Graph 1). Approximately 57 gallons of water were pumped from well RW1 during the step-drawdown test. Recharge in the wells was monitored for one hour following the step-drawdown test.

First Constant-Rate Test on well RW1

Following the recharge period, a constant-rate pumping test was initiated at a rate of approximately 0.33 gpm from well RW1. The rate was chosen based on the data from the step-drawdown test. The test was continued for approximately 51 hours, during which time the well dewatered to the depth of the pump intake several times and could not sustain the selected pump rate. The recharge rate of the well was below the

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optimal operating range of the pump, causing the pump to overheat and cease pumping at times. An average drawdown of 0.50 foot was observed in observation wells MW4, MW5, MW6, and MW9 while pumping at 0.33 gpm. Well RW1 showed a maximum drawdown of 6.27 feet, and 1.1 feet of drawdown was observed in well MW7 while pumping at 0.33 gpm (Table 4). Approximately 503 gallons of water were pumped from well RW1 during the first constant-rate test. Recharge was monitored for approximately two hours after the first constant rate test.

Second Constant-Rate Test on well RW1

Following the recharge period, a second constant-rate test was performed. Water was pumped from well RW1 at a rate of approximately 0.21 gpm. The constant-rate test continued for 40 hours, during which time the well dewatered to the depth of the pump intake several times. Drawdown of approximately 6.11 feet was observed in well RW1. An average drawdown of 0.60 foot was observed in observation wells MW4, MW5, MW6, and MW9 (Graph 2). Approximately 540 gallons of water were pumped from well RW1 during the second constant-rate tests.

Groundwater Sampling

Cardno ERI collected groundwater samples from a sample port before the water reached the holding tank. The water samples were collected in laboratory-supplied containers, stored on ice, and transported under COC protocol to a state-certified analytical laboratory. Samples were collected at the beginning and end of the step-drawdown test and during the constant-rate test approximately every 12 hours, and at the end of the test. Results of the samples are presented in Table 5.

Laboratory Analyses

Cardno ERI submitted groundwater samples for analysis to a state-certified laboratory. Laboratory analytical reports and COC records are provided in Appendix C. Groundwater sample analytical data and testing methods are summarized in Table 5.

Waste Management

The water was temporarily stored on site in a 6,000-gallon storage tank. On February 17, 2012, 1,100 gallons of water was transported to InStrat, Inc., of Rio Vista, California, for recycling. An additional 100 gallons was also transported from the site from previous investigations, for a total of 1,200 gallons removed. Copies of the non-hazardous waste manifests for disposal of groundwater are included in Appendix D.

RESULTS OF INVESTIGATION

Cardno ERI analyzed the hydraulic data collected during the tests from the observation wells using the computer program Aqtesolv™ (Hydro Solve, Inc., 1999). Aqtesolv™ combines statistical parameter estimation methods with graphical curve-matching techniques to analyze the aquifer test data. Transmissivity and storativity estimates were obtained using the Neuman equation for an unconfined aquifer. The Aqtesolv™ output files are included in Appendix E.

The interval after initiating pumping at 0.2 gpm following the recharge period were used for the aquifer testing analysis. The data between the initiation of pumping and the initial dewatering were analyzed using Aqtesolv™.

The results of the constant-rate pump test performed on well RW1 yielded a transmissivity of 197.1 gallons per day per foot and a storativity of 0.016 using the Neuman method and a corresponding hydraulic conductivity of 5.8×10^{-4} centimeter per second (cm/s). The hydraulic conductivity values fall within the range of values representative of sandy silts and clayey sands (Fetter, 1994)

Groundwater Capture Zone

Cardno ERI estimates the downgradient (minimum) steady-state extent of the capture zone (r) using the following equation:

$r = Q / 2 \pi T i$, where:

r	=	Capture zone extent (downgradient direction)
Q	=	Sustainable pumping rate (gallons per day)
T	=	Transmissivity
i	=	Averaged interpreted hydraulic gradient
π	=	Ratio of the circumference of a circle to its diameter

Assuming a sustainable pumping rate of 0.2 gpm based on flow rates obtained during the pump tests, an average transmissivity of 197.1 gallons per day per foot, and an averaged hydraulic gradient of 0.016, the calculation yields a downgradient groundwater capture zone of approximately 14.5 feet and a crossgradient capture zone of approximately 45 feet (Plate 5).

Hydrocarbons in Groundwater

TPHg, MTBE, and BTEX concentrations were reported in groundwater samples collected during the feasibility test (Table 5). TPHg was reported at a maximum concentration of 3,800 µg/L in the samples collected from well

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RW1 during the middle of the testing period. MTBE and benzene were reported at maximum concentrations of 3,900 µg/L and 1,900 µg/L, respectively, during the middle of the testing period (Table 5). Concentrations of TBA were also reported in groundwater samples collected during this investigation (Table 5).

Concentrations of TPHg, MTBE, and benzene remained stable during the constant-rate pump test on well RW1 (Table 5).

Concentrations of dissolved-phase benzene reported from well RW1 are higher than the concentrations reported from other wells at the site (Plate 4). Concentrations of TBA are consistent with concentrations reported in wells MW5 and MW6.

Approximately 0.02 pound of TPHg, 0.02 pound of MTBE, and 0.01 pound of benzene were removed from well RW1 during the constant-rate test (Table 6).

CONCLUSIONS

Well RW1 had more fine-grained sediments than some of the previous wells and borings at the site, which resulted in a lower hydraulic conductivity than anticipated. The relatively low pumping rate observed (less than 0.3 gpm) and low mass removal (0.02 pound or less) indicate that groundwater pump and treat is not an effective remedial alternative at the subject site.

RECOMMENDATIONS

In response to previous and current dissolved-phase concentrations, Cardno ERI recommends evaluating alternative remedial technologies.

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. Janice A. Jacobson, Cardno ERI, 601 North McDowell Boulevard, Petaluma, California, 94954. The agency contact is Ms. Barbara Jakub, Alameda County Health Care Services Agency, Environmental Health Services, 1131 Harbor Bay Parkway, Suite 250, Alameda, California, 94502-6577.

LIMITATIONS

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

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

Please contact Mr. Vincent T. Battaglia, Cardno ERI's project manager for this site, at vincent.battaglia@cardno.com or at (707) 766-2000 with any questions regarding this report.

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Enclosures:

References

Acronym List

Plate 1	Site Vicinity Map
Plate 2	Generalized Site Plan
Plate 3	Groundwater Elevation Map – November 23, 2011
Plate 4	Select Analytical Results
Plate 5	Groundwater Capture Zone
Table 1A	Cumulative Groundwater Monitoring and Sampling Data
Table 1B	Additional Cumulative Groundwater Monitoring and Sampling Data
Table 2A	Cumulative Soil Sample Analytical Results
Table 2B	Additional Cumulative Soil Sample Analytical Results
Table 3	Well Construction Details
Table 4	Groundwater Pumping Test – Operational Data
Table 5	Groundwater Pumping Test – Groundwater Analytical Results
Table 6	Groundwater Pumping Test – Dissolved-Phase Hydrocarbon Removal
Graph 1	Step Test – Well RW1
Graph 2	Constant Rate Test - Well RW1, MW4, MW5, MW6, MW9
Appendix A	Field Protocols
Appendix B	Boring Logs
Appendix C	Laboratory Analytical Reports
Appendix D	Waste Documentation
Appendix E	Aqtesolv™ Output Files

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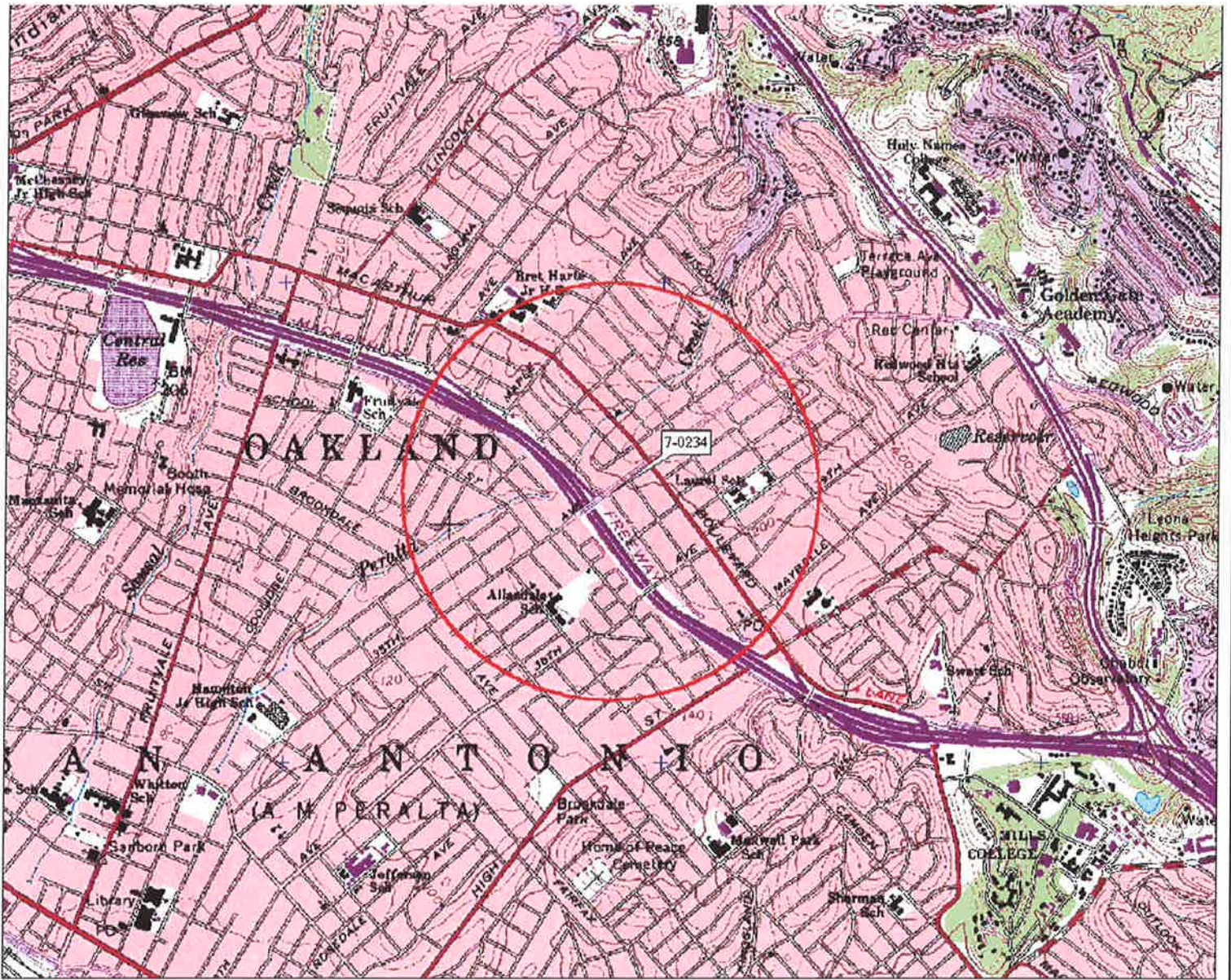
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ACRONYM LIST

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		



3-D TopoQuads Copyright © 1999 DeLorme Topographic, ME 04004 Source Data: USGS 550 ft Scale: 1 : 19,200 Contour: 10 ft Datum: WGS84

2476TOPO

EXPLANATION



1/2-mile radius circle

APPROXIMATE SCALE



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



SITE VICINITY MAP

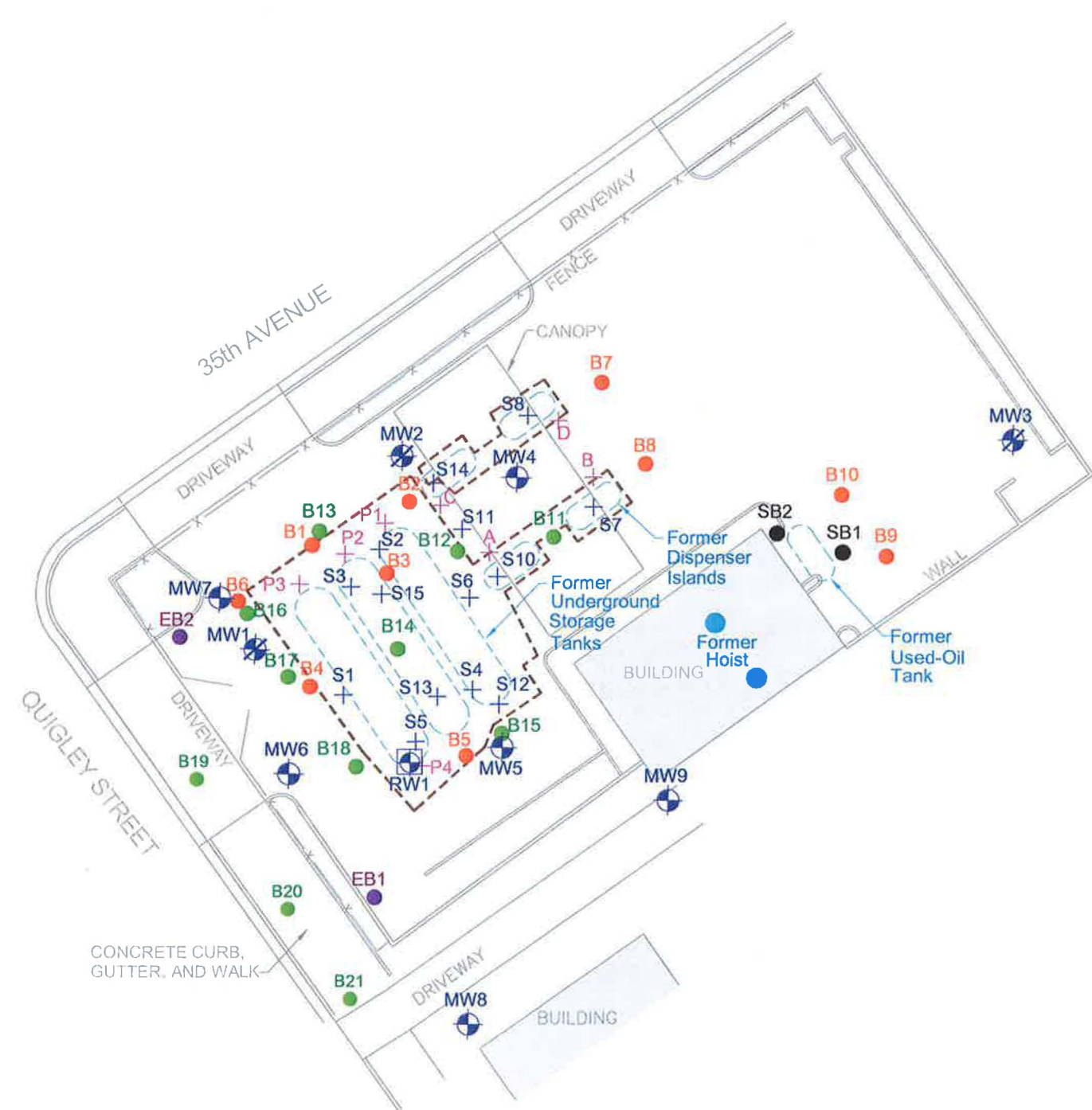
FORMER EXXON SERVICE STATION 70234
3450 35th Avenue
Oakland, California

PROJECT NO.

2476

PLATE

1



FN 2476 12 R06 GSP_SP

Excavated Area

SOURCE: Modified from maps provided by MORROW SURVERING



GENERALIZED SITE PLAN
 FORMER
 EXXON SERVICE STATION 70234
 3450 35th Avenue
 Oakland, California

EXPLANATION

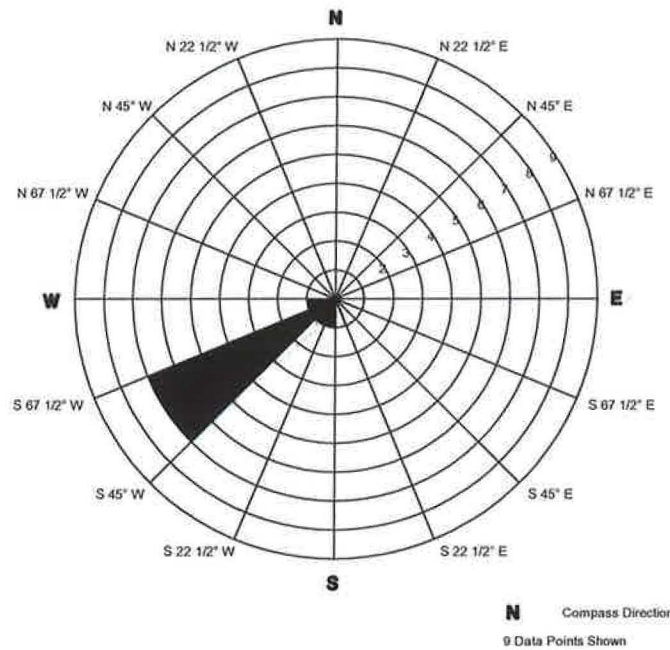
- MW9 Groundwater Monitoring Well
- MW1 Destroyed Groundwater Monitoring Well
- B21 Soil Boring (ERI)

- SB2 Soil Boring (GTI, 1986)
- EB2 Soil Boring (HLA, 1988)
- B10 Soil Boring (Alton, 1991)

- P4 Soil Sample Location (TRC, 2002)
- S15 Soil Sample Location (Alton, 1991)
- RW1 Recovery Groundwater Monitoring Well

PROJECT NO.
2476

PLATE
2



Rose diagram developed by evaluating the groundwater gradient direction from the quarterly monitoring data. Each circle on the rose diagram represents the number of monitoring events that the gradient plotted in that 22 1/2 degree sector. March 30, 2009 to November 23, 2011

GROUNDWATER FLOW DIRECTION ROSE DIAGRAM



SOURCE: Modified from maps provided by MORROW SURVEING AND TRC

FN 2476 12 L12 11 4QTR QM_SP



GROUNDWATER ELEVATION MAP
November 23, 2011
 FORMER
 EXXON SERVICE STATION 70234
 3450 35th Avenue
 Oakland, California

EXPLANATION

- MW9 Groundwater Monitoring Well
- 164.60 Groundwater elevation in feet; datum is mean sea level
- MW1 Destroyed Groundwater Monitoring Well
- MW3 Groundwater Monitoring Well By Others
- RW1 Recovery Groundwater Monitoring Well
- Excavated Area

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

PROJECT NO.	2476
PLATE	3

Analyte Concentrations in ug/L

Sample Date
Sample Time
Total Petroleum Hydrocarbons as gasoline
Benzene
Methyl Tertiary Butyl Ether

< Less Than the Stated Laboratory Reporting Limit

ug/L Micrograms per Liter

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

b Hydrocarbon pattern does not match the requested fuel.



APPROXIMATE SCALE



SOURCE: Modified from maps provided by MORROW SURVEING AND TRC

FN 2476 12 L12 11 4QTR QM_SP



SELECT ANALYTICAL RESULTS

FORMER
EXXON SERVICE STATION 70234
3450 35th Avenue
Oakland, California

EXPLANATION

- MW9 Groundwater Monitoring Well
- MW1 Destroyed Groundwater Monitoring Well

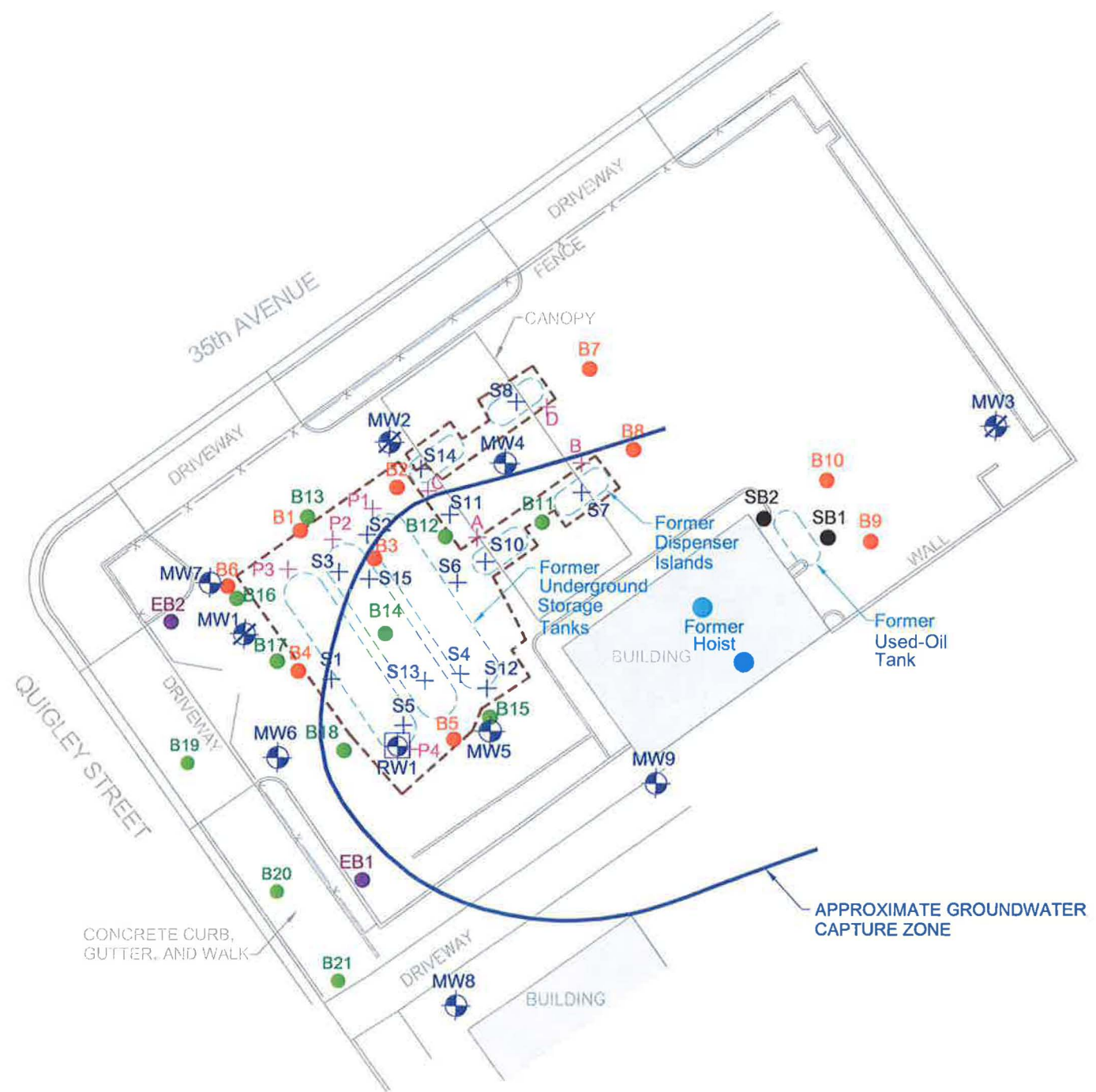
- MW3 Groundwater Monitoring Well By Others
- RW1 Recovery Groundwater Monitoring Well
- Excavated Area

PROJECT NO.

2476

PLATE

4



FN 2476 12 R06 GW CAPTURE ZONE_SP

SOURCE: Modified from maps provided by MORROW SURVERING



GROUNDWATER CAPTURE ZONE
 FORMER
 EXXON SERVICE STATION 70234
 3450 35th Avenue
 Oakland, California

EXPLANATION

- MW9 Groundwater Monitoring Well
- MW1 Destroyed Groundwater Monitoring Well
- B21 Soil Boring (ERI)

- SB2 Soil Boring (GTI, 1986)
- EB2 Soil Boring (HLA, 1988)
- B10 Soil Boring (Alton, 1991)

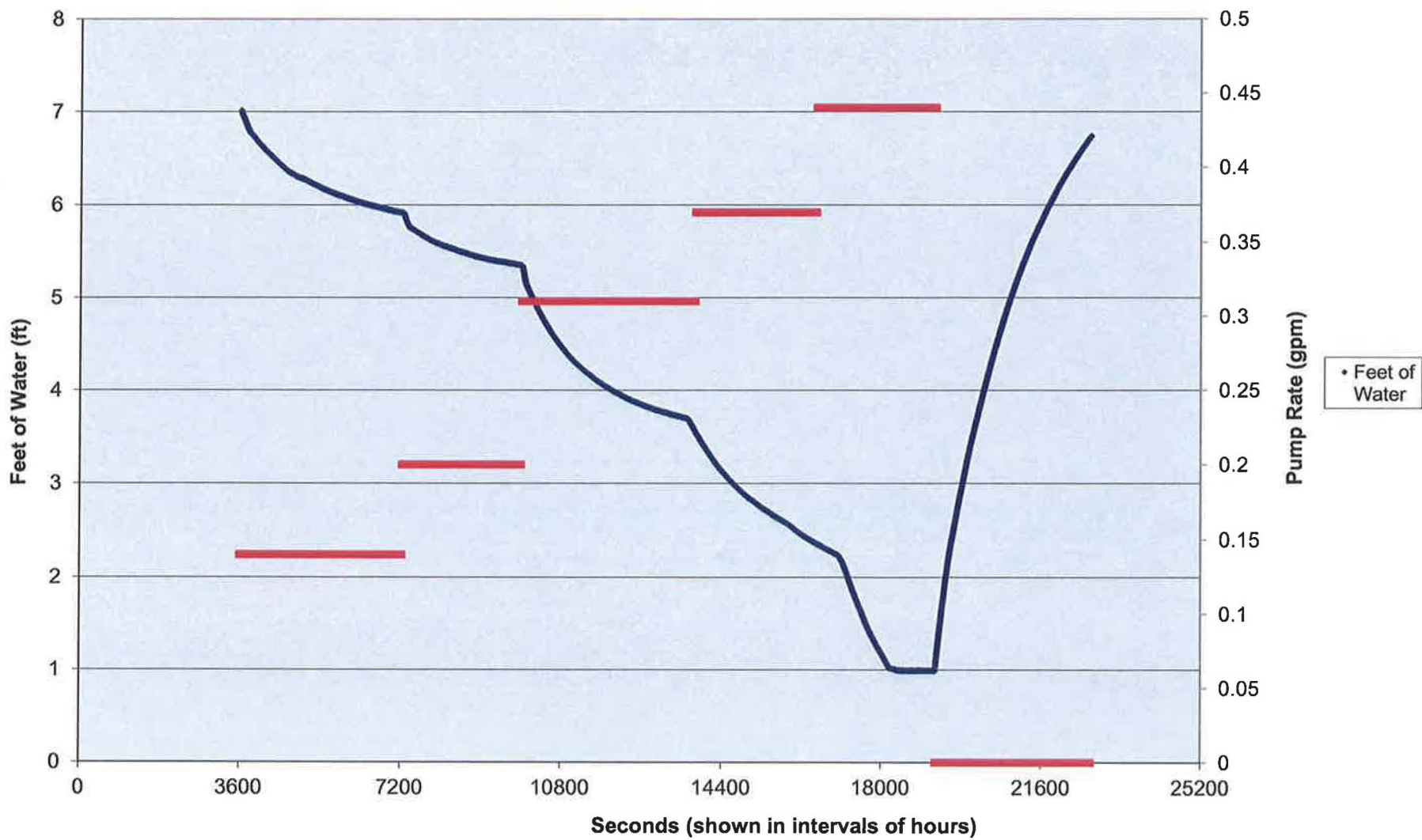
- P4 Soil Sample Location (TRC, 2002)
- S15 Soil Sample Location (Alton, 1991)
- RW1 Recovery Groundwater Monitoring Well

