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**Jennifer C. Sedlachek**  
Project Manager

**RECEIVED**

**8:02 am, Apr 24, 2012**

Alameda County  
Environmental Health

**ExxonMobil**

April 19, 2012

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

**RE: Former Exxon RAS #70104/1725 Park Street, Alameda, California.**

Dear Ms. Jakub:

Attached for your review and comment is a copy of the letter report entitled *Site Assessment Report and Evaluation of Low Threat Closure*, dated April 19, 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 *Site Assessment Report and Evaluation of Low Threat Closure*, dated April 19, 2012

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

w/o attachment  
Ms. Paula Sime, Cardno ERI



Shaping the Future

April 19, 2012  
Cardno ERI 2506C.R20

Cardno ERI  
License A/C10-611383

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**SUBJECT Site Assessment Report and Evaluation of Low Threat Closure**  
Former Exxon Service Station 70104  
1725 Park Street, Alameda, California

Ms. Sedlachek:

At the request of ExxonMobil Environmental Services (EMES), on behalf of Exxon Mobil Corporation, Cardno ERI drilled on-site and off-site borings to delineate the extent of dissolved-phase petroleum hydrocarbons downgradient of groundwater monitoring well MW1 and extraction wells EW1 and EW2, as requested by the Alameda County Health Care Services (ACEH) in a letter dated September 11, 2008 (Appendix A) and to evaluate current conditions on site. In the *Work Plan for the Installation of Two Off-site Groundwater Monitoring Wells* (Work Plan), dated November 10, 2008 (ERI, 2008), Environmental Resolutions, Inc. (ERI), originally proposed the installation of two off-site groundwater monitoring wells east and southeast of the site; however, ERI was not successful in negotiating access with the City of Alameda (the City) for an encroachment permit to install permanent wells. In the *Addendum and Confirmation Soil Boring Work Plan* (Addendum), dated January 27, 2011 (Cardno ERI, 2011), Cardno ERI proposed the advancement of two off-site soil borings for the collection of grab groundwater samples to delineate the extent of dissolved-phase petroleum hydrocarbons downgradient of the subject site and on-site confirmation borings to evaluate current site conditions. Cardno ERI performed the field work in accordance with the Addendum, which was approved by the ACEH in a letter dated December 11, 2011 (Appendix A). This report was originally due on March 20, 2012, but the permitting process to work in the City right-of-way took longer than expected. In electronic correspondence, dated March 12, 2012, the ACEH granted an extension to April 20, 2012 for submittal of this report (Appendix A).

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## **SITE DESCRIPTION**

Former Exxon Service Station 70104 is located at 1725 Park Street, on the northwestern corner of the intersection of Eagle Avenue and Park Street, in Oakland, California (Plate 1). The surrounding areas consist of residential and commercial properties (Plate 2).

The site is currently an active Valero-branded service station. There is an active Shell-branded service station located at 1701 Park Street (upgradient of the site), as well as a former Chevron service station downgradient of the site. Coordinated groundwater monitoring events are conducted with the Shell-branded service station as requested by the ACEH.

## **GEOLOGY AND HYDROGEOLOGY**

The site is located along the eastern margin of the San Francisco Bay within the East Bay Plain area of Alameda County (Hickenbottom & Muir, 1988). The surficial deposits in the site vicinity are mapped as dune sand consisting of fine-grained, very well sorted, and well drained eolian deposits of Holocene and Pleistocene age (Graymer, 2000).

The East Bay Plain is a subbasin of the Santa Clara Valley Groundwater Basin (CADWR, 2003). The East Bay Plain is regionally divided into major groundwater basins: the San Pablo and the San Francisco Basin. 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 with no well-defined aquitards (CRWQCB, 1999). The site is located on Alameda Island with shallow groundwater and potential for saltwater intrusion; therefore, the groundwater does not have current or potential uses. Groundwater production wells were not identified within 1 mile of the site.

The site lies at an elevation of 16 feet above msl, on the eastern side of Alameda Island, approximately 1,400 feet west of the tidal canal and approximately 1 mile north and east of the San Francisco Bay (Plate 1). Surface waters in the site vicinity drain into San Francisco Bay.

Based on the results of previous investigation, there appears to be one upper water-bearing zone at the site. There is a sandy unit underlying the site that extends from the ground surface to approximately 40 feet bgs (the maximum depth explored). This sand unit contains sand, silty sand, and clayey sand (ERI, 2002).

During the fourth quarter 2011 groundwater monitoring event performed on October 10, 2011, the DTW in the monitoring wells ranged from 5.23 to 6.31 with the groundwater flow direction to the east. During the monitoring

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program, the DTW has fluctuated from approximately 2 to 32 feet bgs and was influenced by remedial groundwater extraction. A groundwater elevation map for the fourth quarter 2011 event is included as Plate 3.

## **PREVIOUS WORK**

Cumulative groundwater analytical results are included in Tables 1A and 1B. Well construction details are included in Table 2. Soil sample analytical results are presented in Table 3.

### **Fueling System Activities**

The site currently dispenses diesel and regular, plus, and premium unleaded gasoline. The locations of the USTs, dispenser islands, and other select site features are shown on the Generalized Site Plan (Plate 2).

Three gasoline USTs were removed and replaced with three double-walled fiberglass tanks in 1988 (ERI, 2002).

### **Site Assessment Activities**

Multiple phases of assessment were conducted from 1988 to 2002, including dispenser and product line soil sampling; the advancement of seven soil borings; the installation of 12 groundwater monitoring wells, five groundwater extraction wells, two vapor extraction wells, and one AS well; and the destruction of well MW10 (ERI, 2002). Locations of borings and wells are presented on Plate 2.

### **Remediation Activities**

A GWPTS operated at the site from October 1994 to March 2000. The system was retrofitted and again operated from June 2002 to February 2004.

An SVE system began operation in February 1998 and operated until March 2000 when it was shut down for evaluation. The SVE system was retrofitted to include an AS system, incorporating wells AS1 MW7, MW6, EW5, and SW1 and was restarted in June 2000. The AS/SVE system operated from June 2000 to February 2004.

ERI retrofitted the GWPTS and AS/SVE systems again in 2005. The retrofitted systems operated from June 2005 until December 2010. Influent concentrations of dissolved-phase hydrocarbons showed decreasing trends and the hydrocarbon mass recovery rate no longer justified operation of the GWPTS. Mass removal for the AS/SVE system had been asymptotic since 2007, and was no longer recovering fuel hydrocarbons

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effectively. Based on this evaluation of the site data, Cardno ERI shut down the GWPTS and the AS/SVE system in December 2010.

As of December 28, 2010, approximately 72.5 pounds of TPHg, 5.23 pounds of benzene, and 51.71 pounds of MTBE were removed by the GWPTS system. Approximately 1,746.96 pounds of TPHg, 27.72 pounds of benzene, and 14.76 pounds of MTBE were removed by the AS/SVE system during its periods of operation (Cardno ERI, 2011).

### **Groundwater Monitoring Activities**

Groundwater monitoring was implemented at the site in 1988. NAPL was observed in groundwater monitoring wells MW2 and MW5 in 1993, but has not been observed since that time. Sheen has been observed in wells MW1, MW2, MW4, MW5, MW6, EW2, and EW4. Sheen was last observed in well MW5 on October 1, 1994. Dissolved-phase TPHd, TPHg, BTEX, MTBE, and TBA are present beneath the site.

### **SOIL AND GRAB GROUNDWATER SAMPLING**

Cardno ERI performed the field work in accordance with the Addendum, Cardno ERI's standard field protocols (Appendix B), and a site-specific health and safety plan. A soil boring permit was obtained from Alameda County Public Works Agency (the County) and a right-of-way permit from the City. Copies of the permits are included as Appendix C.

### **On-Site Confirmation Soil Borings**

On February 28, 2012, Cardno ERI observed Cascade Drilling L.P, (Cascade), of Rancho Cordova, California drill soil borings SB16 through SB21 using a 3.25-inch diameter hand auger to 5.5 feet bgs.