Excavated Area

PROJECT NO.
2476

PLATE
5

GRAPH 1
STEP-DRAWDOWN TEST
Former Exxon Service Station 70234
3450 35th Avenue
Oakland, California



GRAPH 2
CONSTANT-RATE TEST
Former Exxon Service Station 70234
3450 35th Avenue
Oakland, California

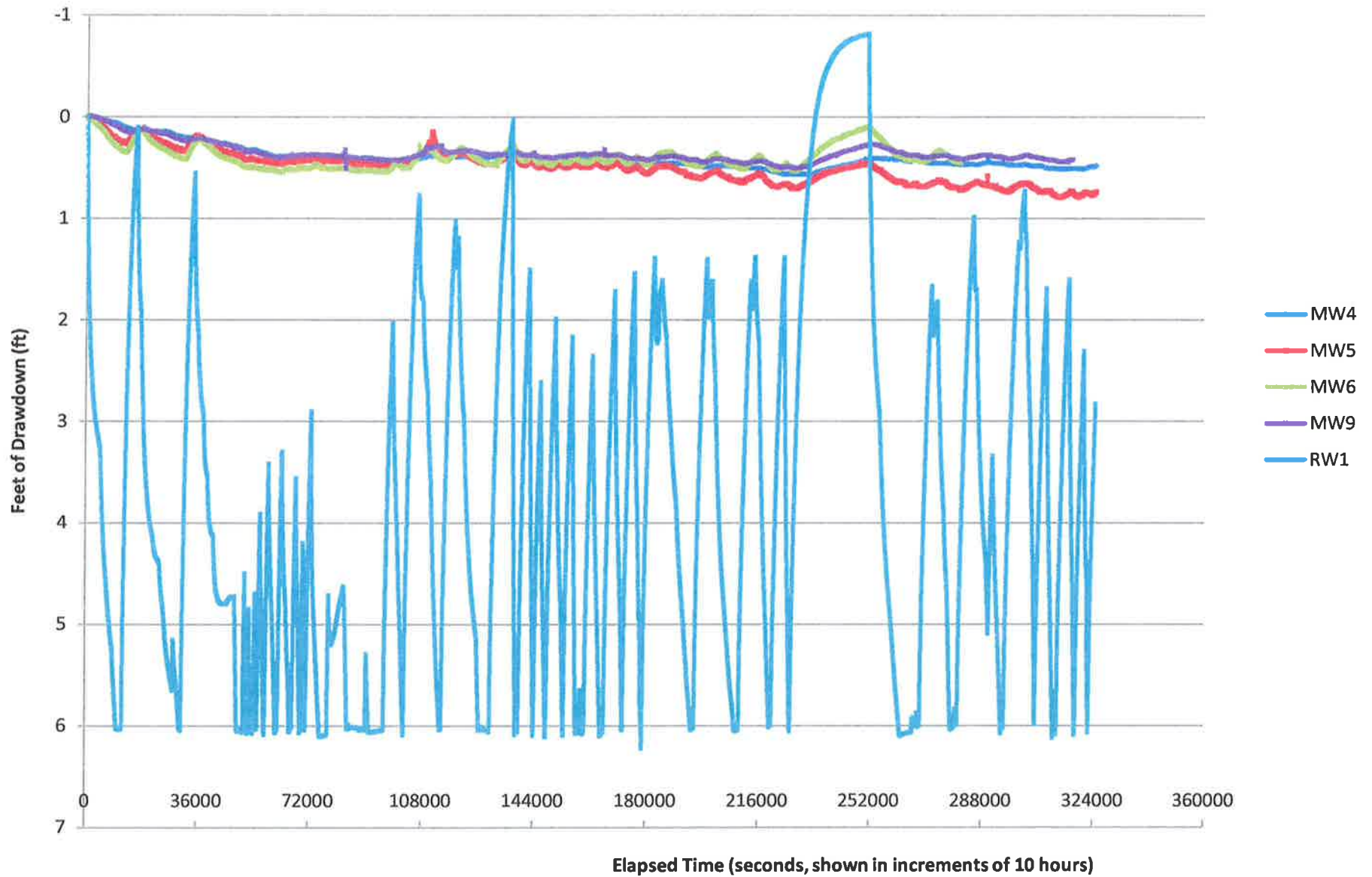


TABLE 1A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 70234
3450 35th Avenue
Oakland, California

Well ID	Sampling Date	Depth (feet)	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHg (µg/L)	MTBE (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Total Pb (µg/L)	Organic Pb (mg/L)
Monitoring Well Samples														
MW1	07/15/92	---	---	Well installed.										
MW1	07/17/92	---	192.00	33.02	158.98	No	67	---	6.6	6.9	2.0	4.5	17	---
MW1	10/22/92	---	192.00	34.07	157.93	No	<50	---	2.9	<0.5	<0.5	<0.5	16	---
MW1	02/04/93	---	192.00	29.43	162.57	No	<50	---	0.8	<0.5	<0.5	<0.5	4	---
MW1	05/03/93	---	192.00	29.72	162.28	No	71	---	2.8	7.2	2.2	22	40	---
MW1	07/30/93	---	192.00	32.95	159.05	No	<50	---	<0.5	<0.5	<0.5	<0.5	5	---
MW1	10/19/93	---	192.00	34.34	157.66	No	<50	---	<0.5	<0.5	<0.5	<0.5	12	---
MW1	02/23/94	---	192.00	31.72	160.28	No	<50	---	<0.5	<0.5	<0.5	<0.5	4	---
MW1	06/06/94	---	192.00	31.77	160.23	No	<50	---	<0.5	<0.5	<0.5	<0.5	<3	---
MW1	08/18/94	---	192.00	33.76	158.24	No	<50	---	<0.5	<0.5	<0.5	<0.5	130	---
MW1	11/15/94	---	192.00	34.08	157.92	No	<50	---	<0.5	<0.5	<0.5	<0.5	<3.0	<100
MW1	02/06/95	---	192.00	28.50	163.50	No	<50	---	<0.5	<0.5	<0.5	<0.5	---	---
MW1	05/10/95	---	192.00	29.30	162.70	No	<50	---	<0.5	<0.5	<0.5	<0.5	---	---
MW1	09/20/99	---	192.00	33.30	158.70	No	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<75	<50
MW1	Well destroyed in June 2000.													
MW2	07/15/92	---	---	Well installed.										
MW2	07/17/92	---	194.85	34.65	160.20	No	<50	---	<0.5	<0.5	<0.5	<0.5	<3	---
MW2	10/22/92	---	194.85	35.64	159.21	No	<50	---	<0.5	<0.5	<0.5	<0.5	--	---
MW2	02/04/93	---	194.85	31.13	163.72	No	<50	---	<0.5	<0.5	<0.5	<0.5	<3	---
MW2	05/03/93	---	194.85	31.08	163.77	No	<50	---	<0.5	<0.5	<0.5	<0.5	3	---
MW2	07/30/93	---	194.85	34.34	160.51	No	<50	---	<0.5	<0.5	<0.5	<0.5	14	---
MW2	10/19/93	---	194.85	36.00	158.85	No	<50	---	<0.5	<0.5	<0.5	<0.5	<3	---
MW2	02/23/94	---	194.85	33.92	160.93	No	<50	---	<0.5	<0.5	<0.5	<0.5	<3	---
MW2	06/06/94	---	194.85	33.50	161.35	No	<50	---	<0.5	<0.5	<0.5	<0.5	<3	---
MW2	08/18/94	---	194.85	35.38	159.47	No	<50	---	<0.5	<0.5	<0.5	<0.5	<3.0	---
MW2	11/15/94	---	194.85	35.93	158.92	No	<50	---	<0.5	<0.5	<0.5	<0.5	<3.0	<100
MW2	02/06/95	---	194.85	30.38	164.47	No	<50	---	<0.5	<0.5	<0.5	<0.5	---	---
MW2	05/10/95	---	194.85	30.77	164.08	No	<50	---	<0.5	<0.5	<0.5	<0.5	---	---
MW2	09/20/99	---	194.85	35.15	159.70	No	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<75	<0.5
MW2	Well destroyed in June 2000.													
MW3	07/15/92	---	---	Well installed.										
MW3	07/17/92	---	196.90	37.24	159.66	No	<50	---	<0.5	<0.5	<0.5	<0.5	50	---
MW3	10/22/92	---	196.90	35.95	160.95	No	<50	---	<0.5	<0.5	<0.5	<0.5	9	---
MW3	02/04/93	---	196.90	29.85	167.05	No	<50	---	<0.5	<0.5	<0.5	<0.5	<3	---

TABLE 1A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 70234
3450 35th Avenue
Oakland, California

Well ID	Sampling Date	Depth (feet)	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHg (µg/L)	MTBE (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Total Pb (µg/L)	Organic Pb (mg/L)
MW3	05/03/93	---	196.90	29.87	167.03	No	<50	---	<0.5	<0.5	<0.5	<0.5	3	---
MW3	07/30/93	---	196.90	33.85	163.05	No	<50	---	<0.5	<0.5	<0.5	<0.5	22	---
MW3	10/19/93	---	196.90	35.89	161.01	No	<50	---	<0.5	<0.5	<0.5	<0.5	12	---
MW3	02/23/94	---	196.90	32.88	164.02	No	<50	---	<0.5	<0.5	<0.5	<0.5	25	---
MW3	06/06/94	---	196.90	32.40	164.50	No	<50	---	<0.5	<0.5	<0.5	<0.5	<3	---
MW3	08/18/94	---	196.90	35.07	161.83	No	<50	---	<0.5	<0.5	<0.5	<0.5	<3.0	---
MW3	11/15/94	---	196.90	35.97	160.93	No	<50	---	<0.5	<0.5	<0.5	<0.5	<3.0	<100
MW3	02/06/95	---	196.90	28.39	168.51	No	<50	---	<0.5	<0.5	<0.5	<0.5	---	---
MW3	05/10/95	---	196.90	28.90	168.00	No	<50	---	<0.5	<0.5	<0.5	<0.5	---	---
MW3	09/20/99	---	196.90	34.68	162.22	No	75.0	1.87	<0.5	11.5	1.8	18.0	<75	<0.5
MW3	Well destroyed in June 2000.													
MW4	03/02/09	---	---	Well installed.										
MW4	03/30/09	---	197.62	30.94	166.68	No	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW4	04/02/09	---	197.62	Well surveyed.										
MW4	05/28/09	---	197.62	32.00	165.62	No	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW4	08/31/09	---	197.62	35.43	162.19	No	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW4	12/11/09	---	197.62	35.01	162.61	No	<50	<0.50	<0.50	0.83	<0.50	1.1	---	---
MW4	05/07/10	---	197.62	29.11	168.51	No	<50	<0.50	<0.50	<0.50	<0.50	<1.0	---	---
MW4	11/01/10	---	197.62	34.95	162.67	No	<50	<0.50	<0.50	<0.50	<0.50	<1.0	---	---
MW4	05/27/11 d	---	197.62	30.65	166.97	No	---	---	---	---	---	---	---	---
MW4	11/23/11	---	197.62	33.49	164.13	No	<50	<0.50	<0.50	<0.50	<0.50	<1.0	---	---
MW5	03/06/09	---	---	Well installed.										
MW5	03/30/09	---	196.35	30.05	166.30	No	4,200	1,900	540	140	<12	310	---	---
MW5	04/02/09	---	196.35	Well surveyed.										
MW5	05/28/09	---	196.35	31.45	164.90	No	5,300	3,600	890	150	<25	140	---	---
MW5	08/31/09	---	196.35	34.70	161.65	No	5,800	3,500	550	<100	<100	<100	---	---
MW5	12/11/09	---	196.35	34.52	161.83	No	4,000b	3,800	230	<100	<100	<100	---	---
MW5	05/07/10	---	196.35	30.84	165.51	No	2,700b	1,700	73	5.3	3.6	6.5	---	---
MW5	11/01/10	---	196.35	33.93	162.42	No	2,400b	3,400	320	71	21	40	---	---
MW5	05/27/11 d	---	196.35	31.65	164.70	No	---	---	---	---	---	---	---	---
MW5	11/23/11	---	196.35	32.58	163.77	No	1,900b	3,200	72	2.7	3.1	8.1	---	---
MW6	03/09/09	---	---	Well installed.										
MW6	03/30/09	---	192.41	26.94	165.47	No	2,800	4,800	0.91	<0.50	<0.50	<0.50	---	---
MW6	04/02/09	---	192.41	Well surveyed.										
MW6	05/28/09	---	192.41	28.04	164.37	No	2,800	6,000	<100	<100	<100	<100	---	---

TABLE 1A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 70234
3450 35th Avenue
Oakland, California

Well ID	Sampling Date	Depth (feet)	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHg (µg/L)	MTBE (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Total Pb (µg/L)	Organic Pb (mg/L)
MW6	08/31/09	---	192.41	30.57	161.84	No	4,900	6,600	<100	<100	<100	<100	---	---
MW6	12/11/09	---	192.41	30.78	161.63	No	4,900b	6,200	<100	<100	<100	<100	---	---
MW6	05/07/10	---	192.41	25.42	166.99	No	2,900b	3,700	2.7	<0.50	0.74c	<1.0	---	---
MW6	11/01/10	---	192.41	30.68	161.73	No	850b	6,100	2.1	<0.50	<0.50	<1.0	---	---
MW6	05/27/11 d	---	192.41	27.07	165.34	No	---	---	---	---	---	---	---	---
MW6	11/23/11	---	192.41	29.25	163.16	No	1,600b	6,400	<0.50	<0.50	<0.50	<1.0	---	---
MW7	03/09/09	---	---	Well installed.										
MW7	03/30/09	---	194.34	29.15	165.19	No	55	66	<0.50	<0.50	<0.50	<0.50	---	---
MW7	04/02/09	---	194.34	Well surveyed.										
MW7	05/28/09	---	194.34	30.16	164.18	No	50	67	<1.0	<1.0	<1.0	<1.0	---	---
MW7	08/31/09	---	194.34	33.31	161.03	No	<50	12	<0.50	0.60	<0.50	<0.50	---	---
MW7	12/11/09	---	194.34	32.71	161.63	No	<50	31	0.78	1.7	0.62	2.4	---	---
MW7	05/07/10	---	194.34	27.54	166.80	No	510b	700	<0.50	<0.50	<0.50	<1.0	---	---
MW7	11/01/10	---	194.34	32.82	161.52	No	68b	140	<0.50	<0.50	<0.50	<1.0	---	---
MW7	05/27/11 d	---	194.34	28.85	165.49	No	---	---	---	---	---	---	---	---
MW7	11/23/11	---	194.34	31.39	162.95	No	190b	300	<0.50	<0.50	<0.50	<1.0	---	---
MW8	03/04/09	---	---	Well installed.										
MW8	03/30/09	---	192.96	27.35	165.61	No	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW8	04/02/09	---	192.96	Well surveyed.										
MW8	05/28/09	---	192.96	28.72	164.24	No	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW8	08/31/09	---	192.96	31.93	161.03	No	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW8	12/11/09	---	192.96	31.24	161.72	No	<50	<0.50	0.74	1.6	0.59	2.3	---	---
MW8	05/07/10	---	192.96	25.68	167.28	No	<50	<0.50	<0.50	<0.50	<0.50	<1.0	---	---
MW8	11/01/10	---	192.96	31.18	161.78	No	<50	<0.50	<0.50	<0.50	<0.50	<1.0	---	---
MW8	05/27/11	---	192.96	27.55	165.41	No	<50	<0.50	<0.50	<0.50	<0.50	<1.0	---	---
MW8	11/23/11	---	192.96	29.74	163.22	No	<50	<0.50	<0.50	<0.50	<0.50	<1.0	---	---
MW9	03/05/09	---	---	Well installed.										
MW9	03/30/09	---	195.16	28.31	166.85	No	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW9	04/02/09	---	195.16	Well surveyed.										
MW9	05/28/09	---	195.16	29.69	165.47	No	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW9	08/31/09	---	195.16	33.20	161.96	No	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW9	12/11/09	---	195.16	32.62	162.54	No	<50	<0.50	0.73	1.7	0.54	2.2	---	---
MW9	05/07/10	---	195.16	26.59	168.57	No	<50	<0.50	<0.50	<0.50	<0.50	<1.0	---	---
MW9	11/01/10	---	195.16	32.45	162.71	No	<50	<0.50	<0.50	<0.50	<0.50	<1.0	---	---
MW9	05/27/11	---	195.16	29.62	165.54	No	<50	<0.50	<0.50	<0.50	<0.50	<1.0	---	---

TABLE 1A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 70234
3450 35th Avenue
Oakland, California

Well ID	Sampling Date	Depth (feet)	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHg (µg/L)	MTBE (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Total Pb (µg/L)	Organic Pb (mg/L)
MW9	11/23/11	---	195.16	30.56	164.60	No	<50	<0.50	<0.50	<0.50	<0.50	<1.0	---	---
Grab Groundwater Samples														
Pit Water	06/14/02	11.5a	---	---	---	---	5,600	12,000	140	840	100	530	---	---
UST Pit	06/19/02	13.5a	---	---	---	---	680	640	2.7	36	18	130	---	---
W-38-B11	11/14/07	38	---	---	---	---	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
W-15-B12	11/13/07	15	---	---	---	---	8,400	78	67	<5.0	140	150	---	---
W-40-B13	11/12/07	40	---	---	---	---	<50	0.53	<0.50	<0.50	<0.50	<0.50	---	---
W-15-B14	11/13/07	15	---	---	---	---	2,500	16	1.7	3.0	26	13	---	---
W-38-B15	11/15/07	38	---	---	---	---	18,000	12,000	3,400	2,500	330	2,000	---	---
W-40-B16	11/15/07	40	---	---	---	---	<50	7.7	<0.50	<0.50	<0.50	<0.50	---	---
W-37-B17	11/13/07	37	---	---	---	---	630	2,200	1.8	<0.50	4.1	1.4	---	---
W-38-B18	11/12/07	38	---	---	---	---	4,300	1,400	52	<12	56	96	---	---
W-35-B19	03/03/09	35	---	---	---	---	4,400	7,100	<0.50	<0.50	<0.50	<1.0	---	---
W-35-B20	03/03/09	35	---	---	---	---	640	440	<0.50	<0.50	<0.50	<1.0	---	---
W-35-B21	03/03/09	35	---	---	---	---	<50	1.4	<0.50	<0.50	<0.50	<1.0	---	---

TABLE 1A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 70234
 3450 35th Avenue
 Oakland, California

Notes:	=	Data prior to 1999 provided by EA Environmental Science and Engineering in previously submitted reports.
TOC Elev.	=	Top of well casing elevation; datum is mean sea level.
DTW	=	Depth to water.
GW Elev.	=	Groundwater elevation; datum is mean sea level.
NAPL	=	Non-aqueous phase liquid.
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015.
MTBE	=	Methyl tertiary butyl ether analyzed using EPA Method 8260.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8260B8020/8021B; during March 2009, analyzed using EPA Method 8020/8021B.
Total Pb	=	Total lead analyzed using EPA Method 6010.
Organic Pb	=	Organic lead analyzed using CA DHS LUFT method.
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.
Ethanol	=	Ethanol analyzed using EPA Method 8260B.
µg/L	=	Micrograms per liter.
mg/L	=	Milligrams per liter.
<	=	Less than the stated laboratory reporting limit.
---	=	Not sampled/Not analyzed/Not measured/Not applicable.
a	=	Approximate depth to groundwater surface at time of sampling.
b	=	Hydrocarbon pattern does not match the requested fuel.
c	=	Analyte presence was not confirmed by second column or GC/MS analysis.
d	=	Well inaccessible for sampling.

TABLE 1B
ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 70234
3450 35th Avenue
Oakland, 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)	Ethanol (µg/L)
Monitoring Well Samples									
MW1	07/17/92 - 09/20/99	---	Not analyzed for these analytes.						
MW1	Well destroyed in June 2000.	---							
MW2	07/17/92 - 09/20/99	---	Not analyzed for these analytes.						
MW2	Well destroyed in June 2000.	---							
MW3	07/17/92 - 09/20/99	---	Not analyzed for these analytes.						
MW3	Well destroyed in June 2000.	---							
MW4	03/30/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW4	05/28/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW4	08/31/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW4	12/11/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW4	05/07/10	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW4	11/01/10	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW4	05/27/11 d	---	---	---	---	---	---	---	---
MW4	11/23/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW5	03/30/09	---	<12	17	<12	450	<12	<12	---
MW5	05/28/09	---	<25	<25	<25	530	<25	<25	---
MW5	08/31/09	---	<100	<100	<100	<1,000	<100	<100	---
MW5	12/11/09	---	<100	<100	<100	2,000	<100	<100	---
MW5	05/07/10	---	<25	<25	<25	400	<25	<25	---
MW5	11/01/10	---	<50	<50	<50	1,500	<50	<50	---
MW5	05/27/11 d	---	---	---	---	---	---	---	---
MW5	11/23/11	---	<50	<50	<50	<500	<50	<50	---
MW6	03/30/09	---	<0.50	<0.50	1.3	410	<0.50	0.82	---
MW6	05/28/09	---	<100	<100	<100	<1,000	<100	<100	---
MW6	08/31/09	---	<100	<100	<100	1,100	<100	<100	---
MW6	12/11/09	---	<100	<100	<100	2,600	<100	<100	---
MW6	05/07/10	---	<100	<100	<100	<1,000	<100	<100	---
MW6	11/01/10	---	<50	<50	<50	2,400	<50	<50	---
MW6	05/27/11 d	---	---	---	---	---	---	---	---
MW6	11/23/11	---	<100	<100	<100	<1,000	<100	<100	---

TABLE 1B
ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 70234
3450 35th Avenue
Oakland, 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)	Ethanol (µg/L)
MW7	03/30/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW7	05/28/09	---	<1.0	<1.0	<1.0	<10	<1.0	<1.0	---
MW7	08/31/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW7	12/11/09	---	<0.50	<0.50	<0.50	12	<0.50	<0.50	---
MW7	05/07/10	---	<0.50	<0.50	<0.50	130	<0.50	<0.50	---
MW7	11/01/10	---	<2.5	<2.5	<2.5	27	<2.5	<2.5	---
MW7	05/27/11 d	---	---	---	---	---	---	---	---
MW7	11/23/11	---	<5.0	<5.0	<5.0	<50	<5.0	<5.0	---
MW8	03/30/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW8	05/28/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW8	08/31/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW8	12/11/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW8	05/07/10	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW8	11/01/10	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW8	05/27/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW8	11/23/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW9	03/30/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW9	05/28/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW9	08/31/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW9	12/11/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW9	05/07/10	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW9	11/01/10	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW9	05/27/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW9	11/23/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
Grab Groundwater Samples									
Pit Water	06/14/02	11.5a	---	---	---	---	---	---	---
UST Pit	06/19/02	13.5a	---	---	---	---	---	---	---
W-38-B11	11/14/07	38	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<50
W-15-B12	11/13/07	15	<5.0	<5.0	<5.0	<100	<5.0	<5.0	<500
W-40-B13	11/12/07	40	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<50
W-15-B14	11/13/07	15	<1.0	<1.0	<1.0	<20	<1.0	<1.0	<100
W-38-B15	11/15/07	38	<25	<25	<25	1,900	<25	<25	<2,500
W-40-B16	11/15/07	40	<0.50	<0.50	<0.50	<10	<0.50	<0.50	85

TABLE 1B
ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 70234
 3450 35th Avenue
 Oakland, 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)	Ethanol (µg/L)
W-37-B17	11/13/07	37	<0.50	<0.50	<0.50	58	<0.50	<0.50	<50
W-38-B18	11/12/07	38	<12	<12	<12	<250	<12	<12	<1,200
W-35-B19	03/03/09	35	<50	<50	<50	<500	<50	<50	<5,000
W-35-B20	03/03/09	35	<0.50	<0.50	<0.50	12	<0.50	<0.50	<50
W-35-B21	03/03/09	35	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<50

TABLE 1B
ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 70234
 3450 35th Avenue
 Oakland, California

Notes:	=	Data prior to 1999 provided by EA Environmental Science and Engineering in previously submitted reports.
TOC Elev.	=	Top of well casing elevation; datum is mean sea level.
DTW	=	Depth to water.
GW Elev.	=	Groundwater elevation; datum is mean sea level.
NAPL	=	Non-aqueous phase liquid.
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015.
MTBE	=	Methyl tertiary butyl ether analyzed using EPA Method 8260.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8260B/8020/8021B; during March 2009, analyzed using EPA Method 8020/8021B.
Total Pb	=	Total lead analyzed using EPA Method 6010.
Organic Pb	=	Organic lead analyzed using CA DHS LUFT method.
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.
Ethanol	=	Ethanol analyzed using EPA Method 8260B.
µg/L	=	Micrograms per liter.
mg/L	=	Milligrams per liter.
<	=	Less than the stated laboratory reporting limit.
---	=	Not sampled/Not analyzed/Not measured/Not applicable.
a	=	Approximate depth to groundwater surface at time of sampling.
b	=	Hydrocarbon pattern does not match the requested fuel.
c	=	Analyte presence was not confirmed by second column or GC/MS analysis.
d	=	Well inaccessible for sampling.