Cardno ERI screened soil samples from each boring with a PID, identified the samples using visual and manual methods, classified the samples according to the ASTM D2488 Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), and constructed boring logs for each boring (Appendix D). Soil samples were collected at 5 feet bgs and preserved for laboratory analysis.

### **Off-Site Soil Borings and Grab Groundwater Sampling**

On March 8, 2012, Cardno ERI observed Cascade advance soil borings SB14 and SB15 using a 3.25-inch diameter hand auger to collect a sample of first-encountered groundwater. The borings were advanced to approximately 8 feet bgs.

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Cardno ERI screened soil samples from each boring with a PID, identified the samples using visual and manual methods, classified the samples according to the Visual-Manual Procedure, and constructed boring logs for each boring (Appendix D). Select soil samples were preserved for laboratory analysis.

Once groundwater entered the borehole, a PVC slotted-screen was inserted. Grab groundwater samples were collected using a disposable bailer and preserved for laboratory analysis.

### **Laboratory Analytical Methods**

Cardno ERI submitted the soil and grab groundwater samples for analysis to Calscience Environmental Laboratories, Inc., of Garden Grove, California, a California state-certified laboratory, under COC protocol. The samples were analyzed for:

- TPHg and TPHd using EPA Method 8015B.
- BTEX, fuel oxygenates (MTBE, ETBE, TAME, TBA, and DIPE), and lead scavengers (EDB and 1,2-DCA) using EPA Method 8260B.

Laboratory analytical reports are provided in Appendix E.

### **Waste Containment and Disposal**

Soil generated during assessment activities was stored in two 55-gallon metal drums on site pending characterization and disposal.

On April 3, 2012, Cardno ERI observed Belshire Environmental Services, Inc., remove the drums from the site for transportation to approved EMES landfills. Waste documentation will be submitted under separate cover. Laboratory results of waste characterization samples are included in Appendix E.

### **Site Survey**

On March 8, 2012, Cardno ERI observed Cardno WRG survey the soil boring locations and elevations. The survey report is included in Appendix F.

## **RESULTS OF INVESTIGATION**

Sediments observed during the advancement of borings SB14 through SB21 were consistent with observations made during previous investigations at the site. Native sediments beneath the site consist primarily of a sand

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unit that contains sand, silty sand, and clayey sand. Groundwater was encountered at approximately 7 feet bgs and rose to between 4.5 and 5 feet bgs after completion. Boring logs are included in Appendix D.

The Work Plan proposed advancing the off-site soil borings B14 and B15 to first-encountered groundwater using a direct-push drill rig; however, while performing borehole clearance in accordance with EMES subsurface protocols groundwater was encountered. Groundwater samples were collected from the hand-augered borings using a disposable bailer and temporary casing.

### **Petroleum Hydrocarbons - Groundwater**

Concentrations of dissolve-phased petroleum hydrocarbons were detected in the grab groundwater samples collected during this investigation. TPHd and TPHg were detected in boring SB14 at 510 µg/L and 1,500 µg/L, respectively. MTBE was detected in boring SB15 at 3.4 µg/L. TBA was detected in borings SB14 and SB15 at concentrations of 5.8 µg/L and 6.8 µg/L, respectively. Benzene was below laboratory reporting limits in both grab groundwater samples. Cumulative analytical results for petroleum hydrocarbons in groundwater are summarized on Tables 1A and 1B. Select groundwater analytical results are shown on Plate 4.

### **Petroleum Hydrocarbons - Soil**

Soil samples were collected from off-site borings SB14 and SB15 at 5 feet bgs and 7.5 feet bgs and from on-site borings SB16 through SB21 at 5 feet bgs. Concentrations of residual hydrocarbons were reported in soil in borings SB17, SB19, and SB20. Maximum concentrations of TPHd, TPHg, and benzene were reported in the sample collected from boring SB20 at concentrations of 880 mg/kg, 4,100 mg/kg, and 2.7 mg/kg, respectively. Concentrations of residual hydrocarbons were below laboratory reporting limits in the samples collected from borings SB14 through SB16, SB18, and SB21. Cumulative analytical results for petroleum hydrocarbons in soil are summarized on Table 3. Select soil sample analytical results are shown on Plate 5.