TABLE 2A
CUMULATIVE SOIL ANALYTICAL RESULTS
Former Exxon Service Station 70234
3450 35th Avenue
Oakland, California
(Page 1 of 6)

Sample ID	Sampling Date	Depth (feet bgs)	Kerosene (mg/kg)	TPHd (mg/kg)	TPHg (mg/kg)	TPHmo (mg/kg)	EHC-HO (mg/kg)	MTBE (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	Lead (mg/kg)	TOG (mg/kg)
Used-Oil UST Confirmation Soil Sample														
T1-12	06/18/97	---	---	200b	8.6a	680c	---	---	ND	0.038	0.016	0.046	---	---
Hydraulic Hoist Confirmation Samples														
H1-8	06/18/97	---	---	---	---	---	99d	---	---	---	---	---	---	---
H2-8	06/18/97	---	---	---	---	---	2,100d	---	---	---	---	---	---	---
Samples from the UST Cavity Sidewall														
Pit1@12'	06/14/02	12	---	---	<1.0	---	---	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
Pit2@11.5'	06/14/02	11.5	---	---	<1.0	---	---	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
Pit3@11'	06/14/02	11	---	---	<1.0	---	---	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
Pit4@10'	06/14/02	10	---	---	<1.0	---	---	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
Samples from Beneath Product Piping														
A-6.4	06/25/02	6.4	---	---	<1.0	---	---	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
B-4.9	06/25/02	4.9	---	---	24	---	---	0.020	0.057	0.11	0.12	1.2	---	---
C-6.5	06/25/02	6.5	---	---	<1.0	---	---	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
D-5.2	06/25/02	5.2	---	---	<1.0	---	---	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
Soil Borings														
S-1	08/28/91	10	---	---	<1.0	---	---	---	<0.005	<0.005	<0.005	<0.005	<5	---
S-2	08/28/91	10	---	---	<1.0	---	---	---	<0.005	<0.005	<0.005	<0.005	<5	---
S-3	08/28/91	10	---	---	<1.0	---	---	---	<0.005	<0.005	<0.005	<0.005	<5	---
S-4	08/28/91	10	---	---	290	---	---	---	2.8	6.5	2	27	<5	---
S-5	08/28/91	10	---	---	3.5	---	---	---	0.27	0.096	0.064	0.32	<5	---
S-6	08/28/91	11	---	---	4.1	---	---	---	0.19	0.13	0.056	0.23	<5	---
S-7	08/28/91	3	---	---	4.0	---	---	---	0.66	0.040	0.11	0.13	<5	---
S-8	08/28/91	3	---	---	<1.0	---	---	---	<0.005	<0.005	<0.005	<0.005	<5	---
S-9	08/28/91	3	---	---	210	---	---	---	1.4	7.2	3.0	18	<5	---
S-10	08/28/91	3	---	---	<1.0	---	---	---	<0.005	0.031	0.031	0.067	<5	---
S-11	08/28/91	1.5	---	---	<1.0	---	---	---	<0.005	<0.005	<0.005	<0.005	<5	---
S-12	08/28/91	15	---	---	3.1	---	---	---	0.36	0.048	0.048	0.16	---	---
S-13	08/28/91	15	---	---	1.8	---	---	---	0.26	0.008	0.008	0.041	---	---
S-14	08/28/91	4	---	---	5.0	---	---	---	0.047	0.063	0.063	0.041	---	---
S-15	08/28/91	15	---	---	<1.0	---	---	---	<0.005	<0.005	<0.005	<0.005	---	---
B-1	3/20/91	15.5	---	---	<1.0	---	---	---	0.011	0.007	0.011	0.04	---	---
B-1	3/20/91	20.5	---	---	<1.0	---	---	---	0.012	0.007	0.01	0.04	---	---
B-2	3/20/91	15.5	---	---	<1.0	---	---	---	0.036	0.026	0.012	0.055	---	---
B-2	3/20/91	20.5	---	---	<1.0	---	---	---	0.0073	0.0063	0.0098	0.038	---	---
B-3	3/20/91	10.5	---	---	1	---	---	---	0.006	0.006	0.008	0.036	---	---

TABLE 2A
CUMULATIVE SOIL ANALYTICAL RESULTS

Former Exxon Service Station 70234
3450 35th Avenue
Oakland, California
(Page 2 of 6)

Sample ID	Sampling Date	Depth (feet bgs)	Kerosene (mg/kg)	TPHd (mg/kg)	TPHg (mg/kg)	TPHmo (mg/kg)	EHC-HO (mg/kg)	MTBE (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	Lead (mg/kg)	TOG (mg/kg)
B-3	3/20/91	15.5	---	---	440	---	---	---	0.7	5.4	4.7	24	---	---
B-4	3/20/91	10.5	---	---	5	---	---	---	0.013	0.019	0.014	0.082	<5	---
B-4	3/20/91	15.5	---	---	6.6	---	---	---	0.039	0.043	0.027	0.12	---	---
B-4	3/20/91	20.5	---	---	<1.0	---	---	---	0.0076	0.0073	0.011	0.054	---	---
B-5	3/20/91	10.5	---	---	26	---	---	---	0.055	0.061	0.17	0.67	---	---
B-6	3/20/91	10.5	---	---	240	---	---	---	0.28	2.2	2.8	13	---	---
B-6	3/20/91	15.5	---	---	1.4	---	---	---	0.0055	0.0054	0.009	0.034	---	---
B-7	3/20/91	10.5	---	---	<1.0	---	---	---	0.006	0.006	0.008	0.033	---	---
B-8	3/20/91	10.5	---	---	<1.0	---	---	---	0.006	0.005	0.008	0.035	---	---
B-9	3/20/91	10.5	---	---	---	---	---	---	---	---	---	---	---	<50
B-10	3/20/91	10.5	---	---	---	---	---	---	---	---	---	---	---	<50
S-5-B11	09/05/07	5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-10-B11	09/10/07	10	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-13.5-B11	09/10/07	13.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-18-B11	09/11/07	18	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-20-B11	09/11/07	20	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-25.5-B11	11/14/07	25.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-29.5-B11	11/14/07	29.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-34.5-B11	11/14/07	34.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-5-B12	09/04/07	5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-15.5-B12	11/13/07	15.5	---	---	43	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-20.5-B12	11/13/07	20.5	---	---	3.2	---	---	0.15	0.076	<0.0050	0.0053	<0.0050	---	---
S-5-B13	09/05/07	5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-10-B13	09/10/07	10	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-14.5-B13	09/10/07	14.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-20-B13	09/10/07	20	---	---	4.3	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-25-B13	11/12/07	25	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-30-B13	11/12/07	30	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-35-B13	11/12/07	35	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-5.0-B14	09/06/07	5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-16-B14	11/13/07	16	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-20.5-B14	11/13/07	20.5	---	---	<0.50	---	---	0.031	<0.0050	<0.0050	<0.0050	<0.0050	---	---

TABLE 2A
CUMULATIVE SOIL ANALYTICAL RESULTS
Former Exxon Service Station 70234
3450 35th Avenue
Oakland, California
(Page 3 of 6)

Sample ID	Sampling Date	Depth (feet bgs)	Kerosene (mg/kg)	TPHd (mg/kg)	TPHg (mg/kg)	TPHmo (mg/kg)	EHC-HO (mg/kg)	MTBE (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	Lead (mg/kg)	TOG (mg/kg)
S-5-B15	09/04/07	5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-10.5-B15	11/15/07	10.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-15.5-B15	11/15/07	15.5	---	---	1.1	---	---	0.12	0.32	0.019	0.017	0.074	---	---
S-20-B15	11/15/07	20	---	---	300	---	---	<0.25	6.1	36	14	72	---	---
S-25.5-B15	11/15/07	25.5	---	---	220	---	---	<0.12	3.1	18	6.8	36	---	---
S-30.5-B15	11/15/07	30.5	---	---	59	---	---	<0.25	2.9	5.6	1.5	20	---	---
S-35.5-B15	11/15/07	35.5	---	---	3.3	---	---	0.26	0.28	0.21	0.26	0.79	---	---
S-5-B16	09/04/07	5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-11-B16	11/14/07	11	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-15.5-B16	11/14/07	15.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-21-B16	11/14/07	21	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-26-B16	11/14/07	26	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-30.5-B16	11/14/07	30.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-34.5-B16	11/14/07	34.5	---	---	<0.50	---	---	0.021	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-38.5-B16	11/14/07	38.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-5-B17	09/05/07	5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-11-B17	11/13/07	11	---	---	90	---	---	0.036	0.052	<0.0050	0.086	0.020	---	---
S-16-B17	11/13/07	16	---	---	<0.50	---	---	0.099	0.0052	<0.0050	<0.0050	<0.0050	---	---
S-21-B17	11/13/07	21	---	---	<0.50	---	---	0.011	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-24.5-B17	11/13/07	24.5	---	---	<0.50	---	---	0.59	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-31-B17	11/13/07	31	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-35.5-B17	11/13/07	35.5	---	---	0.85	---	---	1.7	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-5-B18	09/04/07	5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-10-B18	11/12/07	10	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-15-B18	11/12/07	15	---	---	<0.50	---	---	0.0051	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-20-B18	11/12/07	20	---	---	<0.50	---	---	0.019	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-25-B18	11/12/07	25	---	---	<0.50	---	---	0.18	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-30-B18	11/12/07	30	---	---	<0.50	---	---	0.54	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-35-B18	11/12/07	35	---	---	24	---	---	0.53	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-5-B19	02/25/09	5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-10-B19	03/02/09	10	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-15.5-B19	03/03/09	15.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-20.5-B19	03/03/09	20.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-25.5-B19	03/03/09	25.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-30.5-B19	03/03/09	30.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-35.5-B19	03/03/09	35.5	---	---	<0.50	---	---	0.51	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-39.5-B19	03/03/09	39.5	---	---	<0.50	---	---	0.048	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-5-B20	02/25/09	5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---

TABLE 2A
CUMULATIVE SOIL ANALYTICAL RESULTS
Former Exxon Service Station 70234
3450 35th Avenue
Oakland, California
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Sample ID	Sampling Date	Depth (feet bgs)	Kerosene (mg/kg)	TPHd (mg/kg)	TPHg (mg/kg)	TPHmo (mg/kg)	EHC-HO (mg/kg)	MTBE (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	Lead (mg/kg)	TOG (mg/kg)
S-10.5-B20	03/03/09	10.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-15.0-B20	03/03/09	15.0	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-20.5-B20	03/03/09	20.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-25.5-B20	03/03/09	25.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-30.5-B20	03/03/09	30.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-35.5-B20	03/03/09	35.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-39.5-B20	03/03/09	39.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-5-B21	02/25/09	5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-10.5-B21	03/04/09	10.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-15-B21	03/04/09	15	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-20.5-B21	03/04/09	20.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-25.5-B21	03/04/09	25.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-30.5-B21	03/04/09	30.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-35.5-B21	03/04/09	35.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-39.5-B21	03/04/09	39.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
Monitoring and Recovery Wells														
MW1	07/14/92	8	---	---	<1.0	---	---	---	<0.0050	<0.0050	<0.0050	0.0064	<10	---
MW2	07/14/92	29.5	---	---	<1.0	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<10	---
MW3	07/14/92	28	---	---	<1.0	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<10	---
MW4	07/14/92	29.5	---	---	<1.0	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<10	---
S-5-MW4	02/25/09	5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-10.5-MW4	03/02/09	10.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-15.5-MW4	03/02/09	15.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-20.5-MW4	03/02/09	20.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-25.5-MW4	03/02/09	25.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-30.5-MW4	03/02/09	30.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-35.5-MW4	03/02/09	35.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-40-MW4	03/02/09	40	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-44.5-MW4	03/02/09	44.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-5-MW5	02/27/09	5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-10-MW5	03/05/09	10	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-15-MW5	03/05/09	15	---	---	0.70	---	---	0.036	0.22	0.022	0.071	0.31	---	---
S-20-MW5	03/05/09	20	---	---	260	---	---	<5.0	5.4	19	11	63	---	---
S-25-MW5	03/06/09	25	---	---	41	---	---	<0.50	<0.0050	0.069	0.15	0.75	---	---
S-30-MW5	03/06/09	30	---	---	0.91	---	---	<0.50	0.14	0.0061	0.011	0.036	---	---
S-35-MW5	03/06/09	35	---	---	5.4	---	---	<0.50	<0.050	3.9	1.5	15	---	---
S-39.5-MW5	03/06/09	39.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-5-MW6	02/27/09	5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---

TABLE 2A
CUMULATIVE SOIL ANALYTICAL RESULTS
Former Exxon Service Station 70234
3450 35th Avenue
Oakland, California
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Sample ID	Sampling Date	Depth (feet bgs)	Kerosene (mg/kg)	TPHd (mg/kg)	TPHg (mg/kg)	TPHmo (mg/kg)	EHC-HO (mg/kg)	MTBE (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	Lead (mg/kg)	TOG (mg/kg)
S-10-MW6	03/09/09	10	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-15.5-MW6	03/09/09	15.5	---	---	<0.50	---	---	0.011	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-20.5-MW6	03/09/09	20.5	---	---	<0.50	---	---	0.015	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-25.5-MW6	03/09/09	25.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-30.5-MW6	03/09/09	30.5	---	---	<0.50	---	---	0.063	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-35.5-MW6	03/09/09	35.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-39.5-MW6	03/09/09	39.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-5-MW7	02/27/09	5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-10.5-MW7	03/09/09	10.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-15.5-MW7	03/09/09	15.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-20.5-MW7	03/09/09	20.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-25.5-MW7	03/09/09	25.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-30.5-MW7	03/09/09	30	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-35.5-MW7	03/09/09	35.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-39.5-MW7	03/09/09	39.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-5-MW8	02/25/09	5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-10.5-MW8	03/04/09	10.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-15.5-MW8	03/04/09	15.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-20.5-MW8	03/04/09	20.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-25.5-MW8	03/04/09	25.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-30.5-MW8	03/04/09	30.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-35.5-MW8	03/04/09	35.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-39.5-MW8	03/04/09	39.5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-5-MW9	02/25/09	5	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-10-MW9	03/05/09	10	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-15-MW9	03/05/09	15	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-20-MW9	03/05/09	20	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-25-MW9	03/05/09	25	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-30-MW9	03/05/09	30	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-35-MW9	03/05/09	35	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-40-MW9	03/05/09	40	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	---	---
S-5.0-RW1	12/22/11	5.0	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-15.0-RW1	12/22/11	15.0	---	---	1.3e	---	---	0.0053	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-25.0-RW1	12/22/11	25.0	---	---	6.5e	---	---	0.0066g	<0.0050	<0.0050	<0.0050	0.029	---	---
S-28.0-RW1	12/22/11	28.0	---	---	27e	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-31.0-RW1	12/22/11	31.0	---	---	1.7	---	---	0.50	<0.0050	0.0072	<0.0050	0.096	---	---
S-32.5-RW1	12/22/11	32.5	---	---	0.95	---	---	0.72	<0.0050	<0.0050	<0.0050	0.0087	---	---
S-34.0-RW1	12/22/11	34.0	---	---	2.3e	---	---	0.94	<0.0050	<0.0050	<0.0050	0.0053	---	---
S-37.0-RW1	12/22/11	37.0	---	---	420	---	---	<0.50	<0.50	<0.50	0.88	10	---	---

**TABLE 2A
CUMULATIVE SOIL ANALYTICAL RESULTS**

Former Exxon Service Station 70234
3450 35th Avenue
Oakland, California
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Sample ID	Sampling Date	Depth (feet bgs)	Kerosene (mg/kg)	TPHd (mg/kg)	TPHg (mg/kg)	TPHmo (mg/kg)	EHC-HO (mg/kg)	MTBE (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	Lead (mg/kg)	TOG (mg/kg)
S-38.5-RW1	12/22/11	38.5	---	---	<0.50	---	---	0.0071	<0.0050	<0.0050	<0.0050	<0.0050	---	---
S-40.0-RW1	12/22/11	40.0	---	---	440	---	---	<1.0	<1.0	<1.0	2.1	29	---	---
Soil Stockpile Samples														
SP-1(S-SP1-S-SP4)	09/12/07	---	---	---	<0.10	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	7.2	---
SP(1-4)	06/18/97	---	---	47b	ND	150c	---	---	ND	ND	ND	ND	8.7	---
SP-2	03/09/09	---	---	---	<0.50	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	5.83	---
S-SP1 (1,2,3,4)	12/22/11	---	8.0	<5.0	40	<25	---	<0.50	0.0068	0.012	0.048	0.46	4.50	---

- Notes:
- Kerosene = Kerosene analyzed using EPA Method 8015B.
 - TPHg = Total petroleum hydrocarbons as gasoline analyzed using modified EPA Method 8015M.
 - MTBE = Methyl tertiary butyl ether analyzed using EPA Method 8021B/8260B
 - BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8021B/8260B.
 - Lead = Lead analyzed using EPA Method 6010B.
 - TOG = Total oil and grease.
 - 1,2-DCA = 1,2-dichloroethane analyzed using EPA Method 8260B.
 - EDB = 1,2-dibromoethane 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.
 - Ethanol = Ethanol analyzed using EPA Method 8260B.
 - Add'l SVOCs = Additional semi-volatile organic compounds.
 - HVOCs = Halogenated volatile organic compounds analyzed using EPA Method 8260B.
 - feet bgs = Feet below ground surface.
 - mg/kg = Milligrams per kilogram.
 - ND = Not detected at or above the laboratory reporting limit.
 - < = Less than the stated laboratory reporting limit.
 - = Not analyzed/Not applicable.
 - a = Unidentified C8-C12.
 - b = Unidentified C9-C24.
 - c = Unidentified C16-C36.
 - d = Unidentified C16-C40.
 - e = Hydrocarbon pattern does not match that of the specified standard.
 - f = 1.1 mg/kg 1,2,4-trimethylbenzene; 0.16 mg/kg 1,3,5-trimethylbenzene; 0.022 mg/kg isopropyltoluene; 0.078 mg/kg naphthalene; 0.059 mg/kg n-Butylbenzene; 0.091 mg/kg n-Propylbenzene; 0.0070 p-Isopropyltoluene; 0.012 sec-Butylbenzene.
 - g = Compound did not meet method-described identification guidelines. Identification was based on additional GM/MS characteristics.

TABLE 2B
ADDITIONAL CUMULATIVE SOIL ANALYTICAL RESULTS
Former Exxon Service Station 70234
3450 35th Avenue
Oakland, California
(Page 2 of 5)

Sample ID	Sampling Date	Depth (feet bgs)	1,2-DCA (mg/kg)	EDB (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	Ethanol (mg/kg)	VOCs (mg/kg)	SVOCs (mg/kg)	HVOCs (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)
S-20-B15	11/15/07	20	<0.25	<0.25	<2.5	<0.50	<0.50	<0.50	<12	---	---	---	---	---	---	---
S-25.5-B15	11/15/07	25.5	<0.12	<0.12	<1.2	<0.25	<0.25	<0.25	<6.2	---	---	---	---	---	---	---
S-30.5-B15	11/15/07	30.5	<0.25	<0.25	<2.5	<0.50	<0.50	<0.50	<12	---	---	---	---	---	---	---
S-35.5-B15	11/15/07	35.5	<0.0050	<0.0050	0.25	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-5-B16	09/04/07	5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	---	---	---	---	---	---	---	---
S-11-B16	11/14/07	11	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	---	---	---	---	---	---	---	---
S-15.5-B16	11/14/07	15.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	---	---	---	---	---	---	---	---
S-21-B16	11/14/07	21	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	---	---	---	---	---	---	---	---
S-26-B16	11/14/07	26	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	---	---	---	---	---	---	---	---
S-30.5-B16	11/14/07	30.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	---	---	---	---	---	---	---	---
S-34.5-B16	11/14/07	34.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	---	---	---	---	---	---	---	---
S-38.5-B16	11/14/07	38.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	---	---	---	---	---	---	---	---
S-5-B117	09/05/07	5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	---	---	---	---	---	---	---	---
S-11-B17	11/13/07	11	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	---	---	---	---	---	---	---	---
S-16-B17	11/13/07	16	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	---	---	---	---	---	---	---	---
S-21-B17	11/13/07	21	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	---	---	---	---	---	---	---	---
S-24.5-B17	11/13/07	24.5	<0.0050	<0.0050	0.20	<0.010	<0.010	<0.010	---	---	---	---	---	---	---	---
S-31-B17	11/13/07	31	<0.0050	<0.0050	0.15	<0.010	<0.010	<0.010	---	---	---	---	---	---	---	---
S-35.5-B17	11/13/07	35.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	---	---	---	---	---	---	---	---
S-5-B18	09/04/07	5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	---	---	---	---	---	---	---	---
S-10-B18	11/12/07	10	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	---	---	---	---	---	---	---	---
S-15-B18	11/12/07	15	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	---	---	---	---	---	---	---	---
S-20-B18	11/12/07	20	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	---	---	---	---	---	---	---	---
S-25-B18	11/12/07	25	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	---	---	---	---	---	---	---	---
S-30-B18	11/12/07	30	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	---	---	---	---	---	---	---	---
S-35-B18	11/12/07	35	<0.0050	<0.0050	0.70	<0.010	<0.010	<0.010	---	---	---	---	---	---	---	---
S-5-B19	02/25/09	5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-10-B19	03/02/09	10	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-15.5-B19	03/03/09	15.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-20.5-B19	03/03/09	20.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-25.5-B19	03/03/09	25.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-30.5-B19	03/03/09	30.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-35.5-B19	03/03/09	35.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-39.5-B19	03/03/09	39.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-5-B20	02/25/09	5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-10.5-B20	03/03/09	10.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-15.0-B20	03/03/09	15.0	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-20.5-B20	03/03/09	20.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---

TABLE 2B
ADDITIONAL CUMULATIVE SOIL ANALYTICAL RESULTS
Former Exxon Service Station 70234
3450 35th Avenue
Oakland, California
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Sample ID	Sampling Date	Depth (feet bgs)	1,2-DCA (mg/kg)	EDB (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	Ethanol (mg/kg)	VOCs (mg/kg)	SVOCs (mg/kg)	HVOCs (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)
S-25.5-B20	03/03/09	25.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-30.5-B20	03/03/09	30.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-35.5-B20	03/03/09	35.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-39.5-B20	03/03/09	39.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-5-B21	02/25/09	5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-10.5-B21	03/04/09	10.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-15-B21	03/04/09	15	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-20.5-B21	03/04/09	20.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-25.5-B21	03/04/09	25.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-30.5-B21	03/04/09	30.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-35.5-B21	03/04/09	35.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-39.5-B21	03/04/09	39.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
Monitoring and Recovery Wells																
MW1	07/14/92	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW2	07/14/92	29.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW3	07/14/92	28	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW4	07/14/92	29.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S-5-MW4	02/25/09	5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-10.5-MW4	03/02/09	10.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-15.5-MW4	03/02/09	15.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-20.5-MW4	03/02/09	20.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-25.5-MW4	03/02/09	25.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-30.5-MW4	03/02/09	30.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-35.5-MW4	03/02/09	35.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-40-MW4	03/02/09	40	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-44.5-MW4	03/02/09	44.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-5-MW5	02/27/09	5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-10-MW5	03/05/09	10	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-15-MW5	03/05/09	15	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-20-MW5	03/05/09	20	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<250	---	---	---	---	---	---	---
S-25-MW5	03/06/09	25	<0.50	<0.50	<5.0	<1.0	<1.0	<1.0	<25	---	---	---	---	---	---	---
S-30-MW5	03/06/09	30	<0.50	<0.50	<5.0	<1.0	<1.0	<1.0	<25	---	---	---	---	---	---	---
S-35-MW5	03/06/09	35	<0.50	<0.50	<5.0	<1.0	<1.0	<1.0	<25	---	---	---	---	---	---	---
S-39.5-MW5	03/06/09	39.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-5-MW6	02/27/09	5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-10-MW6	03/09/09	10	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-15.5-MW6	03/09/09	15.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---
S-20.5-MW6	03/09/09	20.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	---	---	---	---	---

TABLE 2B
ADDITIONAL CUMULATIVE SOIL ANALYTICAL RESULTS
Former Exxon Service Station 70234
3450 35th Avenue
Oakland, California
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Sample ID	Sampling Date	Depth (feet bgs)	1,2-DCA (mg/kg)	EDB (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	Ethanol (mg/kg)	VOCs (mg/kg)	SVOCs (mg/kg)	HVOCs (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)
S-37.0-RW1	12/22/11	37.0	<0.50	<0.50	<5.0	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	---
S-38.5-RW1	12/22/11	38.5	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	---	---	---	---	---	---	---	---
S-40.0-RW1	12/22/11	40.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	---	---	---	---	---	---
Soil Stockpile Samples																
SP-1(S-SP1-S-SP4)	09/12/07	---	<0.0050	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---	---
SP(1-4)	06/18/97	---	---	---	---	---	---	---	---	ND	ND	---	ND	55	53	43
SP-2	03/09/09	---	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.25	---	---	ND	---	---	---	---
S-SP1 (1,2,3,4)	12/22/11	---	<0.0050	<0.0050	0.076	<0.010	<0.010	<0.010	---	f	---	---	---	---	---	---

- Notes:
- Kerosene = Kerosene analyzed using EPA Method 8015B.
 - TPHg = Total petroleum hydrocarbons as gasoline analyzed using modified EPA Method 8015M.
 - MTBE = Methyl tertiary butyl ether analyzed using EPA Method 8021B/8260B
 - BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8021B/8260B.
 - Lead = Lead analyzed using EPA Method 6010B.
 - TOG = Total oil and grease.
 - 1,2-DCA = 1,2-dichloroethane analyzed using EPA Method 8260B.
 - EDB = 1,2-dibromoethane 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.
 - Ethanol = Ethanol analyzed using EPA Method 8260B.
 - Add'l SVOCs = Additional semi-volatile organic compounds.
 - HVOCs = Halogenated volatile organic compounds analyzed using EPA Method 8260B.
 - feet bgs = Feet below ground surface.
 - mg/kg = Milligrams per kilogram.
 - ND = Not detected at or above the laboratory reporting limit.
 - < = Less than the stated laboratory reporting limit.
 - = Not analyzed/Not applicable.
 - a = Unidentified C8-C12.
 - b = Unidentified C9-C24.
 - c = Unidentified C16-C36.
 - d = Unidentified C16-C40.
 - e = Hydrocarbon pattern does not match that of the specified standard.
 - f = 1.1 mg/kg 1,2,4-trimethylbenzene; 0.16 mg/kg 1,3,5-trimethylbenzene; 0.022 mg/kg isopropyltoluene; 0.078 mg/kg naphthalene; 0.059 mg/kg n-Butylbenzene; 0.091 mg/kg n-Propylbenzene; 0.0070 p-Isopropyltoluene; 0.012 sec-Butylbenzene.
 - g = Compound did not meet method-described identification guidelines. Identification was based on additional GM/MS characteristics.

TABLE 3
WELL CONSTRUCTION DETAILS
Former Exxon Service Station 70234
3450 35th Avenue
Oakland, California

Well ID	Well Installation Date	Well Destruction 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	07/15/92	Jun-00	192.00	11	45	45	4	Schedule 40 PVC	25-45	0.010	23-45	2/12 Lonestar Sand
MW2	07/15/92	Jun-00	194.85	11	45	45	4	Schedule 40 PVC	25-45	0.010	23-45	2/12 Lonestar Sand
MW3	07/15/92	Jun-00	196.90	11	45	45	4	Schedule 40 PVC	25-45	0.010	23-45	2/12 Lonestar Sand
MW4	03/02/09	---	197.62	8	45	45	2	PVC	35-45	0.2	33-45	#3 Sand
MW5	03/06/09	---	196.35	8	40	40	2	PVC	30-40	0.2	28-40	#3 Sand
MW6	03/09/09	---	192.41	8	40	39	2	PVC	29-39	0.2	27-39	#3 Sand
MW7	03/09/09	---	194.34	8	40	40	2	PVC	30-40	0.2	28-40	#3 Sand
MW8	03/04/09	---	192.96	8	40	40	2	PVC	30-40	0.2	28-40	#3 Sand
MW9	03/05/09	---	195.16	8	40	40	2	PVC	30-40	0.2	28-40	#3 Sand
RW1	12/22/11	---	195.15	10	40	40	4	Stainless Steel	25-39.5	0.020	23-40	#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
GROUNDWATER PUMPING TEST- OPERATIONAL DATA
Former Exxon Service Station 70234
3450 35th Avenue
Oakland, California
(Page 1 of 3)

Date	Time	Water Flow from Well (gpm)	RW1 DTW (feet bgs)	MW4 DTW (feet bgs)	MW5 DTW (feet bgs)	MW6 DTW (feet bgs)	MW7 DTW (feet bgs)	MW8 DTW (feet bgs)	MW9 DTW (feet bgs)	Totalizer Reading (gallons)	Cumulative Gallons	Adjusted Cumulative Gallons	Calculated Water Flow (gpm)
Well RW1 Step Drawdown Test													
02/10/12	17:00	---	31.02	33.18	32.99	29.03	29.98	29.53	30.62	---	---	---	0.0
02/13/12	11:45	---	30.89	32.70	14.90	25.60	32.84	29.32	30.36	9,561	---	---	---
02/13/12	12:45	0.14	---	---	---	---	---	---	---	---	---	---	---
02/13/12	13:45	0.20	---	32.97	32.30	28.98	29.97	29.41	30.50	9,565	4	6	0.05
02/13/12	14:30	0.31	---	---	---	---	---	---	---	---	---	---	---
02/13/12	14:50	0.31	---	33.01	32.60	30.99	30.90	29.39	30.55	9,587	26	36	0.19
02/13/12	15:35	0.37	---	---	---	---	---	---	---	9,587	26	36	0.16
02/13/12	16:20	0.44	---	---	---	---	---	---	---	9,618	57	78	0.29
02/13/12	17:00	0.44	---	---	---	---	---	---	---	9,618	57	78	0.25
02/13/12	17:30	---	---	33.13	32.84	29.50	31.11	39.61	30.73	9,618	57	78	0.23
Total Gallons												57	
Average Groundwater Flow Rate (gal/minute)													0.17
Well RW1 Constant Rate Test													
02/13/12	18:14	0.33	---	---	---	---	---	---	---	9,618	57	78	0.20
02/13/12	19:30	0.33	---	---	---	---	---	---	---	9,649	88	121	0.26
02/13/12	20:00	0.33	---	33.09	32.81	29.43	31.08	---	---	9,649	88	121	0.24
02/13/12	21:15	0.27	---	---	---	---	---	---	---	9,671	110	151	0.27
02/13/12	21:30	0.20	---	---	---	---	---	---	---	9,671	110	151	0.26
02/13/12	22:20	0.30	---	---	---	---	---	---	---	9,671	110	151	0.24
02/13/12	22:55	0.29	---	33.25	32.84	29.46	32.27	---	---	9,679	118	162	0.24
02/13/12	23:30	0.30	---	---	---	---	---	---	---	9,679	118	162	0.23
02/14/12	0:00	0.30	---	---	---	---	---	---	---	9,695	134	185	0.25
02/14/12	0:25	0.27	---	---	---	---	---	---	---	9,695	134	185	0.24
02/14/12	0:50	0.29	---	---	---	---	---	---	---	9,703	142	196	0.25
02/14/12	1:15	0.29	---	33.34	33.10	29.81	31.25	---	---	9,711	150	207	0.26
02/14/12	1:35	0.30	---	---	---	---	---	---	---	9,711	150	207	0.25
02/14/12	2:00	0.29	---	---	---	---	---	---	---	9,728	167	230	0.27
02/14/12	2:25	0.31	---	---	---	---	---	---	---	9,732	171	235	0.27
02/14/12	2:50	0.26	---	---	---	---	---	---	---	9,736	175	241	0.27
02/14/12	3:55	0.30	---	33.35	32.97	29.67	31.32	---	---	9,736	175	241	0.25
02/14/12	4:20	0.30	---	---	---	---	---	---	---	9,736	175	241	0.24
02/14/12	4:45	0.30	---	---	---	---	---	---	---	9,742	181	249	0.24
02/14/12	5:15	0.31	---	---	---	---	---	---	---	9,749	188	259	0.25
02/14/12	5:40	0.31	---	33.49	33.21	29.66	31.68	29.82	31.02	9,751	190	262	0.24
02/14/12	6:40	0.32	---	---	---	---	---	---	---	9,777	216	297	0.26
02/14/12	7:30	0.32	---	33.44	33.12	29.80	31.46	29.92	31.05	9,780	219	302	0.25
02/14/12	8:35	0.33	---	---	---	---	---	---	---	9,806	245	337	0.27
02/14/12	9:00	0.32	---	33.42	33.21	29.78	31.45	29.98	31.11	9,810	249	343	0.27
02/14/12	10:00	0.32	---	---	---	---	---	---	---	9,812	251	346	0.26
02/14/12	10:45	0.31	---	33.55	33.22	29.86	31.49	29.98	31.15	9,827	266	366	0.27
02/14/12	11:45	0.32	---	---	---	---	---	---	---	9,834	273	376	0.26
02/14/12	12:15	0.33	---	---	---	---	---	---	---	9,835	274	377	0.26
02/14/12	12:30	0.33	---	33.54	33.23	29.87	31.48	29.95	31.12	9,843	282	388	0.26
02/14/12	13:15	0.33	---	---	---	---	---	---	---	9,851	290	399	0.26
02/14/12	13:45	0.34	---	---	---	---	---	---	---	9,857	296	408	0.26
02/14/12	14:32	0.32	---	33.52	33.18	29.81	31.46	29.91	31.10	9,859	298	410	0.26
02/14/12	15:48	0.20	---	---	---	---	---	---	---	9,882	321	442	0.26
02/14/12	16:03	0.32	---	---	---	---	---	---	---	---	---	---	---
02/14/12	17:15	0.31	---	33.55	33.19	29.81	31.49	29.93	31.12	9,897	336	463	0.26
02/14/12	19:00	0.19	---	33.57	33.24	29.84	31.49	---	---	9,930	369	508	0.27
02/14/12	20:00	0.19	---	---	---	---	---	---	---	9,930	369	508	0.26
02/14/12	21:00	0.25	---	33.60	33.23	29.87	31.51	---	---	9,935	374	515	0.26
02/14/12	22:00	0.29	---	---	---	---	---	---	---	9,943	382	526	0.26
02/14/12	22:35	0.27	---	---	---	---	---	---	---	9,950	389	536	0.26
02/14/12	23:55	0.29	---	33.59	33.06	29.65	31.53	---	---	9,950	389	536	0.25
02/15/12	0:20	0.28	---	---	---	---	---	---	---	9,968	407	560	0.26
02/15/12	0:55	0.30	---	---	---	---	---	---	---	9,976	415	571	0.26
02/15/12	1:20	0.29	---	---	---	---	---	---	---	9,976	415	571	0.25
02/15/12	1:45	0.30	---	33.51	33.05	29.75	31.50	---	---	9,976	415	571	0.25
02/15/12	3:00	0.30	---	---	---	---	---	---	---	9,982	421	580	0.25
02/15/12	3:25	0.30	---	---	---	---	---	---	---	9,982	421	580	0.24
02/15/12	3:55	0.28	---	---	---	---	---	---	---	9,988	427	588	0.24
02/15/12	4:20	0.29	---	33.58	33.09	29.73	31.49	---	---	9,988	427	588	0.24
02/15/12	4:50	0.30	---	---	---	---	---	---	---	9,996	435	599	0.24
02/15/12	5:15	0.29	---	---	---	---	---	---	---	10,004	443	610	0.24

TABLE 4
GROUNDWATER PUMPING TEST- OPERATIONAL DATA
Former Exxon Service Station 70234
3450 35th Avenue
Oakland, California
(Page 2 of 3)

Date	Time	Water Flow from Well (gpm)	RW1 DTW (feet bgs)	MW4 DTW (feet bgs)	MW5 DTW (feet bgs)	MW6 DTW (feet bgs)	MW7 DTW (feet bgs)	MW8 DTW (feet bgs)	MW9 DTW (feet bgs)	Totalizer Reading (gallons)	Cumulative Gallons	Adjusted Cumulative Gallons	Calculated Water Flow (gpm)
02/15/12	5:40	0.30	---	33.58	33.12	29.81	31.51	---	---	10,004	443	610	0.24
02/15/12	8:30	0.33	---	33.62	33.01	29.74	31.55	29.92	31.10	10,019	458	631	0.23
02/15/12	9:00	0.30	---	---	---	---	---	---	---	10,028	467	643	0.24
02/15/12	10:00	0.31	---	---	---	---	---	---	---	10,036	475	654	0.24
02/15/12	10:15	0.29	---	33.61	33.12	29.77	31.56	29.95	31.11	10,042	481	662	0.24
02/15/12	11:00	0.31	---	---	---	---	---	---	---	10,043	482	664	0.23
02/15/12	11:15	0.31	---	---	---	---	---	---	---	10,044	483	665	0.23
02/15/12	11:25	0.29	---	33.62	33.16	29.79	31.58	29.92	31.18	10,051	490	675	0.24
02/15/12	12:00	0.33	---	---	---	---	---	---	---	10,051	490	675	0.23
02/15/12	12:30	0.31	---	---	---	---	---	---	---	10,059	498	686	0.23
02/15/12	12:45	0.33	---	---	---	---	---	---	---	10,065	504	694	0.24
02/15/12	13:45	0.32	---	33.60	33.17	29.71	31.56	---	---	10,067	506	697	0.23
02/15/12	15:30	0.33	---	---	---	---	---	---	---	10,082	521	717	0.23
02/15/12	16:15	---	---	33.57	33.11	29.76	31.56	29.91	31.10	---	---	---	---
02/15/12	17:30	0.33	---	---	---	---	---	---	---	10,098	537	739	0.23
02/15/12	18:00	---	---	33.61	31.12	29.78	31.54	29.93	31.11	10,106	545	750	0.23
02/15/12	19:15	0.32	---	---	---	---	---	---	---	---	---	---	---
02/15/12	20:00	---	---	33.65	33.15	29.80	31.58	---	---	---	---	---	---
02/15/12	21:00	0.20	---	33.48	33.01	29.64	31.57	---	---	10,121	560	771	0.22
02/15/12	22:00	0.20	---	---	---	---	---	---	---	10,121	560	771	0.22
02/15/12	22:30	0.20	---	---	---	---	---	---	---	10,139	578	796	0.23
02/15/12	22:55	0.19	---	---	---	---	---	---	---	10,139	578	796	0.22
02/15/12	23:20	0.20	---	---	---	---	---	---	---	10,139	578	796	0.22
02/15/12	23:45	0.20	---	---	---	---	---	---	---	10,144	583	803	0.22
02/16/12	0:10	0.20	---	---	---	---	---	---	---	10,152	591	814	0.22
02/16/12	0:30	0.19	---	33.66	33.14	29.83	29.57	---	---	10,152	591	814	0.22
02/16/12	1:35	0.20	---	---	---	---	---	---	---	10,152	591	814	0.22
02/16/12	2:00	0.20	---	---	---	---	---	---	---	10,152	591	814	0.22
02/16/12	2:20	0.19	---	---	---	---	---	---	---	10,160	599	825	0.22
02/16/12	2:45	0.19	---	33.71	33.05	29.77	31.58	---	---	10,160	599	825	0.22
02/16/12	3:10	0.18	---	---	---	---	---	---	---	10,168	607	836	0.22
02/16/12	3:35	0.20	---	---	---	---	---	---	---	10,175	614	845	0.22
02/16/12	3:55	0.19	---	---	---	---	---	---	---	10,175	614	845	0.22
02/16/12	4:20	0.20	---	33.62	33.14	29.81	31.60	---	---	10,182	621	855	0.22
02/16/12	5:40	0.20	---	---	---	---	---	---	---	10,182	621	855	0.21
02/16/12	6:15	0.20	---	33.75	33.15	29.72	31.65	---	---	10,185	624	859	0.21
02/16/12	6:40	0.20	---	---	---	---	---	---	---	10,191	630	868	0.21
02/16/12	7:00	0.19	---	---	---	---	---	---	---	10,198	637	877	0.22
02/16/12	7:25	0.20	---	33.75	33.19	29.82	31.68	---	---	10,198	637	877	0.21
02/16/12	8:30	0.21	---	---	---	---	---	---	---	10,198	637	877	0.21
02/16/12	9:15	0.20	---	---	---	---	---	---	---	10,214	653	899	0.21
02/16/12	10:15	---	---	33.77	33.19	29.81	31.70	30.05	31.25	10,214	653	899	0.21
02/16/12	12:00	---	---	33.70	32.92	29.82	31.62	29.91	31.12	10,214	653	899	0.21
02/16/12	15:40	0.20	---	33.60	32.74	29.42	31.53	29.83	31.01	10,214	653	899	0.20
02/16/12	16:20	0.20	---	---	---	---	---	---	---	10,214	653	899	0.19
02/16/12	17:45	0.20	---	33.60	32.96	29.62	31.54	29.89	31.05	10,237	676	931	0.20
02/16/12	19:45	0.20	---	33.61	33.58	29.75	31.56	---	---	10,252	691	952	0.20
02/16/12	21:45	0.20	---	33.61	33.07	29.72	31.55	---	---	10,260	699	963	0.19
02/16/12	22:10	0.20	---	---	---	---	---	---	---	10,260	699	963	0.19
02/16/12	22:35	0.19	---	---	---	---	---	---	---	10,268	707	974	0.19
02/16/12	22:55	0.20	---	---	---	---	---	---	---	10,268	707	974	0.19
02/16/12	23:20	0.20	---	---	---	---	---	---	---	10,275	714	983	0.19
02/16/12	23:45	0.20	---	---	---	---	---	---	---	10,283	722	994	0.20
02/17/12	0:05	0.20	---	33.64	33.13	29.75	31.58	---	---	10,283	722	994	0.20
02/17/12	1:20	0.20	---	---	---	---	---	---	---	10,283	722	994	0.19
02/17/12	1:45	0.20	---	---	---	---	---	---	---	10,291	730	1,005	0.19
02/17/12	2:05	0.18	---	---	---	---	---	---	---	10,291	730	1,005	0.19
02/17/12	2:25	0.20	---	33.64	33.01	29.70	31.59	---	---	10,298	737	1,015	0.19
02/17/12	2:45	0.20	---	---	---	---	---	---	---	10,298	737	1,015	0.19
02/17/12	3:10	0.20	---	---	---	---	---	---	---	10,298	737	1,015	0.19
02/17/12	3:35	0.18	---	---	---	---	---	---	---	10,306	745	1,026	0.19
02/17/12	3:55	0.20	---	---	---	---	---	---	---	10,306	745	1,026	0.19
02/17/12	4:20	0.20	---	33.67	33.10	29.77	31.57	---	---	10,313	752	1,036	0.19
02/17/12	5:25	0.20	---	---	---	---	---	---	---	10,313	752	1,036	0.19
02/17/12	6:00	0.20	---	---	---	---	---	---	---	10,313	752	1,036	0.19
02/17/12	6:30	0.20	---	33.71	32.96	29.68	31.55	---	---	10,321	760	1,047	0.19
02/17/12	7:00	0.20	---	---	---	---	---	---	---	10,329	768	1,058	0.19
02/17/12	8:00	0.21	---	33.70	33.05	29.75	31.64	30.01	31.20	10,329	768	1,058	0.19
02/17/12	8:30	0.20	---	---	---	---	---	---	---	10,337	776	1,069	0.19

TABLE 4
GROUNDWATER PUMPING TEST- OPERATIONAL DATA
Former Exxon Service Station 70234
3450 35th Avenue
Oakland, California
(Page 3 of 3)

Date	Time	Water Flow from Well (gpm)	RW1 DTW (feet bgs)	MW4 DTW (feet bgs)	MW5 DTW (feet bgs)	MW6 DTW (feet bgs)	MW7 DTW (feet bgs)	MW8 DTW (feet bgs)	MW9 DTW (feet bgs)	Totalizer Reading (gallons)	Cumulative Gallons	Adjusted Cumulative Gallons	Calculated Water Flow (gpm)
02/17/12	8:55	0.20	---	---	---	---	---	---	---	10,344	783	1,078	0.19
02/17/12	9:00	0.20	---	---	---	---	---	---	---	10,344	783	1,078	0.19
02/17/12	9:15	---	---	33.70	33.10	29.75	31.62	29.99	31.16	10,344	783	1,078	0.19
02/17/12	10:00	0.20	---	---	---	---	---	---	---	10,344	783	1,078	0.19
02/17/12	10:20	0.20	---	---	---	---	---	---	---	10,352	791	1,089	0.19
02/17/12	10:35	0.20	---	33.70	33.12	29.76	31.63	29.99	31.16	10,352	791	1,089	0.19
02/17/12	11:30	0.20	---	---	---	---	---	---	---	10,360	799	1,100	0.19
02/17/12	11:50	0.20	33.84	---	---	---	---	---	---	10,360	799	1,100	0.19
02/17/12	13:15	---	---	33.71	33.08	29.65	31.60	29.90	31.11	---	---	---	---
Total Gallons												1,022	
Average Groundwater Flow Rate (gal/minute)												0.18	
Total Gallons												1,100	
Average Groundwater Flow Rate (gal/minute)												0.19	

Notes:
Time = Time on a 24-hour clock.
feet bgs = Feet below ground surface.
Totalizer = Meter reading in gallons of water.
Adjusted Cumulative Gallons = Totalizer adjusted to reflect actual gallons processed.
gpm = Gallons per minute.
--- = Reading not taken.

TABLE 5
GROUNDWATER PUMPING TEST - GROUNDWATER ANALYTICAL RESULTS
Former Exxon Service Station 70234
3450 35th Avenue
Oakland, California
(Page 1 of 1)

Sample ID	Sampling Date	Time	TPHg (µg/L)	MTBE (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	TAME (µg/L)
W-31-RW1-1	02/13/12	12:45	2,100b	2,400	910	4.5a	7.9	39	<10	<10	460	<10	<10	<10
W-37-RW1-2	02/13/12	17:00	2,300b	2,300	1,400	6.2	58	38	<10	<10	450	<10	<10	<10
W-30-RW1-3	02/13/12	18:30	2,400b	2,600	1,400	6.5	59	37	<10	<10	480	<10	<10	<10
W-30-RW1-4	02/14/12	6:10	2,500b	2,700	1,400	7.2	44	42	<10	<10	480	<10	<10	<10
W-30-RW1-1	02/14/12	18:00	2,200	2,200	820	5.8	20	31	<40	<40	1,100	<40	<40	<40
W-30-RW1-2	02/15/12	6:00	2,200	2,500	900	7.1	23	36	<40	<40	1,100	<40	<40	<40
W-30-RW1-3	02/15/12	19:30	3,300	3,900	1,900	18	56	99	<40	<40	1,700	<40	<40	<40
W-30-RW1-4	02/16/12	6:00	1,900	2,400	790	6.8	15	30	<40	<40	1,100	<40	<40	<40
W-30-RW1-1	02/16/12	18:00	3,800	2,100	1,100	10	35	53	<40	<40	1,500	<40	<40	<40
W-30-RW1-2	02/17/12	6:00	2,500	1,700	680	5.8	12	26	<40	<40	1,100	<40	<40	<40
W-30-RW1-3	02/17/12	11:30	2,600	1,800	750	7.4	20	41	<25	<25	1,100	<25	<25	<25

Notes:

- TPHg = Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015B.
- MTBE = Methyl tertiary butyl ether analyzed using EPA Method 8260B.
- BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8260B.
- EDB = 1,2-dibromoethane analyzed using EPA Method 8260B.
- 1,2-DCA = 1,2-dichloroethane analyzed using EPA Method 8260B.
- TBA = Tertiary butyl ether analyzed using EPA Method 8260B.
- ETBE = Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
- DIPE = Di-isopropyl ether analyzed using EPA Method 8260B.
- TAME = Tertiary amyl methyl ether analyzed using EPA Method 8260B.
- µg/L = Micrograms per liter.
- a = Analyte presence was not confirmed by second column or GC/MS analysis.
- b = The chromatographic pattern does not match that of the specified standard.

TABLE 6
GROUNDWATER PUMPING TEST - DISSOLVED-PHASE HYDROCARBON REMOVAL

Former Exxon Service Station 70234
 3450 35th Avenue
 Oakland, California
 (Page 1 of 1)

Pumping Well	Date	Time	Hours of Operation (hours)	Totalizer Reading (gallons)	Adjusted Gallons	Average Flow Rate (gpm)	Analytical Results			TPHg Removal		Benzene Removal		MTBE Removal	
							TPHg (µg/L)	Benzene (µg/L)	MTBE (µg/L)	Per Period (lbs)	Cumulative (lbs)	Per Period (lbs)	Cumulative (lbs)	Per Period (lbs)	Cumulative (lbs)
W-31-RW1-1	02/13/12	12:45	1.00	9,565	6	---	2,100b	910	2,400	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
W-37-RW1-2	02/13/12	17:00	5.25	9,618	73	0.01	2,300b	1,400	2,300	0.0013	0.0013	0.0007	0.0007	0.0014	0.0014
W-30-RW1-3	02/13/12	18:30	6.75	9,618	0	0.00	2,400b	1,400	2,600	0.0000	0.0013	0.0000	0.0007	0.0000	0.0014
W-30-RW1-4	02/14/12	6:10	18.42	9,777	219	0.01	2,500b	1,400	2,700	0.0045	0.0058	0.0026	0.0033	0.0048	0.0063
W-30-RW1-1	02/14/12	18:00	30.25	9,930	211	0.01	2,200	820	2,200	0.0041	0.0099	0.0020	0.0052	0.0043	0.0106
W-30-RW1-2	02/15/12	6:00	42.25	10,004	102	0.01	2,200	900	2,500	0.0019	0.0118	0.0007	0.0059	0.0020	0.0126
W-30-RW1-3	02/15/12	19:30	55.75	10,106	140	0.01	3,300	1,900	3,900	0.0032	0.0150	0.0016	0.0076	0.0037	0.0163
W-30-RW1-4	02/16/12	6:00	66.83	10,182	105	0.01	1,900	790	2,400	0.0023	0.0173	0.0012	0.0088	0.0028	0.0191
W-30-RW1-1	02/16/12	18:00	78.83	10,237	76	0.00	3,800	1,100	2,100	0.0018	0.0191	0.0006	0.0094	0.0014	0.0205
W-30-RW1-2	02/17/12	6:00	90.83	10,313	105	0.01	2,500	680	1,700	0.0028	0.0219	0.0008	0.0101	0.0017	0.0222
W-30-RW1-3	02/17/12	11:30	96.33	10,360	65	0.01	2,600	750	1,800	0.0014	0.0232	0.0004	0.0105	0.0009	0.0231
Totals:					1,100						0.0232		0.0105		0.0231

- Notes:
- TPHg = Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015B.
 - Benzene = Benzene analyzed using EPA Method 8260B.
 - MTBE = Methyl tertiary butyl ether analyzed using EPA Method 8260B.
 - Adjusted Gallons = Totalizer adjusted to reflect actual gallons processed.
 - gpm = Gallons per minute.
 - µg/L = Micrograms per liter.
 - lbs = Pounds.
 - = Not sampled/not measured.
 - a = Analyte presence was not confirmed by second column or GC/MS analysis.
 - b = The chromatographic pattern does not match that of the specified standard.

APPENDIX A

FIELD PROTOCOLS

Cardno ERI Field Protocol - Groundwater Pump Test

A groundwater pump test is performed to determine various aquifer parameters such as the optimal pumping rate, capture zone, storativity and hydraulic conductivity for use in evaluating dissolved phase transport and potential remediation system design. The pump test is performed by reviewing the lithology and selecting an extraction well central to the source area. The pump is placed in the well so that its intake is approximately 2 feet above the bottom of the well. Observation wells are chosen at various radial distances and flow directions from the extraction well. One observation well is chosen outside the anticipated cone of depression to monitor barometric pressure changes that occur during the test. Transducers with data loggers are placed in the observation wells one day in advance to allow the suspension cables to stretch and/or unwind. Transducers with a sensitivity range spanning the anticipated drawdowns are placed at a depth below the anticipated drawdowns for each observation well. The data logging program is initiated to ensure that all transducers are functioning and recording properly. A pump that can extract water at approximately twice the anticipated flow rate with a variable speed controller is placed in the extraction well. Prior to starting the test, water levels in the extraction and observation wells are measured to an accuracy of 0.01 foot using a water level meter.

Step-Drawdown Test

The pump, transducers, water level meter and sampling equipment are decontaminated or obtained new prior to starting the test. The water level meter is decontaminated using a three-bucket soap and water rinse each time before being inserted into a new well.

A step-drawdown test is performed initially to determine the optimum pumping rate for the extraction well. The optimum pumping rate is defined as the rate that produces a drawdown of approximately 75% of the available water column (pump intake depth minus water table depth). The test is performed by pumping at 3 to 5 flow rates at successively higher rates. Pumping rates are measured using an accurate flow meter or a bucket and stopwatch. The speed of the pump is controlled to maintain a constant flow rate during each step of the test. Generally, the pumping rates are selected at a minimum of 33%, 67% and 100% of the anticipated optimal pumping rate. However, each subsequent pumping rate depends on the drawdown in the pumping well at the current pumping rate. Water levels in the extraction well are monitored closely and the pumping rate is adjusted accordingly. Larger steps between pumping rates are used if the change in stabilized water levels is minimal or if greater drawdown in the extraction well is desired. The pumping rate is maintained until the water level in the pumping well begins to stabilize (difference between three successive readings is less than 10% of total drawdown) or for a minimum of 15 minutes at each rate. Water levels in the observations wells are recorded during each step of the test using the transducers and data logger, and are periodically checked with a water level indicator. The results of the step-drawdown test are used to determine the optimum sustainable rate for the constant-rate pump test.

Constant-Rate Pumping Test

Water levels are allowed to recover from the step-drawdown test prior to starting the constant-rate pumping test. The constant-rate pump test is performed by pumping from the extraction well at the optimal pumping rate determined from the step-drawdown test and measuring the drawdown in the surrounding observation wells. Data loggers are programmed to record information more frequently (every few seconds) during the initial phase of this test progressing to less frequently (every 15 minutes) during later phases. The test continues until the water depths (unconfined aquifers) or piezometric heads (confined aquifers) in the observations wells have stabilized (difference between three successive readings is less than 10% of total drawdown). The speed of the pump is controlled to maintain the selected constant flow rate. Tighter soils (silt and clay) have longer tests than coarser soils (sand and gravel) due to delayed drainage, slower pump rates, etc. Upon completion of the test, the pump is shut off, and the water levels in the observation wells and pumping well are monitored and recorded until they recover to near initial static levels. Equipment is decontaminated before leaving the site

Groundwater Disposal

Extracted groundwater is stored on site in a tank and subsequently treated at a client- and regulatory-approved facility, treated with a permitted mobile carbon treatment system, or transported off site in a truck or trailer-mounted tank and disposed of in accordance with regulatory requirements. Water samples are collected and analyzed as appropriate under chain-of-custody protocol.