## **ASSESSMENT OF HISTORICAL AND CURRENT SITE CONDITIONS**

### **Dissolved Constituent Distribution in Groundwater**

Groundwater elevations in the monitoring wells have fluctuated between approximately 2 and 32 feet bgs during quarterly monitoring events. The groundwater elevation map for the October 2011 monitoring and sampling event is shown on Plate 3. The predominant historical groundwater flow direction is to the east and east-northeast, toward off-site soil borings SB14 and SB15.

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TPHg, benzene, and MTBE have been detected at maximum concentrations of 280,000 µg/L (MW2, 04/30/93), 12,000 µg/L (MW6, 03/13/90), and 360,000 µg/L (MW7, 04/24/96), respectively. Current (fourth quarter 2011) maximum dissolved-phase petroleum hydrocarbon concentrations for TPHg, benzene, and MTBE are 2,200 µg/L (MW5), 120 µg/L (MW5), and 200 µg/L (MW1), respectively. Maximum dissolved-phase petroleum hydrocarbon concentrations in grab groundwater samples collected during this investigation for TPHg and MTBE are 1,500 µg/L (SB14) and 3.4 µg/L (SB15), respectively. Cumulative groundwater monitoring and sampling data are presented in Tables 1A and 1B. The most recent select groundwater analytical results are illustrated on Plate 4. The concentrations reported in the groundwater samples collected from borings SB14 and SB15 adequately delineate dissolved-phase concentrations downgradient of the site.

### **Petroleum Hydrocarbon Concentrations in Soil**

Soil data indicates that residual hydrocarbons are adequately delineated to the north by borings MW1 and MW12; to the east and east-northeast by borings MW9, MW10, SB14, and SB15; to the southeast by boring MW8; and to the south by borings SB4 and MW11. The active Shell service station at 1701 Park Street has an active environmental investigation and precludes delineation to the southwest.

Eight soil borings (SB14 through SB21) were installed at the site in February and March 2012. The samples collected from borings SB14, SB15, SB16, SB18, and SB21 did not have reportable concentrations of TPHg, TPHd, MTBE, or BTEX. Borings SB17, SB19, and SB20 had reportable concentrations of TPHg and TPHd ranging from 83 mg/kg (TPHd, SB19) to 4,100 mg/kg (TPHg, SB20). Benzene was only reported in the soil sample collected from boring SB20 (2.7 mg/kg).

Cumulative analytical results of soil samples are presented in Tables 3A and 3B and illustrated on Plate 5. Residual concentrations are adequately delineated and limited to the site, which continues to operate as a service station.

### **DISCUSSION**

On November 29, 2011, the UST Cleanup Fund (Fund) issued a Second 5-Year Review Summary for the site (Appendix A). After reviewing the available case files and GeoTracker® database submissions, the Fund noted that the remaining mass of residual and dissolved-phase hydrocarbons are biodegrading and decreasing. With groundwater not currently used as a source with beneficial uses, the Fund recommended the ACEH consider the site for closure.

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Based on the cumulative site data, Cardno ERI believes the site should be considered a low threat closure based on the following points:

- The site is located within an area of public water service and groundwater production wells have not been located within 1 mile of the site.
- Analytical data from the site indicates that the release consists only of petroleum hydrocarbons.
- Groundwater monitoring data collected for over 20 years of monitoring and sampling demonstrate that the release has been stopped. The data indicate a stable or declining trend and do not suggest an active release.
- NAPL was detected in groundwater monitoring wells MW2 and MW5 in 1993 and sheen was recorded in wells MW1, MW2, and MW4 through MW6 between 1989 and 1995. NAPL has not been observed at the site in over 15 years.
- ERI submitted a *Site Conceptual Model* (ERI, 2002) that evaluates site conditions and receptors as well as a site-specific risk assessment. The data collected since the preparation of the *Site Conceptual Model* demonstrates the stability of the hydrocarbon concentrations and the lack of a threat to any identified receptors.
- Secondary sources have been addressed to the extent feasible given the current constraints. Residual concentrations remain beneath the site near the dispensers. Further remediation is not feasible given the constraints of an active service station with underground installations at the site. AS, SVE, and groundwater systems have operated at the site over a period of approximately 16 years. The systems operated until influent concentrations of dissolved-phase hydrocarbons showed decreasing trends and the hydrocarbon mass recovery rate no longer justified operation of the GWPTS. Mass removal for the AS/SVE system had been asymptotic since 2007, and was no longer recovering petroleum hydrocarbons effectively. Based on this evaluation of the site data, Cardno ERI shut down the GWPTS and the AS/SVE system on December 28, 2010. (Cardno ERI, 2011). Since the remediation systems have been shut down, concentrations have not rebounded in the monitoring wells at the site.
- Concentrations of petroleum hydrocarbons are adequately delineated and limited to the site, which continues to operate as a service station. The groundwater gradient is towards the east-northeast towards additional commercial properties. The nearest residential properties are located to the northwest of the site and are adequately delineated by existing data points.

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- The remaining soil concentrations are not contributing to dissolved-phase concentrations migrating off of the site to any identified receptors and the groundwater concentrations are stable or decreasing, indicating adequate degradation is occurring.
- A potential construction worker or utility worker performing subsurface work at the site could be exposed to the residual concentrations present beneath the site. The soil borings installed at the site in February 2012 (SB16 through SB21) were located in areas known to have the maximum soil concentrations at the site. The maximum benzene concentration reported from borings SB16 through SB21 was 2.7 mg/kg (SB20, 5 feet bgs). The results of soil borings SB16 through SB21 indicate that construction or utility workers could perform work at the site without significant risk of adversely affecting human health by using mitigation measures and/or engineering controls.

## **CONCLUSIONS**

Cardno ERI concludes that:

- Dissolved-phase petroleum hydrocarbons are adequately delineated in the downgradient direction by soil borings SB14 and SB15.
- Residual soil concentrations are adequately delineated and limited to the site.
- The remaining soil concentrations are not contributing to groundwater concentrations migrating off-site to any identified receptors.
- Future construction or utility workers at the site may need to use mitigation measures or engineering controls if performing subsurface work in select areas of the site.
- This site does not pose a significant risk to the environment or human health.

## **RECOMMENDATIONS**

Cardno ERI recommends this site be evaluated for closure and that monitoring and sampling be suspended during the closure evaluation.

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 Cardno ERI 2506C.R20 Former Exxon Service Station 70104, Alameda, California

## CONTACT INFORMATION

The responsible party contact is Ms. Jennifer C. Sedlachek, ExxonMobil Environmental Services, 4096 Piedmont Avenue #194, Oakland, California, 94611. The consultant contact is Ms. Rebekah A. Westrup, Cardno ERI, 601 North McDowell Boulevard, Petaluma, California, 94954. The agency contact is Ms. Barbara Jakub, P.G., Alameda County Health Care Services Agency, Department of Environmental Health, 1131 Harbor Bay Parkway, Room 250, Alameda, California, 94502-6577.

## LIMITATIONS

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

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

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

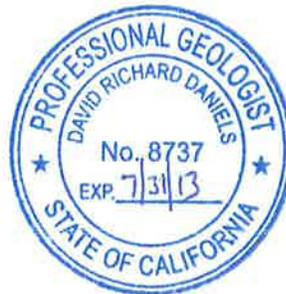
Sincerely,

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

Mr. Shay Wideman, The Valero Companies, Environmental Liability Management, P.O. Box 696000, San Antonio, Texas, 78269

Enclosures:

References

Acronym List

Plate 1	Site Vicinity Map
Plate 2	Generalized Site Plan
Plate 3	Groundwater Elevation Map
Plate 4	Select Groundwater Analytical Results
Plate 5	Select Soil Analytical Results
Table 1A	Cumulative Groundwater Monitoring and Sampling Data
Table 1B	Additional Cumulative Groundwater Monitoring and Sampling Data
Table 2	Well Construction Details
Table 3	Cumulative Soil Analytical Results
Appendix A	Correspondence
Appendix B	Field Protocols
Appendix C	Permit
Appendix D	Boring Logs
Appendix E	Laboratory Analytical Reports and Chain-of-Custody Records
Appendix F	Survey Report

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## REFERENCES

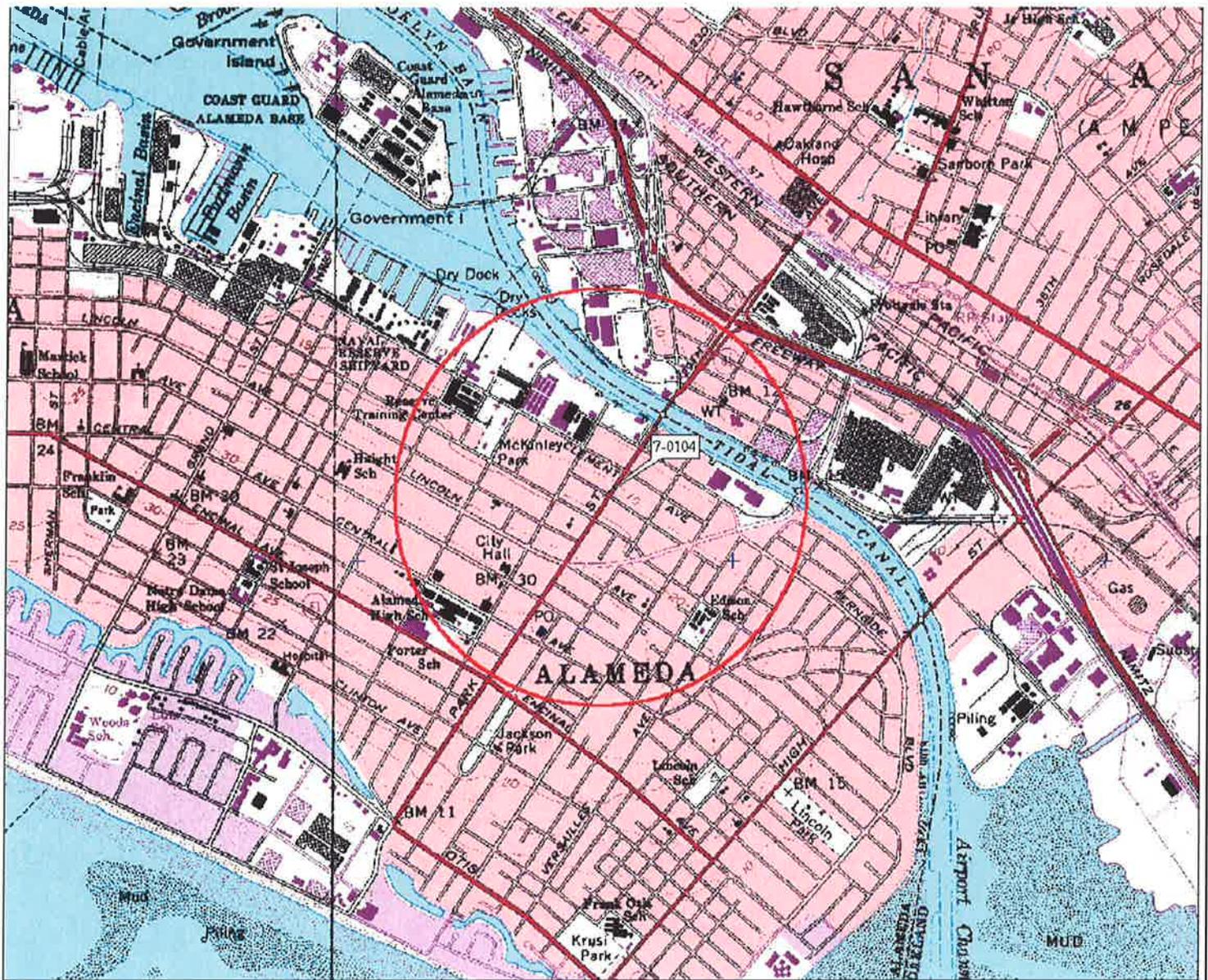
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**ACRONYM LIST**