APPENDIX B

BORING LOGS



BORING LOG RW1

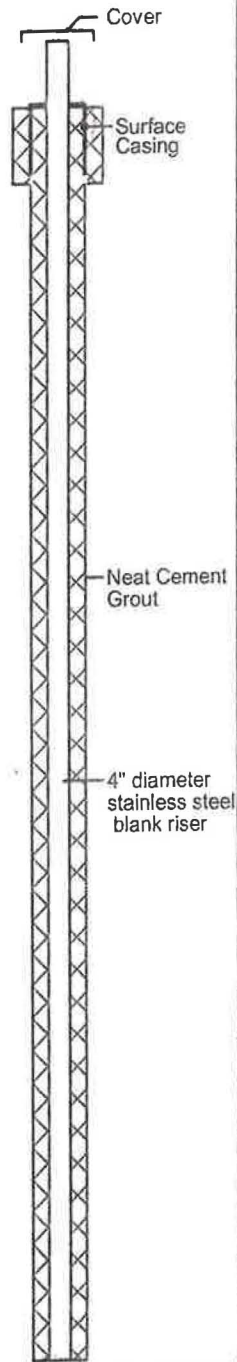
(Page 1 of 2)

Date Drilled: : 12/22/2011
 Drilling Co.: : Cascade Drilling
 Drilling Method: : Hollow Stem Auger
 Sampling Method: : Split Spoon
 Borehole Diameter: : 10"
 Casing Diameter: : 4"
 Location N-S : 2115521.4
 Location E-W : 6069882.6
 Total Depth: : 40 fbgs
 First GW Depth: : 29 fbgs

Project No.: : Former Exxon Service Station 70234
 Site: : 3450 35th Avenue, Oakland, CA
 Logged By: : Vincent T. Battaglia
 Reviewed By: : David R. Daniels, P.G. 8737
 Signature:

Depth (ft)	Blow Count	OVM/PTD (ppmv)	Sample	Column	USCS	Sample Condition	Water Levels	DESCRIPTION
						<input checked="" type="checkbox"/> No Recovery <input type="checkbox"/> Interval Not Sampled <input type="checkbox"/> Described Sample <input checked="" type="checkbox"/> Preserved Sample	<input type="checkbox"/> After Completion: 32.08 fbgs <input checked="" type="checkbox"/> During drilling: 29 fbgs	
0								6-inches of Concrete
					GP			GRAVEL (FILL): gray, dry, poorly graded, rounded (0,0,0,100)
					SP			SAND with Gravel and Clay: fine-to coarse-grained, brown, damp, poorly graded, subangular, fine gravel, subangular gravel (10,0,75,15)
5	4.0							Cleared to 5 fbgs using air-vacuum rig, 12/22/2011
10	4 4 2							No Recovery.
15	10 12 13	4.0			CL			CLAY with Sand and Gravel: brown with gray mottling, moist, low plasticity, trace calcium carbonate precipitates, stiff (60,0,20,20)
20	50/5							No Recovery.

Well: RW1
 TOC Elev.: 195.15





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Shaping the Future

BORING LOG RW1

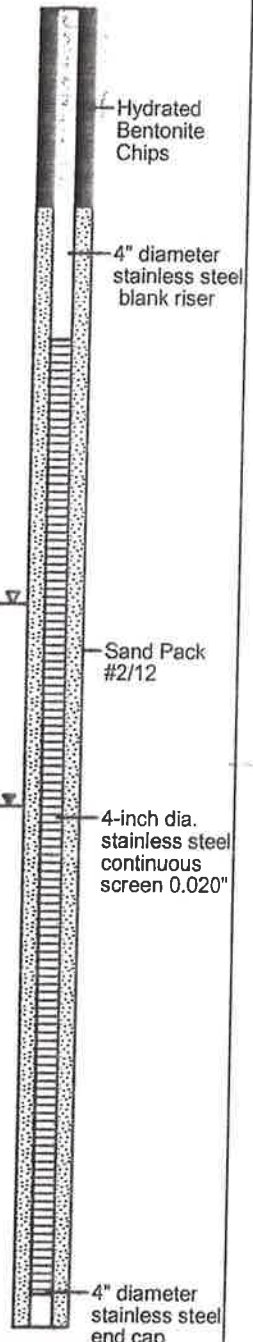
(Page 2 of 2)

Date Drilled: : 12/22/2011
 Drilling Co.: : Cascade Drilling
 Drilling Method: : Hollow Stem Auger
 Sampling Method: : Split Spoon
 Borehole Diameter: : 10"
 Casing Diameter: : 4"
 Location N-S : 2115521.4
 Location E-W : 6069882.6
 Total Depth: : 40 fbgs
 First GW Depth: : 29 fbgs

Project No.: : Former Exxon Service Station 70234
 Site: : 3450 35th Avenue, Oakland, CA
 Logged By: : Vincent T. Battaglia
 Reviewed By: : David R. Daniels, P.G. 8737
 Signature:

Depth (ft)	Blow Count	OVM/IPID (ppmv)	Sample	Column	USCS	Sample Condition	Water Levels	DESCRIPTION
						<input checked="" type="checkbox"/> No Recovery <input type="checkbox"/> Interval Not Sampled <input type="checkbox"/> Described Sample <input checked="" type="checkbox"/> Preserved Sample	After Completion: 32.08 fbgs During drilling: 29 fbgs	
20								
11					CL			
12								
25		48						
13	50/5							
13					CL			
13								
15		187						
4								
4								
30								
13					CL			
13								
14		>999						
10								
12		231			CL			
13								
9								
9								
35		160			CL			
9								
9								
7								
9								
9		343						
10					CL			
10		806						
11								
9								
40		102						

Well: RW1
 TOC Elev.: 195.15



Total Depth of Boring at 40 fbgs, 12/22/11. 1410.
 Free Groundwater Encountered at 29 fbgs.



BORING LOG MW4

(Page 1 of 2)

Date Drilled: : 03/02/2009
 Drilling Co.: : Gregg Drilling Company
 Drilling Method: : Hollow-Stem Auger
 Sampling Method: : Direct Push
 Borehole Diameter: : 8"
 Casing Diameter: : 2"
 Location N-S : 2115577.4
 Location E-W : 6069903.2
 Total Depth: : 45 fbs
 First GW Depth: : 37 fbs

Project No.: : Former Exxon Service Station 70234
 Site: : 3450 35th Avenue, Oakland, California
 Logged By: : Heidi L. Dieffenbach-Carle, P.G. #6793
 Reviewed By: : Heidi L. Dieffenbach-Carle, P.G. #6793
 Signature: : *Heidi Dieffenbach-Carle*

Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	USCS	DESCRIPTION
------------	------------	----------------	--------	--------	------	-------------

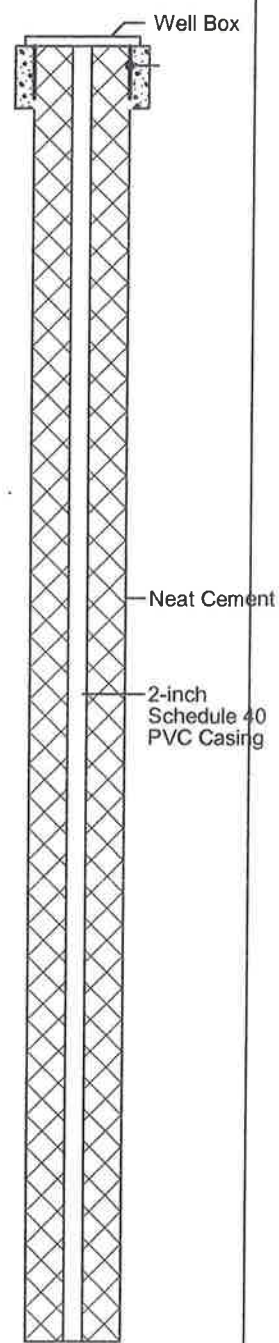
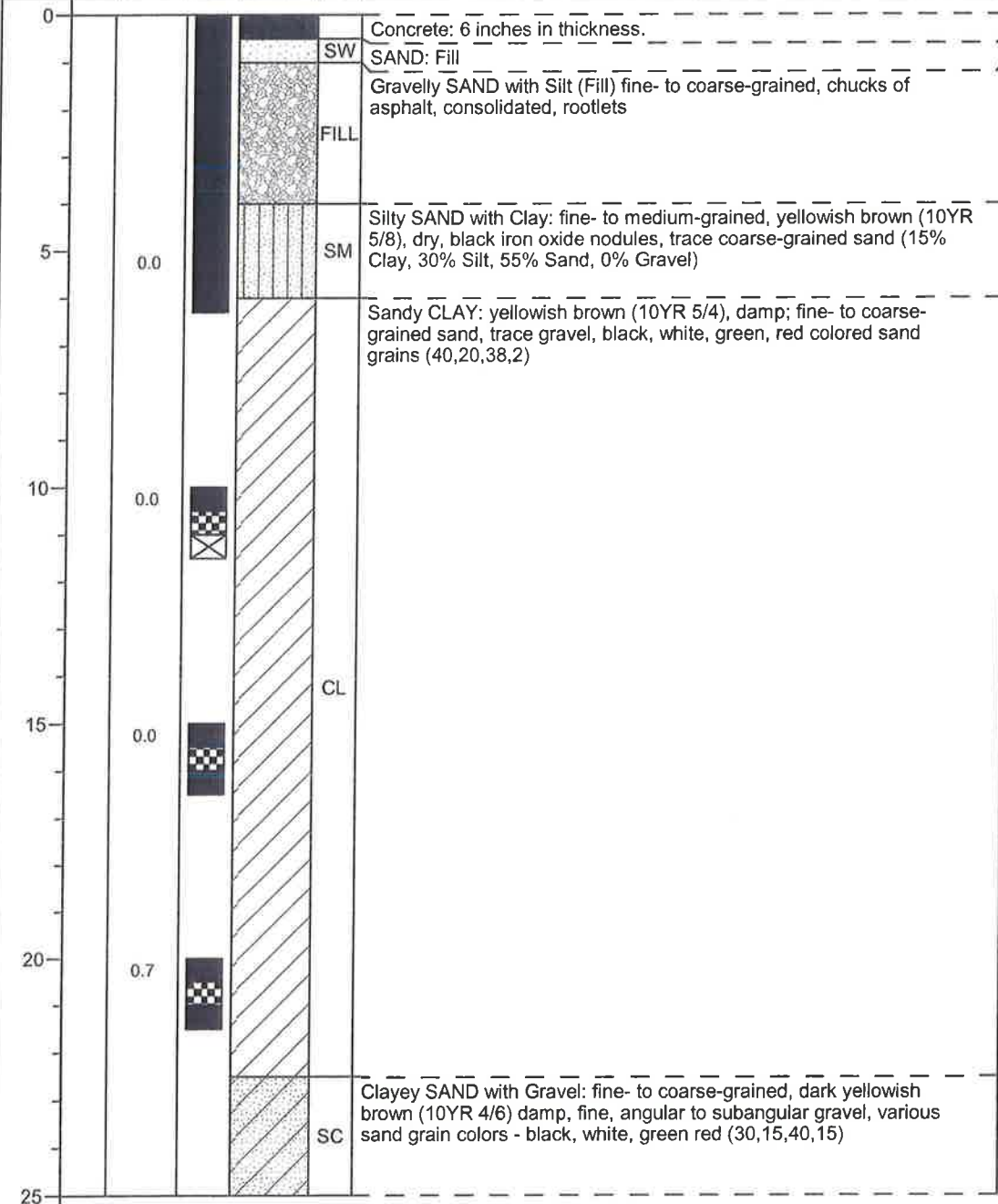
Sample Condition

- No Recovery
- Sampled Interval
- Described Sample
- Preserved Sample

Water Levels

- First Encountered Water: 37'
- Second Encountered Water: NA

Well: MW4



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BORING LOG MW4

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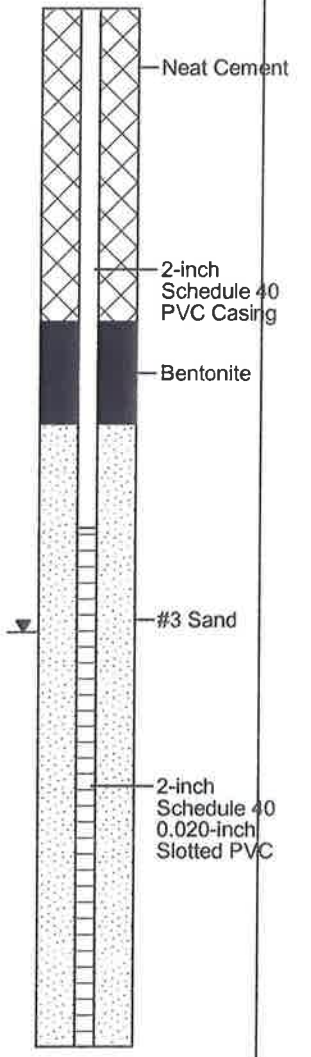
Date Drilled: : 03/02/2009
 Drilling Co.: : Gregg Drilling Company
 Drilling Method: : Hollow-Stem Auger
 Sampling Method: : Direct Push
 Borehole Diameter: : 8"
 Casing Diameter: : 2"
 Location N-S : 2115577.4
 Location E-W : 6069903.2
 Total Depth: : 45 fbs
 First GW Depth: : 37 fbs

Project No.: : Former Exxon Service Station 70234
 Site: : 3450 35th Avenue, Oakland, California
 Logged By: : Heidi L. Dieffenbach-Carle, P.G. #6793
 Reviewed By: : Heidi L. Dieffenbach-Carle, P.G. #6793
 Signature: : *Heidi L. Dieffenbach-Carle*

Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	USCS	Sample Condition	Water Levels
						☒ No Recovery ▨ Sampled Interval ■ Described Sample ▣ Preserved Sample	▼ First Encountered Water: 37' ▽ Second Encountered Water: NA
DESCRIPTION							

Well: MW4

25		0.0	▣	▨	SC	Clayey SAND with Gravel (continued): fine- to coarse-grained, dark yellowish brown (10YR 4/6) damp, fine, angular to subangular gravel, various sand grain colors - black, white, green red (30,15,40,15)
30		0.0	▣	▨	GC	Clayey GRAVEL with Sand: fine- to coarse-grained, yellowish brown (10YR 4/4), damp, subangular to angular, coarse-grained sand (30,15,25,30)
35		0.0	▣	▨	SW	Gravelly SAND: medium- to coarse-grained, dark yellowish brown (10YR 4/4), moist, subangular, gravel angular to subangular (20,15,40,25) Wet from 37 feet bgs.
40		0.0	▣	▨	CL	Sandy CLAY: dark yellowish brown (10YR 4/6), damp, low plasticity, fine- to medium-grained sand, trace coarse-grained sand
45		0.0	▣	▨		Cleared with a hand auger, air knife, water-knife and vacuum to 6.3 feet bgs on 02/25/2009. Total Depth = 45 feet bgs, 13:00, 03/02/2009.
50						



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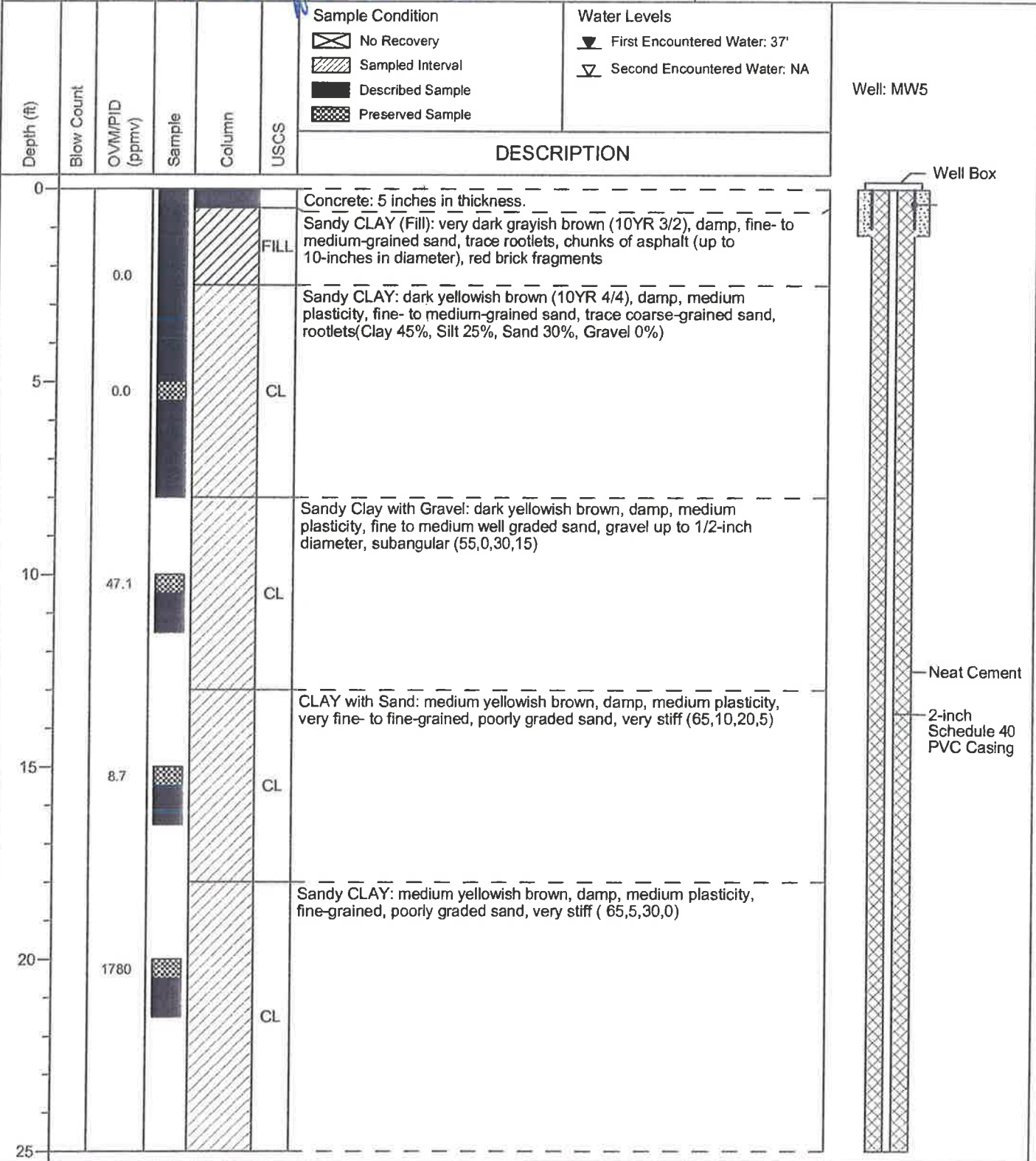


BORING LOG MW5

(Page 1 of 2)

Date Drilled: : 03/05/09, 03/06/09
 Drilling Co.: : Gregg Drilling Company
 Drilling Method: : Hollow-Stem Auger
 Sampling Method: : Direct Push
 Borehole Diameter: : 8"
 Casing Diameter: : 2"
 Location N-S : 2115524.5
 Location E-W : 6069900.5
 Total Depth: : 42 fbg
 First GW Depth: : 37 fbg

Project No.: : Former Exxon Service Station 70234
 Site: : 3450 35th Avenue, Oakland, California
 Logged By: : Heidi L. Dieffenbach-Carle, P.G. #6793 / Paula Sime
 Reviewed By: : Heidi L. Dieffenbach-Carle, P.G. #6793
 Signature: *Heidi Dieffenbach-Carle*



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BORING LOG MW5

(Page 2 of 2)

Date Drilled: : 03/05/09, 03/06/09
 Drilling Co.: : Gregg Drilling Company
 Drilling Method: : Hollow-Stem Auger
 Sampling Method: : Direct Push
 Borehole Diameter: : 8"
 Casing Diameter: : 2"
 Location N-S : 2115524.5
 Location E-W : 6069900.5
 Total Depth: : 42 fbg
 First GW Depth: : 37 fbg

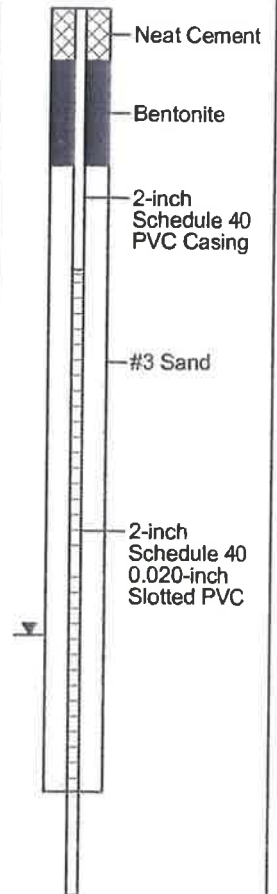
Project No.: : Former Exxon Service Station 70234
 Site: : 3450 35th Avenue, Oakland, California
 Logged By: : Heidi L. Dieffenbach-Carle, P.G. #6793 / Paula Sime
 Reviewed By: : Heidi L. Dieffenbach-Carle, P.G. #6793
 Signature:

Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	USCS	Sample Condition	Water Levels
						☒ No Recovery ▨ Sampled Interval ■ Described Sample ▩ Preserved Sample	▼ First Encountered Water: 37' ▽ Second Encountered Water: NA

Well: MW5

DESCRIPTION

25		2000			SW	Gravelly SAND: fine- to coarse-grained, medium yellowish brown, dry to damp, subangular, well graded, trace dense clay (5,0,65,30)
					CL	Sandy CLAY: yellowish brown, damp, low plasticity, very fine-grained, poorly graded sand, trace coarse-grained sand, very stiff (65,0,35,0)
30		336				@30 feet fbg: heavily mottled with light bluish green, moist
					SW	Gravelly SAND: fine- to coarse-grained, medium yellowish brown, dry to damp, angular to subangular, well graded, trace dense clay
35		286			CL	CLAY with Sand: yellowish brown with greenish gray mottling, moist, medium plasticity, very fine-grained, very poorly graded sand, trace coarse-grained sand, soft (85,0,15,0)
					SW	SAND: fine- to coarse-grained, dark yellowish brown, damp, well graded, subangular gravel, trace clay (5,0,80,15) @37 feet fbg: wet
40		3			CL	Sandy CLAY with Gravel: yellowish brown, moist (wet along clast boundaries), low plasticity, fine- to coarse-grained, well graded sand, subangular gravel (55,0,30,15)
45						Cleared to 5 feet fbg with hand auger for collection of soil sample. Boring widened to 10-inches using airknife and vacuum truck on 2/27/2009.
50						Total Depth = 42 feet fbg, 11:50 03/06/2009.





BORING LOG MW6

(Page 1 of 2)

Date Drilled: : 03/09/2009
 Drilling Co.: : Gregg Drilling Company
 Drilling Method: : Hollow-Stem Auger
 Sampling Method: : Direct Push
 Borehole Diameter: : 8"
 Casing Diameter: : 2"
 Location N-S : 2115519.6
 Location E-W : 6069858.6
 Total Depth: : 40 fbs
 First GW Depth: : 33 fbs

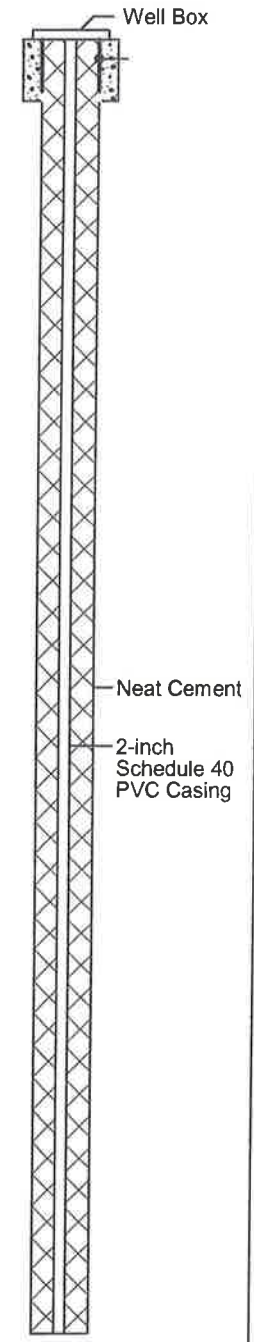
Project No.: : Former Exxon Service Station 70234
 Site: : 3450 35th Avenue, Oakland, California
 Logged By: : Heidi L. Dieffenbach-Carle, P.G. #6793
 Reviewed By: : Heidi L. Dieffenbach-Carle, P.G. #6793
 Signature: *Heidi Dieffenbach-Carle*

Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	USCS	Sample Condition	Water Levels
						<input type="checkbox"/> No Recovery <input type="checkbox"/> Sampled Interval <input type="checkbox"/> Described Sample <input type="checkbox"/> Preserved Sample	<input type="checkbox"/> First Encountered Water: 33' <input type="checkbox"/> Second Encountered Water: NA

Well: MW6

DESCRIPTION

0						Concrete: 6 inches in thickness.
0.0					CL	Sandy CLAY: light olive brown (2.5Y 5/4) with pervasive yellowish brown staining, damp, medium plasticity, fine- to medium-grained sand, tree rootlets (45% Clay, 25% Silt, 30% Sand, 0% Gravel) @4 feet bgs: becoming dark yellowish brown (10YR 4/6), increase in medium-grained sand
5.0					CL	Sandy CLAY: dark yellowish brown (10YR 4/6), damp, medium- to coarse-grained sand, trace gravel (40,25,30,5)
10.0					CL	CLAY with Sand: dark yellowish brown (10YR 4/4), damp, fine-grained sand (60,25,15,0)
15.0					CL	CLAY with Sand: light olive brown (2.5Y 5/3), mottled dark yellowish brown, damp, fine- to medium-grained sand
20.0					CL	Sandy CLAY: dark yellowish brown (10YR 4/4), damp, medium- to coarse-grained, well graded and angular sand with multi-colored grains, trace gravel (45,22,30,3)
25.0					CL	Sandy CLAY: dark yellowish brown (10YR 3/6), damp, fine- to coarse-grained, well graded and subrounded to angular sand, trace gravel, black iron oxides (45,15,35,5)



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BORING LOG MW6

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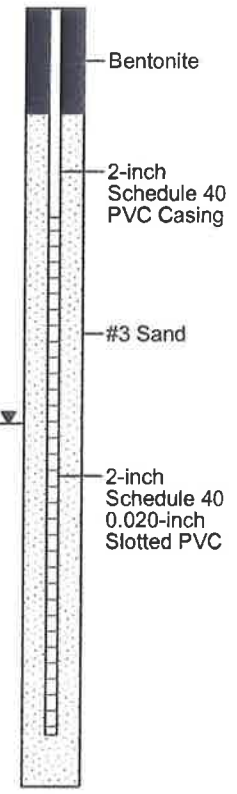
Date Drilled: : 03/09/2009
 Drilling Co.: : Gregg Drilling Company
 Drilling Method: : Hollow-Stem Auger
 Sampling Method: : Direct Push
 Borehole Diameter: : 8"
 Casing Diameter: : 2"
 Location N-S : 2115519.6
 Location E-W : 6069858.6
 Total Depth: : 40 fbgs
 First GW Depth: : 33 fbgs

Project No.: : Former Exxon Service Station 70234
 Site: : 3450 35th Avenue, Oakland, California
 Logged By: : Heidi L. Dieffenbach-Carle, P.G. #6793
 Reviewed By: : Heidi L. Dieffenbach-Carle, P.G. #6793
 Signature: : *Heidi Dieffenbach-Carle*

Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	USCS	Sample Condition	Water Levels
						<input type="checkbox"/> No Recovery <input type="checkbox"/> Sampled Interval <input type="checkbox"/> Described Sample <input type="checkbox"/> Preserved Sample	▼ First Encountered Water: 33' ▽ Second Encountered Water: NA
DESCRIPTION							

Well: MW6

25			<input checked="" type="checkbox"/>		CL	Sandy CLAY (continued): dark yellowish brown (10YR 3/6), damp, fine- to coarse-grained, well graded and subrounded to angular sand, trace gravel, black iron oxides (45,15,35,5)
			<input checked="" type="checkbox"/>		GC	Clayey GRAVEL: fine-grained gravel, yellowish brown (10YR 5/4), damp, subangular to angular, trace medium- to coarse-grained sand (30,15,20,35)
			<input checked="" type="checkbox"/>		CL	CLAY with Sand: dark yellowish brown (10YR 4/6) with dark gray stringers, high plasticity, fine- to medium-grained sand (60,20,20,0)
30			<input checked="" type="checkbox"/>		CL	Sandy CLAY: dark yellowish brown (10YR 4/6), low plasticity, fine- to medium-grained sand with multi-colored grains, trace fine-grained gravel (40,20,30,10)
			<input checked="" type="checkbox"/>		SC	Clayey SAND with Gravel: medium- to coarse-grained, dark yellowish brown (10YR 3/6), moist to wet, subangular to angular, fine-grained gravel (30,10,60,10)
35			<input checked="" type="checkbox"/>		CL	Sandy CLAY: dark yellowish brown (10YR 3/6), damp, medium- to coarse-grained, well graded and subangular sand, trace gravel
40			<input checked="" type="checkbox"/>		CL	



Cleared to 5 feet bgs by 10-inches on 2/27/2009
 Cleared to 4 feet bgs with hand auger, airknife and vacuum.
 Cleared to 5 feet bgs with hand auger for collection of soil sample.
 Widened to 10-inches using airknife and vacuum.
 Total Depth = 40 feet bgs, 10:15, 03/09/2009.

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BORING LOG MW7

(Page 1 of 2)

Date Drilled: : 03/09/2009
 Drilling Co.: : Gregg Drilling Company
 Drilling Method: : Hollow-Stem Auger
 Sampling Method: : Direct Push
 Borehole Diameter: : 8"
 Casing Diameter: : 2"
 Location N-S : 2115554.1
 Location E-W : 6069845.1
 Total Depth: : 40 fbs
 First GW Depth: : 35 fbs

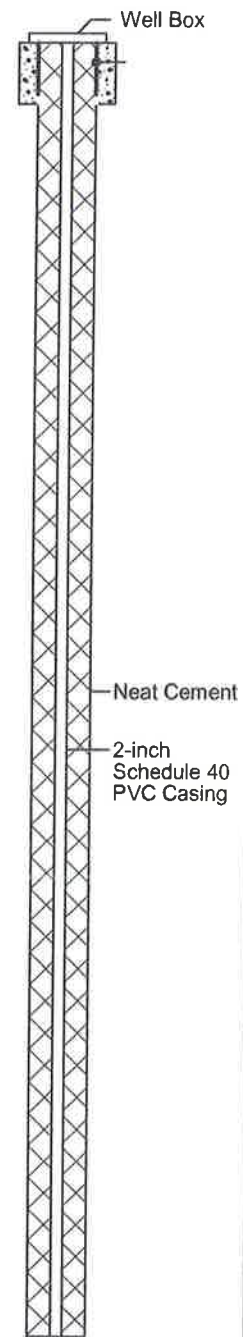
Project No.: : Former Exxon Service Station 70234
 Site: : 3450 35th Avenue, Oakland, California
 Logged By: : Heidi L. Dieffenbach-Carle, P.G. #6793
 Reviewed By: : Heidi L. Dieffenbach-Carle, P.G. #6793
 Signature: *Heidi Dieffenbach-Carle*

Depth (ft)	Blow Count	OVM/PIID (ppmv)	Sample	Column	USCS	Sample Condition	Water Levels
						<input type="checkbox"/> No Recovery <input checked="" type="checkbox"/> Sampled Interval <input checked="" type="checkbox"/> Described Sample <input checked="" type="checkbox"/> Preserved Sample	<input checked="" type="checkbox"/> First Encountered Water: 35' <input type="checkbox"/> Second Encountered Water: NA

Well: MW7

DESCRIPTION

0						Concrete: 6 inches in thickness.
					CL	Sandy CLAY: very dark grayish brown (10YR 3/2), damp, fine-grained sand, rootlets, trace gravel (45% Clay, 25% Silt, 30% Sand, 2% Gravel)
					CL	Sandy CLAY: dark yellowish brown (10YR 4/4), damp, fine- to medium-grained sand
5					CL	Silty CLAY with Sand: yellowish brown (10YR 5/6), damp, high plasticity, fine- to coarse-grained sand, trace gravel with rootlets, bark and woody material (65,18,15,2)
					CL	Sandy CLAY: dark yellowish brown (10YR 4/4), damp, fine- to coarse-grained sand with multi-colored grains (40,30,30,0)
10					CL	CLAY with Sand: light olive brown with dark yellowish brown mottling, damp, low plasticity, fine- to medium-grained sand, trace coarse-grained sand (45,30,15,0)
15					CL	Sandy CLAY: yellowish brown (10YR 5/6), damp, fine- to coarse-grained, subangular to angular sand with multi-colored grains, trace gravel (45,15,35,5)
20					CL	Gravelly SAND with Clay and Silt: medium- to coarse-grained, dark yellowish brown (10YR 4/4), damp, fine-grained gravel (10,20,50,10)
25					SW	



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BORING LOG MW7

(Page 2 of 2)

Date Drilled: : 03/09/2009
 Drilling Co.: : Gregg Drilling Company
 Drilling Method: : Hollow-Stem Auger
 Sampling Method: : Direct Push
 Borehole Diameter: : 8"
 Casing Diameter: : 2"
 Location N-S : 2115554.1
 Location E-W : 6069845.1
 Total Depth: : 40 fbgs
 First GW Depth: : 35 fbgs

Project No.: : Former Exxon Service Station 70234
 Site: : 3450 35th Avenue, Oakland, California
 Logged By: : Heidi L. Dieffenbach-Carle, P.G. #6793
 Reviewed By: : Heidi L. Dieffenbach-Carle, P.G. #6793
 Signature: : *Heidi Dieffenbach-Carle*

Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	USCS	DESCRIPTION
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Sample Condition

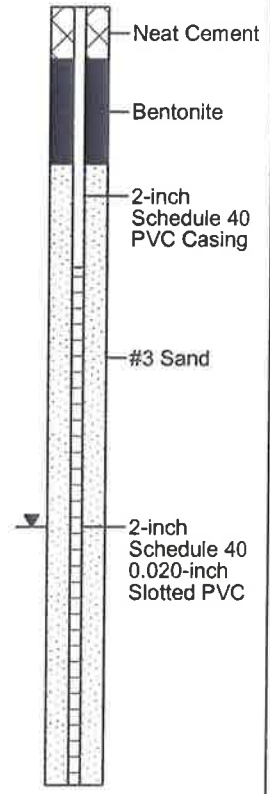
- No Recovery
- Sampled Interval
- Described Sample
- Preserved Sample

Water Levels

- First Encountered Water: 35'
- Second Encountered Water: NA

Well: MW7

25					SW	Gravelly SAND with Clay and Silt (continued): medium- to coarse-grained, dark yellowish brown (10YR 4/4), damp, fine-grained gravel (10,20,50,10)
					CL	Sandy CLAY: dark yellowish brown (10YR 4/4), low plasticity, fine- to medium-grained sand, trace fine-grained, subangular to angular gravel (40,20,30,10)
30						
					SC	Clayey SAND with Gravel: medium- to coarse-grained, dark yellowish brown (10YR 4/4), moist, well graded, multi-colored grains, fine-grained, subangular to angular gravel (30,10,55,15)
35						@35 feet bgs: becoming wet
40					CL	Sandy CLAY: dark yellowish brown (10YR 4/4), moist, fine- to medium-grained sand (45,25,30,0)



Cleared to 5 feet bgs by 10-inches on 2/27/2009

Cleared to 5 feet bgs with hand auger for collection of soil sample. Boring widened to 10-inches using airknife and vacuum truck.

Total Depth = 40 feet bgs, 13:35, 03/09/2009.



BORING LOG MW8

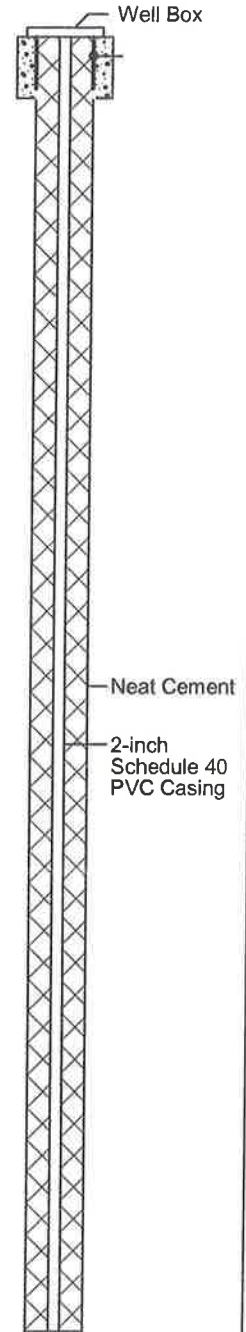
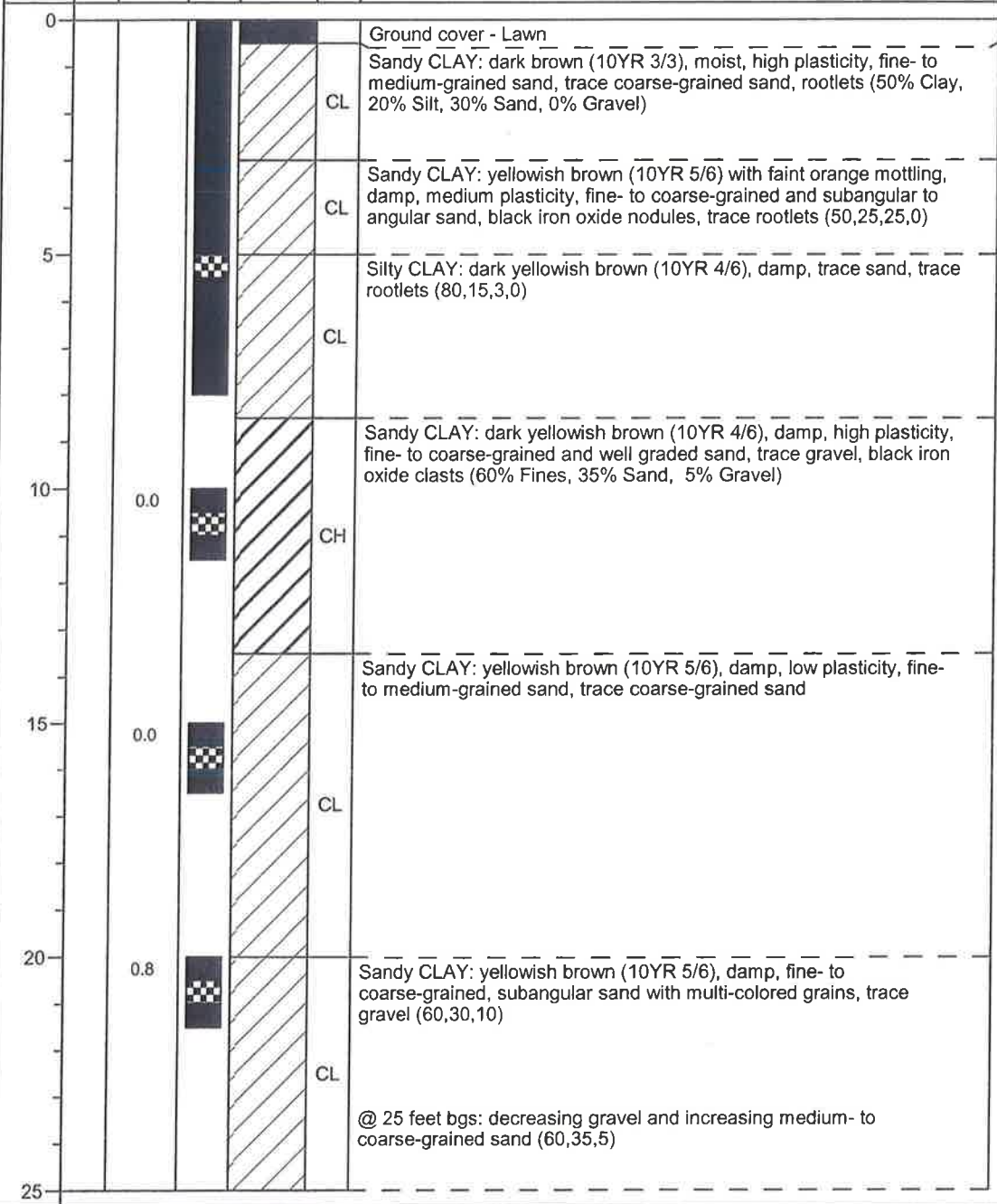
(Page 1 of 2)

Date Drilled: : 03/04/2009
 Drilling Co.: : Gregg Drilling Company
 Drilling Method: : Hollow-Stem Auger
 Sampling Method: : Direct Push
 Borehole Diameter: : 8"
 Casing Diameter: : 2"
 Location N-S : 2115470.5
 Location E-W : 6069894.0
 Total Depth: : 40 fbs
 First GW Depth: : 35 fbs

Project No.: : Former Exxon Service Station 70234
 Site: : 3450 35th Avenue, Oakland, California
 Logged By: : Heidi L. Dieffenbach-Carle, P.G. #6793
 Reviewed By: : Heidi L. Dieffenbach-Carle, P.G. #6793
 Signature: : *Heidi Dieffenbach-Carle*

Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	USCS	Sample Condition	Water Levels
						<input type="checkbox"/> No Recovery <input checked="" type="checkbox"/> Sampled Interval <input checked="" type="checkbox"/> Described Sample <input checked="" type="checkbox"/> Preserved Sample	<input checked="" type="checkbox"/> First Encountered Water: 35' <input type="checkbox"/> Second Encountered Water: NA
DESCRIPTION							

Well: MW8



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BORING LOG MW8

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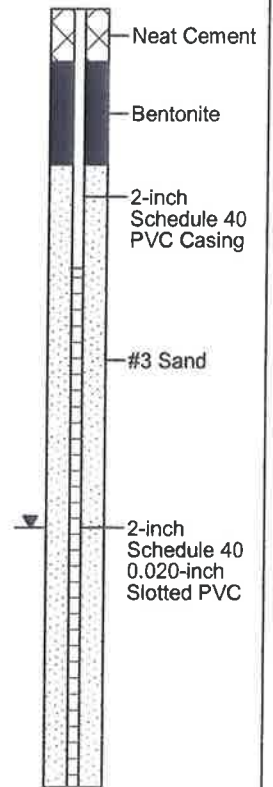
Date Drilled: : 03/04/2009
 Drilling Co.: : Gregg Drilling Company
 Drilling Method: : Hollow-Stem Auger
 Sampling Method: : Direct Push
 Borehole Diameter: : 8"
 Casing Diameter: : 2"
 Location N-S : 2115470.5
 Location E-W : 6069894.0
 Total Depth: : 40 fbg
 First GW Depth: : 35 fbg

Project No.: : Former Exxon Service Station 70234
 Site: : 3450 35th Avenue, Oakland, California
 Logged By: : Heidi L. Dieffenbach-Carle, P.G. #6793
 Reviewed By: : Heidi L. Dieffenbach-Carle, P.G. #6793
 Signature: : *Heidi Dieffenbach-Carle*

Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	USCS	Sample Condition	Water Levels
						☒ No Recovery ▨ Sampled Interval ■ Described Sample ▣ Preserved Sample	▼ First Encountered Water: 35' ▽ Second Encountered Water: NA
DESCRIPTION							

Well: MW8

25	1.4		▣	▨	CL	Sandy CLAY: yellowish brown (10YR 5/6), damp, fine- to coarse-grained, subangular sand with multi-colored grains, trace gravel (60,35,5)
30	1.3		▣	▨	CH	CLAY with Sand: dark yellowish brown (10YR 4/4) damp, high plasticity, fine-grained sand, trace medium- to coarse-grained sand (75,25,0)
35	1.4		▣	▨	SC	SAND with Clay: medium- to coarse-grained sand, dark yellowish brown (10 YR 4/4), moist, poorly graded (30,60,10)
			▣	▨	CL	CLAY with Sand: dark yellowish brown (10 YR 4/6), moist, medium plasticity, fine-grained sand, trace medium- to coarse-grained sand (80,20,0)
			▣	▨	SC	Clayey SAND: medium to coarse-grained, dark yellowish brown (10YR 4/4), wet, trace angular gravel (40,55,5)
40	2.1		▣	▨	CL	Sandy CLAY: dark yellowish brown (10YR 4/4), damp, fine- to coarse-grained sand with multi-colored grains, trace subangular to angular gravel (60,35,5)



Cleared to 5 feet bgs by 10-inches on 2/25/2009.

Cleared to 5 feet bgs with hand auger for collection of soil sample. Boring widened to 10-inches and deepened to 8 fbg using airknife and vacuum truck

Total Depth = 40 feet bgs, 14:50, 03/04/2009.



BORING LOG MW9

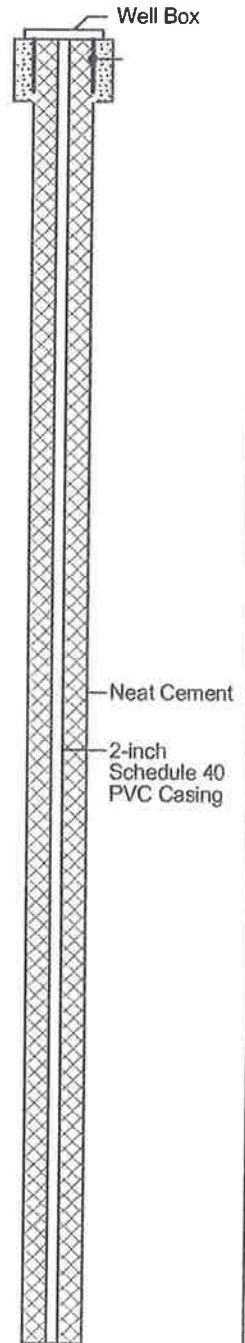
(Page 1 of 2)

Date Drilled: : 03/05/2009
 Drilling Co.: : Gregg Drilling Company
 Drilling Method: : Hollow-Stem Auger
 Sampling Method: : Direct Push
 Borehole Diameter: : 8"
 Casing Diameter: : 2"
 Location N-S : 2115514.5
 Location E-W : 6069933.1
 Total Depth: : 40 fbg
 First GW Depth: : 35 fbg

Project No.: : Former Exxon Service Station 70234
 Site: : 3450 35th Avenue, Oakland, California
 Logged By: : Heidi L. Dieffenbach-Carle, P.G. #6793 / Paula Sime
 Reviewed By: : Heidi L. Dieffenbach-Carle, P.G. #6793
 Signature: : *Heidi Dieffenbach-Carle*

Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	USCS	Sample Condition	Water Levels
						<input type="checkbox"/> No Recovery <input checked="" type="checkbox"/> Sampled Interval <input checked="" type="checkbox"/> Described Sample <input checked="" type="checkbox"/> Preserved Sample	<input checked="" type="checkbox"/> First Encountered Water: 35' <input type="checkbox"/> Second Encountered Water: NA
DESCRIPTION							
0						Concrete: 4.3 inches in thickness.	
					CH	Silty CLAY: dark brown (7.5YR 3/2), moist, high plasticity, trace sand, trace rootlets (Clay 80%, Silt 15%, Sand 5%, Gravel 0%)	
					CL	Sandy CLAY: dark yellowish brown (10YR 4/6), moist, medium plasticity, fine- to coarse-grained, angular to subangular sand, trace angular to subangular gravel, trace rootlets (70,12,15,3)	
5					CH	Silty CLAY: dark yellowish brown (10 YR 4/6), damp, high plasticity, trace sand, trace rootlets (82,15,3,0)	
					CL	Sandy CLAY: dark yellowish brown, damp, high plasticity, fine- to coarse-grained, subangular, well graded sand (60, 0, 35, 5)	
10					CL	Sandy CLAY: dark yellowish brown, damp, low plasticity, fine- to medium, poorly graded sand, trace coarse-grained sand, very stiff, trace silt (60,5,35,0)	
15					CL	Sandy CLAY: dark yellowish brown, damp, low plasticity, fine- to coarse-grained, subangular, well graded sand, trace gravel and silt, very stiff (55,5,35,5)	
20					CL		
25							

Well: MW9



04-24-2009 F:\EXXONMOBIL\ExxonMobil Projects\022476 (70234) Oakland\2476 AutoCad\BORING LOGS\2476 MW9 bor



BORING LOG MW9

(Page 2 of 2)

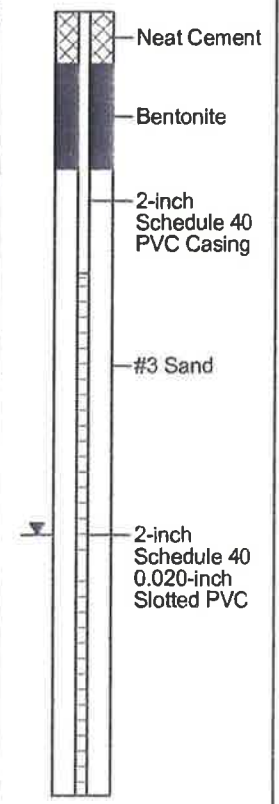
Date Drilled: : 03/05/2009
 Drilling Co.: : Gregg Drilling Company
 Drilling Method: : Hollow-Stem Auger
 Sampling Method: : Direct Push
 Borehole Diameter: : 8"
 Casing Diameter: : 2"
 Location N-S : 2115514.5
 Location E-W : 6069933.1
 Total Depth: : 40 fbgs
 First GW Depth: : 35 fbgs

Project No.: : Former Exxon Service Station 70234
 Site: : 3450 35th Avenue, Oakland, California
 Logged By: : Heidi L. Dieffenbach-Carle, P.G. #6793 / Paula Sime
 Reviewed By: : Heidi L. Dieffenbach-Carle, P.G. #6793
 Signature: : *Heidi Dieffenbach-Carle*

Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	USCS	Sample Condition	Water Levels
						No Recovery Sampled Interval Described Sample Preserved Sample	First Encountered Water: 35' Second Encountered Water: NA

Well: MW9

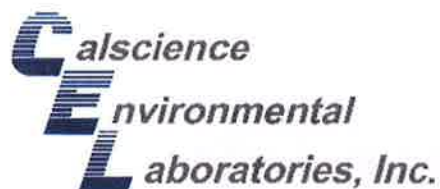
DESCRIPTION					
25				SC	Clayey SAND: fine- to medium-grained, dark yellowish brown, damp, well graded, trace gravel and silt, very dense (25,5,65,5)
30				CL	Sandy CLAY: dark yellowish brown, damp to moist, medium plasticity, fine- to medium-grained, well graded sand (75,0,25,0)
35				SW	SAND with Clay: fine- to coarse-grained, dark yellowish brown, very moist to wet (along clasts boundaries), well graded, subangular, trace gravel, medium loose (10,0,85,5) @35 feet bgs: wet
40				CL	Sandy CLAY: dark yellowish brown, moist, low plasticity, fine- to coarse-grained, poorly graded sand, trace gravel (70,0,27,3)
Cleared to 5 feet bgs with hand auger for collection of soil sample. Boring widened to 10-inches and deepened to 8 fbgs using air/water knife and vacuum truck on 2/25/2009. Total Depth = 40 fbgs, 10:45 03/05/2009.					
45					
50					



04-24-2009 F:\EXXONMOBIL\ExxonMobil Projects\022476 (70234) Oakland\BORING LOGS\2476 MW9.bor

APPENDIX C

LABORATORY ANALYTICAL REPORTS



CALSCIENCE

WORK ORDER NUMBER: 12-02-0940

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Cardno ERI

Client Project Name: ExxonMobil 70234 / 022476

Attention: Janice Jacobson
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Cecile de Guia

Approved for release on 02/27/2012 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 70234 / 022476

Work Order Number: 12-02-0940

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	1.3 EPA 8260B Volatile Organics (Aqueous)	6
2	Quality Control Sample Data	8
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	2.2 LCS/LCSD	12
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4	Chain of Custody/Sample Receipt Form	17

Analytical Report



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

Date Received: 02/15/12
Work Order No: 12-02-0940
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project: ExxonMobil 70234 / 022476

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-31-RW1-1	12-02-0940-1-D	02/13/12 12:45	Aqueous	GC 56	02/16/12	02/16/12 21:34	120216B01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	2100	50	1	HD	ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	100	38-134			

W-37-RW1-2	12-02-0940-2-D	02/13/12 17:00	Aqueous	GC 56	02/16/12	02/16/12 22:06	120216B01
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	2300	50	1	HD	ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	102	38-134			

W-30-RW1-3	12-02-0940-3-D	02/13/12 18:30	Aqueous	GC 56	02/16/12	02/16/12 22:37	120216B01
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	2400	50	1	HD	ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	102	38-134			

W-30-RW1-4	12-02-0940-4-F	02/14/12 06:10	Aqueous	GC 56	02/16/12	02/16/12 23:09	120216B01
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	2500	50	1	HD	ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	102	38-134			

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

Analytical Report



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

Date Received: 02/15/12
Work Order No: 12-02-0940
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project: ExxonMobil 70234 / 022476

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	099-12-436-7,146	N/A	Aqueous	GC 56	02/16/12	02/16/12 11:32	120216B01

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
TPH as Gasoline	ND	50	1	U	ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	92	38-134			

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

Analytical Report



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

Date Received: 02/15/12
 Work Order No: 12-02-0940
 Preparation: EPA 5030C
 Method: EPA 8021B
 Units: ug/L

Project: ExxonMobil 70234 / 022476

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-31-RW1-1	12-02-0940-1-D	02/13/12 12:45	Aqueous	GC 21	02/16/12	02/17/12 01:07	120216B03

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	910	2.5	5		Ethylbenzene	7.9	2.5	5	
Toluene	4.5	2.5	5	LD	Xylenes (total)	39	5.0	5	
Surrogates:	REC (%)	Control Limits	Qual						
1,4-Bromofluorobenzene	97	70-130							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-37-RW1-2	12-02-0940-2-F	02/13/12 17:00	Aqueous	GC 21	02/16/12	02/17/12 02:53	120216B03

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	1400	2.5	5		Ethylbenzene	58	2.5	5	
Toluene	6.2	2.5	5		Xylenes (total)	38	5.0	5	
Surrogates:	REC (%)	Control Limits	Qual						
1,4-Bromofluorobenzene	99	70-130							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-30-RW1-3	12-02-0940-3-F	02/13/12 18:30	Aqueous	GC 21	02/16/12	02/17/12 03:28	120216B03

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	1400	2.5	5		Ethylbenzene	59	2.5	5	
Toluene	6.5	2.5	5		Xylenes (total)	37	5.0	5	
Surrogates:	REC (%)	Control Limits	Qual						
1,4-Bromofluorobenzene	96	70-130							

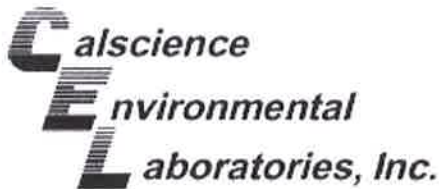
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-30-RW1-4	12-02-0940-4-D	02/14/12 06:10	Aqueous	GC 21	02/16/12	02/17/12 04:03	120216B03

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	1400	2.5	5		Ethylbenzene	44	2.5	5	
Toluene	7.2	2.5	5		Xylenes (total)	42	5.0	5	
Surrogates:	REC (%)	Control Limits	Qual						
1,4-Bromofluorobenzene	99	70-130							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-667-1,379	N/A	Aqueous	GC 21	02/16/12	02/16/12 23:20	120216B03

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1	U	Ethylbenzene	ND	0.50	1	U
Toluene	ND	0.50	1	U	Xylenes (total)	ND	1.0	1	U
Surrogates:	REC (%)	Control Limits	Qual						
1,4-Bromofluorobenzene	83	70-130							

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



Analytical Report



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

Date Received: 02/15/12
Work Order No: 12-02-0940
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 70234 / 022476

Page 1 of 2

Table with 9 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: W-31-RW1-1, 12-02-0940-1-A, 02/13/12 12:45, Aqueous, GC/MS FFF, 02/16/12, 02/17/12 18:20, 120217L01

Table with 10 columns: Parameter, Result, RL, DF, Qual, Parameter, Result, RL, DF, Qual. Lists various chemical parameters and their results for sample W-31-RW1-1.