$\mu\text{g/L}$	Micrograms per liter	NEPA	National Environmental Policy Act
$\mu\text{s}$	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 <sup>3</sup>	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		



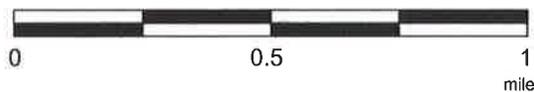
3-D TopoQuads Copyright © 1999 DeLorme Topographic, MA 04004 Source Data: USGS 500 ft Scale: 1 : 19,200 Detail: 13-0 Datum: WGS84

**EXPLANATION**



1/2-mile radius circle

**APPROXIMATE SCALE**

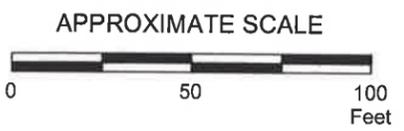


SOURCE:  
Modified from a map  
provided by  
DeLorme 3-D TopoQuads



**SITE VICINITY MAP**  
FORMER EXXON SERVICE STATION 70104  
1725 Park Street  
Alameda, California

**PROJECT NO.**  
2506  
**PLATE**  
1



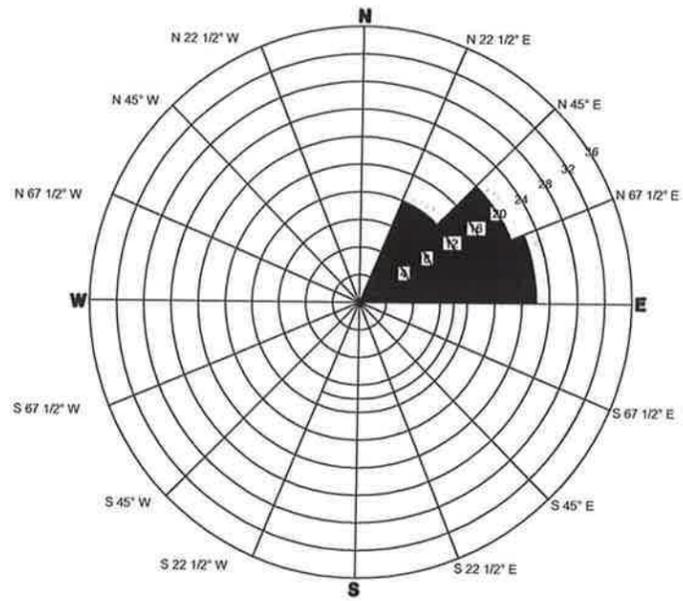
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**GENERALIZED SITE PLAN**  
 FORMER  
 EXXON SERVICE STATION 70104  
 1725 Park Street  
 Alameda, California

EXPLANATION	
MW11	Groundwater Monitoring Well
EW4	Recovery Well
MW10	Destroyed Groundwater Monitoring Well
MW4	Groundwater Monitoring Well By Others
VW2	Vapor Extraction Well
AS1	Air Sparge/Soil Vapor Well
EW5	Recovery Well By Others
OW2	Observation Well By Others
SB21	Soil Boring
PL3	Product Line Boring
DI4	Dispenser Island Boring