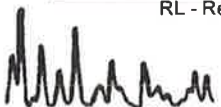
Table with 9 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: W-37-RW1-2, 12-02-0940-2-A, 02/13/12 17:00, Aqueous, GC/MS FFF, 02/16/12, 02/17/12 18:48, 120217L01

Table with 10 columns: Parameter, Result, RL, DF, Qual, Parameter, Result, RL, DF, Qual. Lists various chemical parameters and their results for sample W-37-RW1-2.

Table with 9 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: W-30-RW1-3, 12-02-0940-3-A, 02/13/12 18:30, Aqueous, GC/MS FFF, 02/16/12, 02/17/12 19:15, 120217L01

Table with 10 columns: Parameter, Result, RL, DF, Qual, Parameter, Result, RL, DF, Qual. Lists various chemical parameters and their results for sample W-30-RW1-3.

RL - Reporting Limit DF - Dilution Factor Qual - Qualifiers



Analytical Report



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

Date Received: 02/15/12
 Work Order No: 12-02-0940
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: ExxonMobil 70234 / 022476

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-30-RW1-4	12-02-0940-4-A	02/14/12 06:10	Aqueous	GC/MS FFF	02/16/12	02/17/12 19:43	120217L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	2700	50	100		Tert-Amyl-Methyl Ether (TAME)	ND	10	20	U
Tert-Butyl Alcohol (TBA)	480	100	20		1,2-Dibromoethane	ND	10	20	U
Diisopropyl Ether (DIPE)	ND	10	20	U	1,2-Dichloroethane	ND	10	20	U
Ethyl-t-Butyl Ether (ETBE)	ND	10	20	U					
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	99	68-120			Dibromofluoromethane	116	80-127		
1,2-Dichloroethane-d4	109	80-128			Toluene-d8	104	80-120		

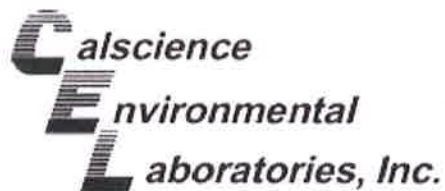
Method Blank	099-12-884-796	N/A	Aqueous	GC/MS FFF	02/16/12	02/16/12 13:18	120216L01
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	U	Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	U
Tert-Butyl Alcohol (TBA)	ND	5.0	1	U	1,2-Dibromoethane	ND	0.50	1	U
Diisopropyl Ether (DIPE)	ND	0.50	1	U	1,2-Dichloroethane	ND	0.50	1	U
Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	U					
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	98	68-120			Dibromofluoromethane	101	80-127		
1,2-Dichloroethane-d4	99	80-128			Toluene-d8	101	80-120		

Method Blank	099-12-884-797	N/A	Aqueous	GC/MS L	02/17/12	02/17/12 14:14	120217L01
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	U	Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	U
Tert-Butyl Alcohol (TBA)	ND	5.0	1	U	1,2-Dibromoethane	ND	0.50	1	U
Diisopropyl Ether (DIPE)	ND	0.50	1	U	1,2-Dichloroethane	ND	0.50	1	U
Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	U					
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	91	68-120			Dibromofluoromethane	87	80-127		
1,2-Dichloroethane-d4	97	80-128			Toluene-d8	93	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

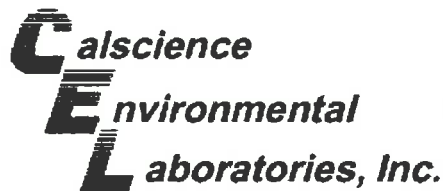
Date Received: 02/15/12
Work Order No: 12-02-0940
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project ExxonMobil 70234 / 022476

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-02-0935-2	Aqueous	GC 56	02/16/12	02/16/12	120216S01

<u>Parameter</u>	<u>SPIKE ADDED</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
TPH as Gasoline	2000	99	97	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

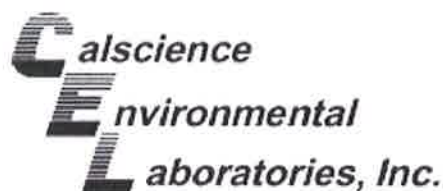
Date Received: 02/15/12
Work Order No: 12-02-0940
Preparation: EPA 5030C
Method: EPA 8021B

Project ExxonMobil 70234 / 022476

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
W-31-RW1-1	Aqueous	GC 21	02/16/12	02/17/12	120216B01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	500.0	83	100	57-129	6	0-23	
Toluene	500.0	91	93	50-134	2	0-26	
Ethylbenzene	500.0	90	92	58-130	2	0-26	
Xylenes (total)	1500	90	93	58-130	3	0-28	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - Spike/Spike Duplicate



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

Date Received: 02/15/12
Work Order No: 12-02-0940
Preparation: EPA 5030C
Method: EPA 8260B

Project ExxonMobil 70234 / 022476

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-02-0989-1	Aqueous	GC/MS FFF	02/16/12	02/16/12	120216S01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	10.00	98	97	76-124	1	0-20	
Toluene	10.00	98	97	80-120	1	0-20	
Ethylbenzene	10.00	91	89	78-126	2	0-20	
Methyl-t-Butyl Ether (MTBE)	10.00	96	95	67-121	1	0-49	
Tert-Butyl Alcohol (TBA)	50.00	132	138	36-162	3	0-30	
Diisopropyl Ether (DIPE)	10.00	105	105	60-138	0	0-45	
Ethyl-t-Butyl Ether (ETBE)	10.00	97	96	69-123	0	0-30	
Tert-Amyl-Methyl Ether (TAME)	10.00	89	88	65-120	1	0-20	
Ethanol	100.0	95	88	30-180	8	0-72	
1,2-Dibromoethane	10.00	90	89	80-120	1	0-20	
1,2-Dichloroethane	10.00	90	89	80-120	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Quality Control - Spike/Spike Duplicate



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

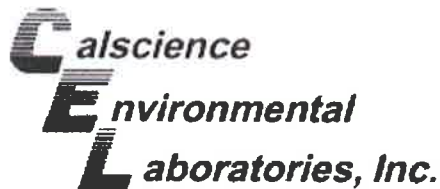
Date Received: 02/15/12
 Work Order No: 12-02-0940
 Preparation: EPA 5030C
 Method: EPA 8260B

Project ExxonMobil 70234 / 022476

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-02-1006-1	Aqueous	GC/MS L	02/17/12	02/17/12	120217S01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	10.00	91	93	76-124	2	0-20	
Toluene	10.00	96	97	80-120	1	0-20	
Ethylbenzene	10.00	103	101	78-126	2	0-20	
Methyl-t-Butyl Ether (MTBE)	10.00	84	87	67-121	4	0-49	
Tert-Butyl Alcohol (TBA)	50.00	122	185	36-162	26	0-30	HX
Diisopropyl Ether (DIPE)	10.00	88	88	60-138	1	0-45	
Ethyl-t-Butyl Ether (ETBE)	10.00	85	87	69-123	2	0-30	
Tert-Amyl-Methyl Ether (TAME)	10.00	90	94	65-120	4	0-20	
Ethanol	100.0	109	117	30-180	7	0-72	
1,2-Dibromoethane	10.00	95	89	80-120	6	0-20	
1,2-Dichloroethane	10.00	98	98	80-120	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate



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

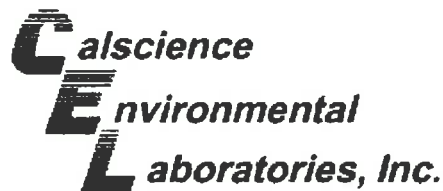
Date Received: N/A
Work Order No: 12-02-0940
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project: ExxonMobil 70234 / 022476

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-436-7,146	Aqueous	GC 56	02/16/12	02/16/12	120216B01

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	2000	93	95	78-120	2	0-10	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate



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

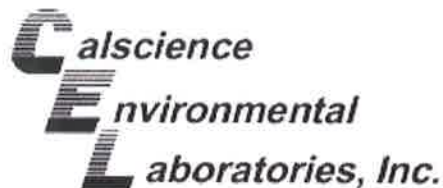
Date Received: N/A
Work Order No: 12-02-0940
Preparation: EPA 5030C
Method: EPA 8021B

Project: ExxonMobil 70234 / 022476

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-667-1,379	Aqueous	GC 21	02/16/12	02/16/12	120216B03

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	100.0	97	99	70-118	2	0-9	
Toluene	100.0	91	93	66-114	1	0-9	
Ethylbenzene	100.0	91	93	72-114	2	0-9	
Xylenes (total)	300.0	91	93	74-116	2	0-9	

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: 12-02-0940
Preparation: EPA 5030C
Method: EPA 8260B

Project: ExxonMobil 70234 / 022476

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-884-796	Aqueous	GC/MS FFF	02/16/12	02/16/12	120216L01			
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	10.00	90	91	80-120	73-127	1	0-20	
Toluene	10.00	87	89	80-120	73-127	2	0-20	
Ethylbenzene	10.00	80	81	80-120	73-127	2	0-20	
Methyl-t-Butyl Ether (MTBE)	10.00	86	87	69-123	60-132	1	0-20	
Tert-Butyl Alcohol (TBA)	50.00	78	82	63-123	53-133	5	0-20	
Diisopropyl Ether (DIPE)	10.00	93	95	59-137	46-150	1	0-37	
Ethyl-t-Butyl Ether (ETBE)	10.00	87	88	69-123	60-132	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	10.00	82	82	70-120	62-128	0	0-20	
Ethanol	100.0	89	90	28-160	6-182	2	0-57	
1,2-Dibromoethane	10.00	84	85	79-121	72-128	1	0-20	
1,2-Dichloroethane	10.00	84	85	80-120	73-127	2	0-20	

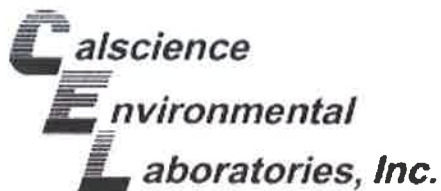
Total number of LCS compounds : 11

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



Quality Control - LCS/LCS Duplicate



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

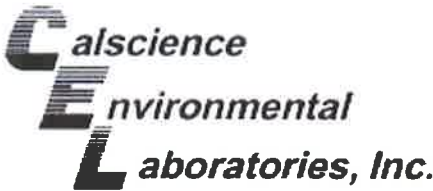
Date Received: N/A
Work Order No: 12-02-0940
Preparation: EPA 5030C
Method: EPA 8260B

Project: ExxonMobil 70234 / 022476

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-884-797	Aqueous	GC/MS L	02/17/12	02/17/12	120217L01			
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	10.00	95	91	80-120	73-127	4	0-20	
Toluene	10.00	98	95	80-120	73-127	2	0-20	
Ethylbenzene	10.00	100	98	80-120	73-127	2	0-20	
Methyl-t-Butyl Ether (MTBE)	10.00	88	86	69-123	60-132	2	0-20	
Tert-Butyl Alcohol (TBA)	50.00	99	101	63-123	53-133	2	0-20	
Diisopropyl Ether (DIPE)	10.00	89	88	59-137	46-150	1	0-37	
Ethyl-t-Butyl Ether (ETBE)	10.00	87	86	69-123	60-132	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	10.00	96	94	70-120	62-128	3	0-20	
Ethanol	100.0	107	107	28-160	6-182	0	0-57	
1,2-Dibromoethane	10.00	101	103	79-121	72-128	2	0-20	
1,2-Dichloroethane	10.00	103	100	80-120	73-127	3	0-20	

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

RPD - Relative Percent Difference , CL - Control Limit



Glossary of Terms and Qualifiers



Work Order Number: 12-02-0940

<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



BAHU

		< WebShip > > > > 800-322-5555 www.gso.com	
Ship From: ALAN KEMP CAL SCIENCE- CONCORD 5063 COMMERCIAL CIRCLE #H CONCORD, CA 94520		Tracking #: 518456903 	NPS
Ship To: SAMPLE RECEIVING CEL 7440 LINCOLN WAY GARDEN GROVE, CA 92841		ORC GARDEN GROVE	
COD: \$0.00		D92841A  98608576	
Reference: STANTEC, CARDNO ERI		Print Date : 02/14/12 15:37 PM	
Delivery Instructions:		Signature Type: SIGNATURE REQUIRED	

Package 1 of 1

Send Label To Printer	<input checked="" type="checkbox"/> Print All	Edit Shipment	Finish
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LABEL INSTRUCTIONS:

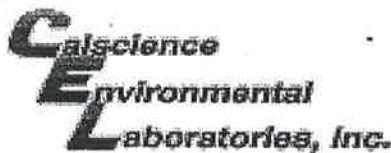
- Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
- STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.
- STEP 2 - Fold this page in half.
- STEP 3 - Securely attach this label to 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 not limited to, artwork, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.



WORK ORDER #: 12-02-0940

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: CARDXO EPA

DATE: 02/15/12

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

Temperature 1.5°C - 0.3°C (CF) = 1.2°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: PT

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 type="checkbox"/>	<input checked="" 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 VOAh VOAna₂ 125AGB 125AGBh 125AGBp 1AGB 1AGBna₂ 1AGBs

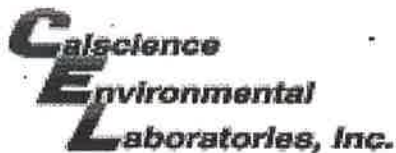
500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 1PBna 500PB

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

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

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



WORK ORDER #: 12-02-0940

SAMPLE ANOMALY FORM

SAMPLES - CONTAINERS & LABELS:

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

Comments:

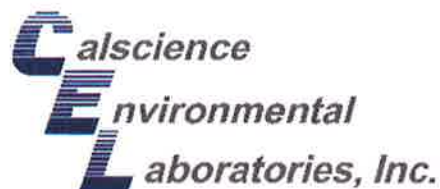
HEADSPACE – Containers with Bubble > 6mm or ¼ inch:

Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Cont. received	Analysis
1	C ₁ F	6							

Comments:

*Transferred at Client's request.

Initial / Date: PT 02/15/12



CALSCIENCE

WORK ORDER NUMBER: 12-02-1105

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Cardno ERI

Client Project Name: ExxonMobil 70234 / 022476

Attention: Janice Jacobson
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Cecile L. deGuia

Approved for release on 02/29/2012 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 70234 / 022476

Work Order Number: 12-02-1105

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Analytical Report



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

Date Received: 02/17/12
 Work Order No: 12-02-1105
 Preparation: EPA 5030C
 Method: EPA 8015B (M)

Project: ExxonMobil 70234 / 022476

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-30-RW1-1	12-02-1105-1-F	02/14/12 18:00	Aqueous	GC 22	02/20/12	02/20/12 15:26	120220B01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	2200	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	95	38-134			

W-30-RW1-2	12-02-1105-2-F	02/15/12 06:00	Aqueous	GC 22	02/20/12	02/20/12 17:03	120220B01
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	2200	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	90	38-134			

W-30-RW1-3	12-02-1105-3-F	02/15/12 19:30	Aqueous	GC 22	02/20/12	02/20/12 18:08	120220B01
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	3300	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	97	38-134			

W-30-RW1-4	12-02-1105-4-F	02/16/12 06:00	Aqueous	GC 22	02/20/12	02/20/12 17:35	120220B01
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	1900	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	88	38-134			

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

Analytical Report



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

Date Received: 02/17/12
 Work Order No: 12-02-1105
 Preparation: EPA 5030C
 Method: EPA 8015B (M)

Project: ExxonMobil 70234 / 022476

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	099-12-436-7,154	N/A	Aqueous	GC 22	02/20/12	02/20/12 12:42	120220B01

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

<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>
1,4-Bromofluorobenzene	83	38-134	

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

Analytical Report



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

Date Received: 02/17/12
Work Order No: 12-02-1105
Preparation: EPA 5030C
Method: EPA 8021B
Units: ug/L

Project: ExxonMobil 70234 / 022476

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-30-RW1-1	12-02-1105-1-E	02/14/12 18:00	Aqueous	GC 8	02/18/12	02/18/12 16:36	120218B01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	820	2.5	5		Ethylbenzene	20	2.5	5	
Toluene	5.8	2.5	5		Xylenes (total)	31	5.0	5	

Surrogates: REC (%) Control Limits Qual

1,4-Bromofluorobenzene 97 70-130

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-30-RW1-2	12-02-1105-2-D	02/15/12 06:00	Aqueous	GC 8	02/18/12	02/18/12 18:23	120218B01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	900	2.5	5		Ethylbenzene	23	2.5	5	
Toluene	7.1	2.5	5		Xylenes (total)	36	5.0	5	

Surrogates: REC (%) Control Limits Qual

1,4-Bromofluorobenzene 93 70-130

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-30-RW1-3	12-02-1105-3-D	02/15/12 19:30	Aqueous	GC 8	02/18/12	02/18/12 18:59	120218B01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	1900	2.5	5		Ethylbenzene	56	2.5	5	
Toluene	18	2.5	5		Xylenes (total)	99	5.0	5	

Surrogates: REC (%) Control Limits Qual

1,4-Bromofluorobenzene 94 70-130

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-30-RW1-4	12-02-1105-4-D	02/16/12 06:00	Aqueous	GC 8	02/18/12	02/18/12 19:35	120218B01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	790	2.5	5		Ethylbenzene	15	2.5	5	
Toluene	6.8	2.5	5		Xylenes (total)	30	5.0	5	

Surrogates: REC (%) Control Limits Qual

1,4-Bromofluorobenzene 95 70-130

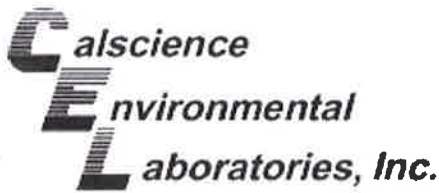
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-667-1,380	N/A	Aqueous	GC 8	02/18/12	02/18/12 12:07	120218B01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1	U	Ethylbenzene	ND	0.50	1	U
Toluene	ND	0.50	1	U	Xylenes (total)	ND	1.0	1	U

Surrogates: REC (%) Control Limits Qual

1,4-Bromofluorobenzene 97 70-130

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



Analytical Report



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

Date Received: 02/17/12
Work Order No: 12-02-1105
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 70234 / 022476

Page 1 of 2

Table with 9 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: W-30-RW1-1, 12-02-1105-1-B, 02/14/12 18:00, Aqueous, GC/MS BB, 02/22/12, 02/22/12 18:32, 120222L01

Table with 10 columns: Parameter, Result, RL, DF, Qual, Parameter, Result, RL, DF, Qual. Lists compounds like Methyl-t-Butyl Ether (MTBE), Tert-Butyl Alcohol (TBA), Diisopropyl Ether (DIPE), Ethyl-t-Butyl Ether (ETBE), and Surrogates (1,4-Bromofluorobenzene, 1,2-Dichloroethane-d4).

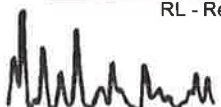
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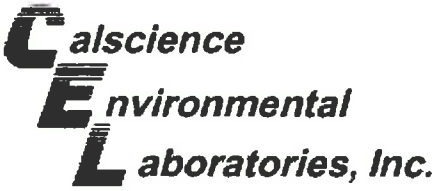
Table with 10 columns: Parameter, Result, RL, DF, Qual, Parameter, Result, RL, DF, Qual. Lists compounds like Methyl-t-Butyl Ether (MTBE), Tert-Butyl Alcohol (TBA), Diisopropyl Ether (DIPE), Ethyl-t-Butyl Ether (ETBE), and Surrogates (1,4-Bromofluorobenzene, 1,2-Dichloroethane-d4).

Table with 9 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: W-30-RW1-3, 12-02-1105-3-B, 02/15/12 19:30, Aqueous, GC/MS BB, 02/22/12, 02/22/12 19:01, 120222L01

Table with 10 columns: Parameter, Result, RL, DF, Qual, Parameter, Result, RL, DF, Qual. Lists compounds like Methyl-t-Butyl Ether (MTBE), Tert-Butyl Alcohol (TBA), Diisopropyl Ether (DIPE), Ethyl-t-Butyl Ether (ETBE), and Surrogates (1,4-Bromofluorobenzene, 1,2-Dichloroethane-d4).

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





Analytical Report



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

Date Received: 02/17/12
Work Order No: 12-02-1105
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 70234 / 022476

Page 2 of 2

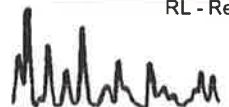
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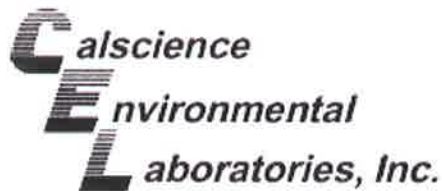
Table with 10 columns: Parameter, Result, RL, DF, Qual, Parameter, Result, RL, DF, Qual. Lists various chemical parameters and their results.

Table with 9 columns: Method Blank, Lab Sample Number, Date/Time, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row: Method Blank, 099-12-884-800, N/A, Aqueous, GC/MS BB, 02/22/12, 02/22/12 14:35, 120222L01

Table with 10 columns: Parameter, Result, RL, DF, Qual, Parameter, Result, RL, DF, Qual. Lists various chemical parameters and their results for the Method Blank.

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





Quality Control - Spike/Spike Duplicate



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

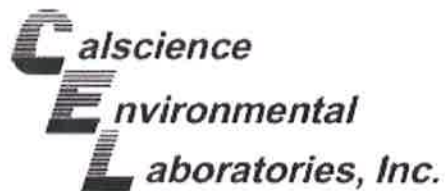
Date Received: 02/17/12
Work Order No: 12-02-1105
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project ExxonMobil 70234 / 022476

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
W-30-RW1-1	Aqueous	GC 22	02/20/12	02/20/12	120220S01

<u>Parameter</u>	<u>SPIKE ADDED</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
TPH as Gasoline	2000	101	108	68-122	4	0-18	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - Spike/Spike Duplicate



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

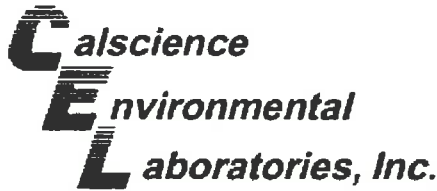
Date Received: 02/17/12
Work Order No: 12-02-1105
Preparation: EPA 5030C
Method: EPA 8021B

Project ExxonMobil 70234 / 022476

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
W-30-RW1-1	Aqueous	GC 8	02/18/12	02/18/12	120218S01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	500.0	79	88	57-129	3	0-23	
Toluene	500.0	90	88	50-134	3	0-26	
Ethylbenzene	500.0	87	87	58-130	0	0-26	
Xylenes (total)	1500	88	88	58-130	0	0-28	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - Spike/Spike Duplicate



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

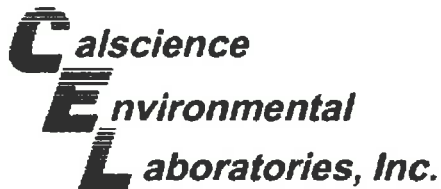
Date Received: 02/17/12
Work Order No: 12-02-1105
Preparation: EPA 5030C
Method: EPA 8260B

Project ExxonMobil 70234 / 022476

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-02-1106-1	Aqueous	GC/MS BB	02/22/12	02/22/12	120222S01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	10.00	109	108	76-124	1	0-20	
Toluene	10.00	110	111	80-120	1	0-20	
Ethylbenzene	10.00	107	105	78-126	2	0-20	
Methyl-t-Butyl Ether (MTBE)	10.00	122	129	67-121	5	0-49	HX
Tert-Butyl Alcohol (TBA)	50.00	156	135	36-162	15	0-30	
Diisopropyl Ether (DIPE)	10.00	107	106	60-138	1	0-45	
Ethyl-t-Butyl Ether (ETBE)	10.00	117	117	69-123	0	0-30	
Tert-Amyl-Methyl Ether (TAME)	10.00	127	127	65-120	0	0-20	HX
Ethanol	100.0	93	90	30-180	4	0-72	
1,2-Dibromoethane	10.00	117	120	80-120	2	0-20	
1,2-Dichloroethane	10.00	112	112	80-120	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate



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

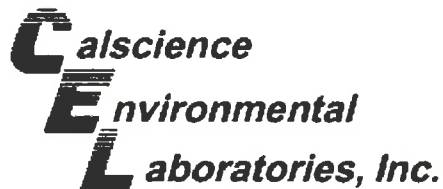
Date Received: N/A
Work Order No: 12-02-1105
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project: ExxonMobil 70234 / 022476

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-436-7,154	Aqueous	GC 22	02/20/12	02/20/12	120220B01

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	2000	91	90	78-120	1	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: 12-02-1105
Preparation: EPA 5030C
Method: EPA 8021B

Project: ExxonMobil 70234 / 022476

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-667-1,380	Aqueous	GC 8	02/18/12	02/18/12	120218B01

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	100.0	92	91	70-118	1	0-9	
Toluene	100.0	93	91	66-114	2	0-9	
Ethylbenzene	100.0	89	89	72-114	1	0-9	
Xylenes (total)	300.0	89	88	74-116	1	0-9	

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: 12-02-1105
 Preparation: EPA 5030C
 Method: EPA 8260B

Project: ExxonMobil 70234 / 022476

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-884-800	Aqueous	GC/MS BB	02/22/12	02/22/12	120222L01			
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	10.00	106	108	80-120	73-127	2	0-20	
Toluene	10.00	107	109	80-120	73-127	2	0-20	
Ethylbenzene	10.00	105	107	80-120	73-127	2	0-20	
Methyl-t-Butyl Ether (MTBE)	10.00	112	113	69-123	60-132	1	0-20	
Tert-Butyl Alcohol (TBA)	50.00	97	94	63-123	53-133	3	0-20	
Diisopropyl Ether (DIPE)	10.00	102	101	59-137	46-150	1	0-37	
Ethyl-t-Butyl Ether (ETBE)	10.00	107	108	69-123	60-132	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	10.00	117	112	70-120	62-128	5	0-20	
Ethanol	100.0	92	95	28-160	6-182	3	0-57	
1,2-Dibromoethane	10.00	110	107	79-121	72-128	2	0-20	
1,2-Dichloroethane	10.00	100	102	80-120	73-127	2	0-20	

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

RPD - Relative Percent Difference , CL - Control Limit

Work Order Number: 12-02-1105

<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



Sandy Tat

From: Jake Prowse [jake.prowse@cardno.com]
Sent: Friday, February 17, 2012 5:08 PM
To: Sandy Tat
Subject: Re: ExxonMobil 70234 / 022476 (12-02-1105)

Please follow the COC

Jake Prowse
Cardno ERI
707-766-2000

On Feb 17, 2012, at 3:50 PM, "Sandy Tat" <stat@calscience.com> wrote:

Hi Jake / Judy,

Please verify the sample ID for sample (W-30-RW1-3), because it was labeled as (W-30-RW1) on the label. Therefore, which sample ID should we follow? Please advise. 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

<image001.jpg>

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<12-02-1105.PDF>

1105

	<p>WebShip >>>></p>	
<p>800-322-5555 www.gso.com</p>		
<p>Ship From: ALAN KEMP CAL SCIENCE- CONCORD 5063 COMMERCIAL CIRCLE #H CONCORD, CA 94520</p>	<p>Tracking #: 518475436 </p>	<p>NPS</p>
<p>Ship To: SAMPLE RECEIVING CEL 7440 LINCOLN WAY GARDEN GROVE, CA 92841</p>	<p>ORC GARDEN GROVE</p>	
<p>COD: \$0.00</p>	<p>D92841A</p>  <p>98688321</p>	
<p>Reference: CARDNO ERI, CONOCO PHILLIPS</p>		
<p>Delivery Instructions:</p>		
<p>Signature Type: SIGNATURE REQUIRED</p>		
<p>Print Date : 02/16/12 14:52 PM</p>		

Package 1 of 1

Print All

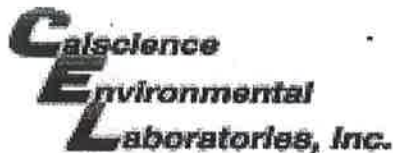
LABEL INSTRUCTIONS:

- 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-

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: CARDNO EPI

DATE: 02/17/12

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

Temperature 1.4 °C - 0.3 °C (CF) = 1.1 °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: DL

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 type="checkbox"/>	<input checked="" 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 VOAh VOAna₂ 125AGB 125AGBh 125AGBp 1AGB 1AGBna₂ 1AGBs

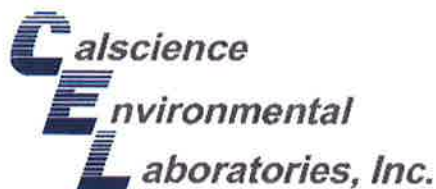
500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 1PBna 500PB

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

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

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: 12-02-1303

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Cardno ERI

Client Project Name: ExxonMobil 70234 / 022476

Attention: Janice Jacobson
601 North McDowell Blvd.
Petaluma, CA 94954-2312

Cecile de Guia

Approved for release on 03/5/2012 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 70234 / 022476

Work Order Number: 12-02-1303

1	Client Sample Data	3
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1.2	EPA 8021B BTEX (Aqueous)	4
1.3	EPA 8260B Volatile Organics (Aqueous)	5
2	Quality Control Sample Data	7
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2.2	LCS/LCSD	11
3	Glossary of Terms and Qualifiers	15
4	Chain of Custody/Sample Receipt Form	16

Analytical Report



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

Date Received: 02/22/12
 Work Order No: 12-02-1303
 Preparation: EPA 5030C
 Method: EPA 8015B (M)

Project: ExxonMobil 70234 / 022476

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-30-RW1-1	12-02-1303-1-D	02/16/12 18:00	Aqueous	GC 11	02/23/12	02/23/12 16:05	120223B01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	3800	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	95	38-134			

W-30-RW1-2	12-02-1303-2-D	02/17/12 06:00	Aqueous	GC 11	02/23/12	02/23/12 18:23	120223B01
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	2500	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	90	38-134			

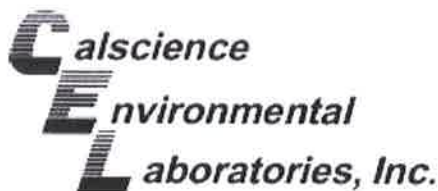
W-30-RW1-3	12-02-1303-3-D	02/17/12 11:30	Aqueous	GC 11	02/23/12	02/23/12 18:57	120223B01
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	2600	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	90	38-134			

Method Blank	099-12-436-7,167	N/A	Aqueous	GC 11	02/23/12	02/23/12 13:47	120223B01
--------------	------------------	-----	---------	-------	----------	-------------------	-----------

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1	U	ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	84	38-134			

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



Analytical Report



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

Date Received: 02/22/12
Work Order No: 12-02-1303
Preparation: EPA 5030C
Method: EPA 8021B
Units: ug/L

Project: ExxonMobil 70234 / 022476

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-30-RW1-1	12-02-1303-1-E	02/16/12 18:00	Aqueous	GC 21	02/23/12	02/24/12 02:06	120223B01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	1100	2.5	5		Ethylbenzene	35	2.5	5	
Toluene	10	2.5	5		Xylenes (total)	53	5.0	5	
Surrogates:	REC (%)	Control Limits	Qual						
1,4-Bromofluorobenzene	89	70-130							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-30-RW1-2	12-02-1303-2-E	02/17/12 06:00	Aqueous	GC 21	02/23/12	02/24/12 02:41	120223B01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	680	2.5	5		Ethylbenzene	12	2.5	5	
Toluene	5.8	2.5	5		Xylenes (total)	26	5.0	5	
Surrogates:	REC (%)	Control Limits	Qual						
1,4-Bromofluorobenzene	88	70-130							

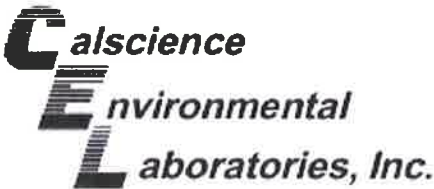
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-30-RW1-3	12-02-1303-3-E	02/17/12 11:30	Aqueous	GC 21	02/23/12	02/24/12 03:17	120223B01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	750	2.5	5		Ethylbenzene	20	2.5	5	
Toluene	7.4	2.5	5		Xylenes (total)	41	5.0	5	
Surrogates:	REC (%)	Control Limits	Qual						
1,4-Bromofluorobenzene	88	70-130							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-667-1,385	N/A	Aqueous	GC 21	02/23/12	02/23/12 16:06	120223B01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1	U	Ethylbenzene	ND	0.50	1	U
Toluene	ND	0.50	1	U	Xylenes (total)	ND	1.0	1	U
Surrogates:	REC (%)	Control Limits	Qual						
1,4-Bromofluorobenzene	93	70-130							

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



Analytical Report



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

Date Received: 02/22/12
Work Order No: 12-02-1303
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 70234 / 022476

Page 1 of 2

Table with 9 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: W-30-RW1-1, 12-02-1303-1-A, 02/16/12 18:00, Aqueous, GC/MS BB, 02/29/12, 03/01/12 04:55, 120229L01

Table with 10 columns: Parameter, Result, RL, DF, Qual, Parameter, Result, RL, DF, Qual. Lists various chemical parameters and their results for sample W-30-RW1-1.

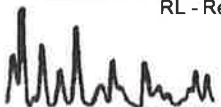
Table with 9 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: W-30-RW1-2, 12-02-1303-2-A, 02/17/12 06:00, Aqueous, GC/MS BB, 02/29/12, 03/01/12 05:24, 120229L01

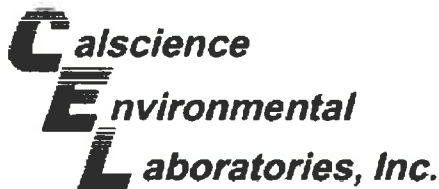
Table with 10 columns: Parameter, Result, RL, DF, Qual, Parameter, Result, RL, DF, Qual. Lists various chemical parameters and their results for sample W-30-RW1-2.

Table with 9 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: W-30-RW1-3, 12-02-1303-3-B, 02/17/12 11:30, Aqueous, GC/MS BB, 03/01/12, 03/01/12 17:41, 120301L01

Table with 10 columns: Parameter, Result, RL, DF, Qual, Parameter, Result, RL, DF, Qual. Lists various chemical parameters and their results for sample W-30-RW1-3.

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





Analytical Report



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

Date Received: 02/22/12
Work Order No: 12-02-1303
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 70234 / 022476

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	099-12-884-803	N/A	Aqueous	GC/MS BB	02/29/12	02/29/12 22:34	120229L01

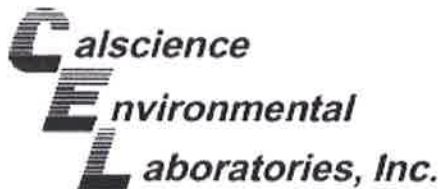
Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	U	Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	U
Tert-Butyl Alcohol (TBA)	ND	5.0	1	U	1,2-Dibromoethane	ND	0.50	1	U
Diisopropyl Ether (DIPE)	ND	0.50	1	U	1,2-Dichloroethane	ND	0.50	1	U
Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	U					
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>	
1,4-Bromofluorobenzene	100	68-120			Dibromofluoromethane	99	80-127		
1,2-Dichloroethane-d4	96	80-128			Toluene-d8	98	80-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-884-805	N/A	Aqueous	GC/MS BB	03/01/12	03/01/12 14:16	120301L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	U	Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	U
Tert-Butyl Alcohol (TBA)	ND	5.0	1	U	1,2-Dibromoethane	ND	0.50	1	U
Diisopropyl Ether (DIPE)	ND	0.50	1	U	1,2-Dichloroethane	ND	0.50	1	U
Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	U					
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>	
1,4-Bromofluorobenzene	98	68-120			Dibromofluoromethane	97	80-127		
1,2-Dichloroethane-d4	92	80-128			Toluene-d8	95	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

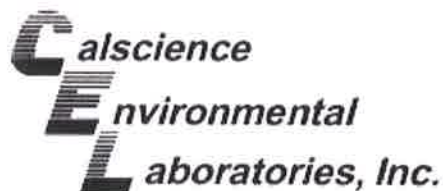
Date Received: 02/22/12
Work Order No: 12-02-1303
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project ExxonMobil 70234 / 022476

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
W-30-RW1-1	Aqueous	GC 11	02/23/12	02/23/12	120223S01

<u>Parameter</u>	<u>SPIKE ADDED</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
TPH as Gasoline	2000	100	91	68-122	3	0-18	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - Spike/Spike Duplicate



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

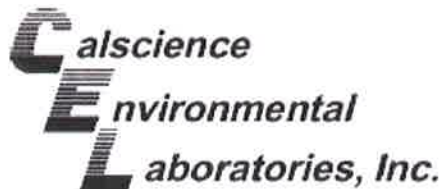
Date Received: 02/22/12
Work Order No: 12-02-1303
Preparation: EPA 5030C
Method: EPA 8021B

Project ExxonMobil 70234 / 022476

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-02-1348-1	Aqueous	GC 21	02/23/12	02/23/12	120223S01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	100.0	103	96	57-129	7	0-23	
Toluene	100.0	98	97	50-134	1	0-26	
Ethylbenzene	100.0	98	98	58-130	0	0-26	
Xylenes (total)	300.0	98	98	58-130	1	0-28	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - Spike/Spike Duplicate



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

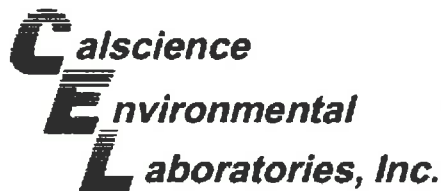
Date Received: 02/22/12
Work Order No: 12-02-1303
Preparation: EPA 5030C
Method: EPA 8260B

Project ExxonMobil 70234 / 022476

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-02-1472-2	Aqueous	GC/MS BB	02/29/12	03/01/12	120229S01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	10.00	99	100	76-124	1	0-20	
Toluene	10.00	98	97	80-120	0	0-20	
Ethylbenzene	10.00	102	104	78-126	2	0-20	
Methyl-t-Butyl Ether (MTBE)	10.00	93	97	67-121	4	0-49	
Tert-Butyl Alcohol (TBA)	50.00	185	116	36-162	45	0-30	HX,BA
Diisopropyl Ether (DIPE)	10.00	94	97	60-138	3	0-45	
Ethyl-t-Butyl Ether (ETBE)	10.00	92	95	69-123	2	0-30	
Tert-Amyl-Methyl Ether (TAME)	10.00	94	95	65-120	1	0-20	
Ethanol	100.0	103	109	30-180	6	0-72	
1,2-Dibromoethane	10.00	101	106	80-120	4	0-20	
1,2-Dichloroethane	10.00	100	102	80-120	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - Spike/Spike Duplicate



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

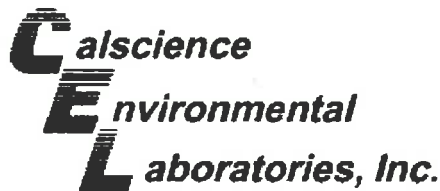
Date Received: 02/22/12
Work Order No: 12-02-1303
Preparation: EPA 5030C
Method: EPA 8260B

Project ExxonMobil 70234 / 022476

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-02-1535-1	Aqueous	GC/MS BB	03/01/12	03/01/12	120301S01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	10.00	97	98	76-124	1	0-20	
Toluene	10.00	94	95	80-120	1	0-20	
Ethylbenzene	10.00	101	102	78-126	1	0-20	
Methyl-t-Butyl Ether (MTBE)	10.00	87	86	67-121	2	0-49	
Tert-Butyl Alcohol (TBA)	50.00	100	130	36-162	26	0-30	
Diisopropyl Ether (DIPE)	10.00	86	86	60-138	0	0-45	
Ethyl-t-Butyl Ether (ETBE)	10.00	86	85	69-123	2	0-30	
Tert-Amyl-Methyl Ether (TAME)	10.00	91	89	65-120	2	0-20	
Ethanol	100.0	105	108	30-180	3	0-72	
1,2-Dibromoethane	10.00	96	97	80-120	0	0-20	
1,2-Dichloroethane	10.00	96	95	80-120	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate



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

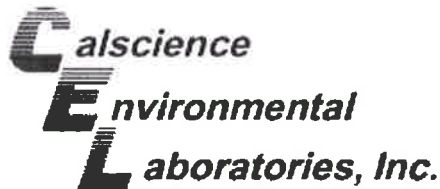
Date Received: N/A
Work Order No: 12-02-1303
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project: ExxonMobil 70234 / 022476

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-436-7,167	Aqueous	GC 11	02/23/12	02/23/12	120223B01

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	2000	94	94	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: 12-02-1303
Preparation: EPA 5030C
Method: EPA 8021B

Project: ExxonMobil 70234 / 022476

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-667-1,385	Aqueous	GC 21	02/23/12	02/23/12	120223B01

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	100.0	103	103	70-118	0	0-9	
Toluene	100.0	97	97	66-114	1	0-9	
Ethylbenzene	100.0	98	98	72-114	0	0-9	
Xylenes (total)	300.0	98	98	74-116	0	0-9	

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: 12-02-1303
 Preparation: EPA 5030C
 Method: EPA 8260B

Project: ExxonMobil 70234 / 022476

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-884-803	Aqueous	GC/MS BB	02/29/12	02/29/12	120229L01			
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	10.00	101	102	80-120	73-127	1	0-20	
Toluene	10.00	100	101	80-120	73-127	1	0-20	
Ethylbenzene	10.00	104	104	80-120	73-127	1	0-20	
Methyl-t-Butyl Ether (MTBE)	10.00	96	98	69-123	60-132	3	0-20	
Tert-Butyl Alcohol (TBA)	50.00	101	100	63-123	53-133	2	0-20	
Diisopropyl Ether (DIPE)	10.00	99	99	59-137	46-150	0	0-37	
Ethyl-t-Butyl Ether (ETBE)	10.00	98	99	69-123	60-132	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	10.00	98	100	70-120	62-128	2	0-20	
Ethanol	100.0	114	106	28-160	6-182	8	0-57	
1,2-Dibromoethane	10.00	102	104	79-121	72-128	1	0-20	
1,2-Dichloroethane	10.00	99	103	80-120	73-127	4	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

Quality Control - LCS/LCS Duplicate



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

Date Received: N/A
 Work Order No: 12-02-1303
 Preparation: EPA 5030C
 Method: EPA 8260B

Project: ExxonMobil 70234 / 022476

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-884-805	Aqueous	GC/MS BB	03/01/12	03/01/12	120301L01			
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	10.00	99	98	80-120	73-127	2	0-20	
Toluene	10.00	97	95	80-120	73-127	2	0-20	
Ethylbenzene	10.00	103	100	80-120	73-127	3	0-20	
Methyl-t-Butyl Ether (MTBE)	10.00	87	88	69-123	60-132	1	0-20	
Tert-Butyl Alcohol (TBA)	50.00	97	91	63-123	53-133	6	0-20	
Diisopropyl Ether (DIPE)	10.00	87	87	59-137	46-150	1	0-37	
Ethyl-t-Butyl Ether (ETBE)	10.00	86	87	69-123	60-132	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	10.00	89	91	70-120	62-128	2	0-20	
Ethanol	100.0	110	102	28-160	6-182	8	0-57	
1,2-Dibromoethane	10.00	98	96	79-121	72-128	2	0-20	
1,2-Dichloroethane	10.00	96	95	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

Work Order Number: 12-02-1303

<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



Sandy Tat

From: Jake Prowse [jake.prowse@cardno.com]
Sent: Thursday, February 23, 2012 10:43 AM
To: Sandy Tat
Subject: RE: ExxonMobil 70234 / 022476 (12-02-1303)
Attachments: 70234_20120223134714.pdf

Here you go

Jake Prowse

Staff Geologist | QM Supervisor
Cardno ERI
601 North McDowell Blvd., Petaluma, CA 94954
Phone: 707 766 2000 **Direct:** 707 766 2000 **Fax:** 707 789 0414

From: Sandy Tat [mailto:stat@calscience.com]
Sent: Thursday, February 23, 2012 10:39 AM
To: Jake Prowse; Judy Hutton
Subject: ExxonMobil 70234 / 022476 (12-02-1303)
Importance: High

Hi Jake / Judy,

Please cross out sample (W-RW1-4) from this COC, because sample was not received. 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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AIR SOIL WATER MARINE CHEMISTRY

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Ship To: SAMPLE RECEIVING CEL 7440 LINCOLN WAY GARDEN GROVE, CA 92841		ORC GARDEN GROVE	
COD: \$0.00		D92841A  98788725	
Reference: CARDNO ERI		Print Date : 02/21/12 13:08 PM	
Delivery Instructions:		Package 3 of 3	
Signature Type: SIGNATURE REQUIRED			

Print All

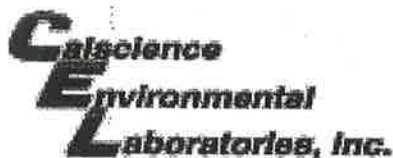
LABEL INSTRUCTIONS:

- 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 #: 12-02-1303

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Cardno ERI

DATE: 02/22/12

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

Temperature -3.4 °C - 0.3°C (CF) = 3.1 °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 type="checkbox"/>	<input checked="" 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 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: [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 zanna: ZnAc₂+NaOH f: Filtered Scanned by: [Signature]

APPENDIX D

WASTE DOCUMENTATION

NON-HAZARDOUS Waste Hauler Document Daily Field Ticket No. 72399 80781

GENERATOR

Name: Esperan 70231
 EPA # _____
 Address: 493 25th Ave
Costa Mesa

DESIGNATED TSD FACILITY

Name: Orbit
 EPA # _____
 Address: 1105 Avenida P
Pasadena

ALTERNATE TDS FACILITY

Name: _____
 EPA # _____
 Address: _____

Order Placed: _____ Order Date: _____

WASTE - DRILLING MUD - GASWELL WATER - OTHER Drill Water
 Weight/Volume 1200 Units Gal Container: - Dump Truck Tank Truck

This material is nonhazardous because:
 1) it is a drilling mud containing only the additives listed by the Department in its exemption letter and contains no significant concentrations of toxic materials from natural sources, or
 2) is a sulfur-dioxide scrubber solution from a sodium hydroxide or sodium carbonate oil field boiler scrubber system, and possesses no characteristics that would require its handling as a hazardous waste.

 SIGNATURE OF AUTHORIZED AGENT DATE

TRANSPORTER

Warren E. Gomes Exc., Inc.
 P. O. Box 369
 Rio Vista, CA 94571
 (707) 374-2881
 EPA # CAD076557370

Job No. Cardam - ERI Pick-Up Date 2-17-12
 Unit No. 29 _____
 SIGNATURE OF BUYER

TSD FACILITY

Name INSTRAT INC QTY Measured 1200 GALLONS
 EPA # _____ - BBL - TONS - OTHER

 SIGNATURE OF AUTHORIZED AGENT DATE 2-17-12

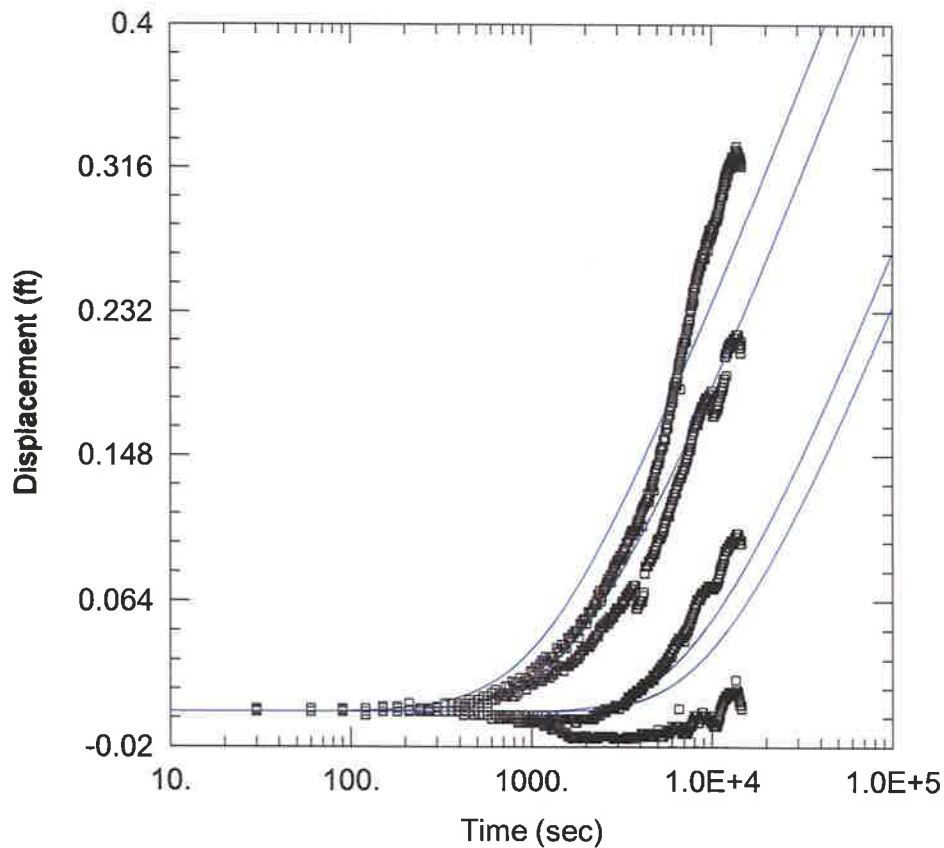
Method of Disposal:

- Injection Well
 - Landfill
 - Land Treatment
 - Surface Impoundment
 - Other GAC

TSD TO GENERATOR

APPENDIX E

Aqtesolv™ OUTPUT FILES



PUMP TEST

Data Set: L:\...\2476 CR2 Neuman.aqt
 Date: 03/09/12 Time: 07:25:28

PROJECT INFORMATION

Company: Cardno ERI
 Client: Exxon Mobil
 Project: 022476
 Location: 70234
 Test Well: RW1
 Test Date: February 2012

SOLUTION

Aquifer Model: Unconfined
 Solution Method: Neuman
 T = 0.2833 cm²/sec
 S = 0.001001
 Sy = 0.001859
 Kz/Kr = 2.723

AQUIFER DATA

Saturated Thickness: 16. ft

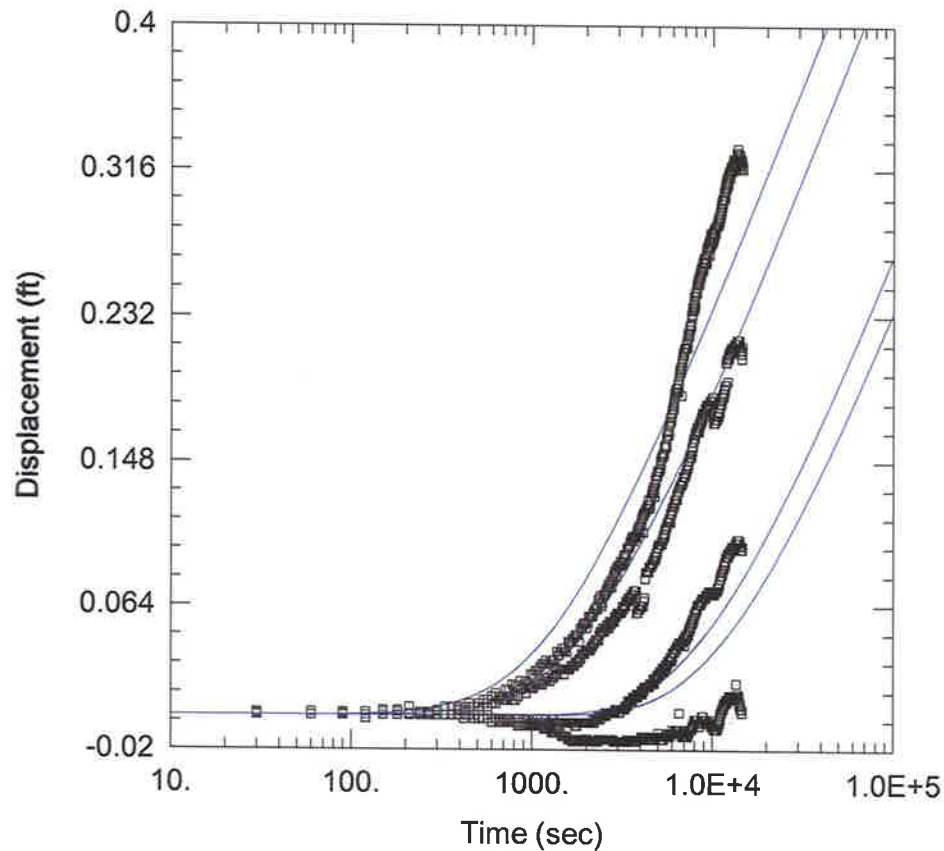
WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW1	36	51

Observation Wells

Well Name	X (ft)	Y (ft)
□ <u>MW5</u>	54	54
□ <u>MW6</u>	13	49
□ <u>MW4</u>	56	106
□ <u>MW9</u>	86	44



PUMP TEST

Data Set: L:\...\2476 CR2 Neuman.aqt
 Date: 03/09/12 Time: 07:25:53

PROJECT INFORMATION

Company: Cardno ERI
 Client: Exxon Mobil
 Project: 022476
 Location: 70234
 Test Well: RW1
 Test Date: February 2012

SOLUTION

Aquifer Model: Unconfined
 Solution Method: Neuman
 T = 197.1 gal/day/ft
 S = 0.001001
 Sy = 0.001859
 Kz/Kr = 2.723

AQUIFER DATA

Saturated Thickness: 16. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW1	36	51

Observation Wells

Well Name	X (ft)	Y (ft)
□ MW5	54	54
□ MW6	13	49
□ MW4	56	106
□ MW9	86	44