<b>PROJECT NO.</b>	2506
<b>PLATE</b>	2

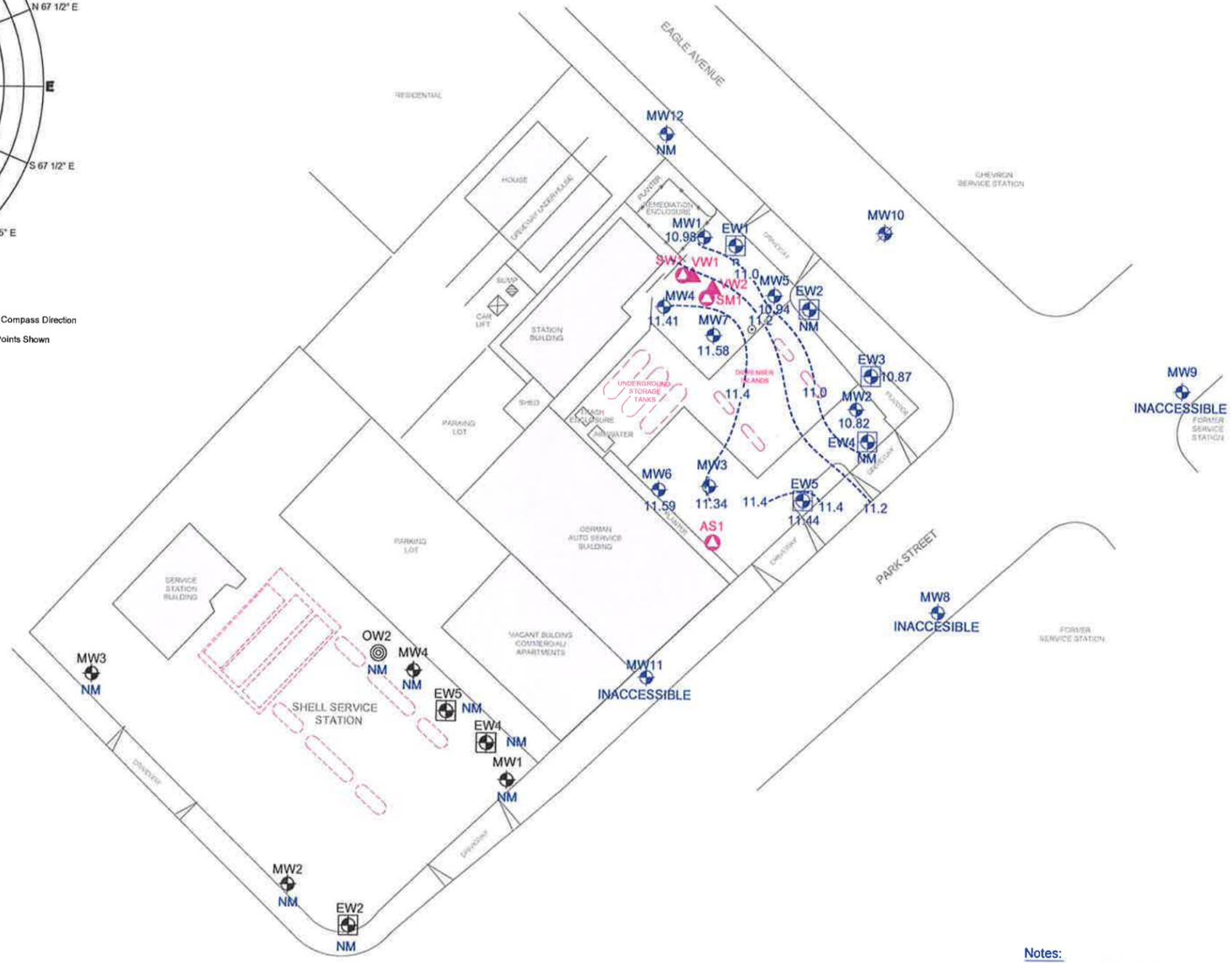


March 1, 2004, through October 10, 2011

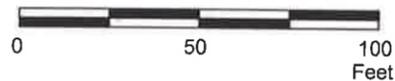
Compass Direction  
54 Data Points Shown

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 22.5 degree sector.

**GROUNDWATER FLOW DIRECTION ROSE DIAGRAM**



APPROXIMATE SCALE



- Notes:**
- Wells MW12, EW2, and EW4 not routinely monitored or sampled.
  - NM Not Measured
  - 11.4-----Line of Equal Groundwater Elevation; datum is mean sea level

FN 2506 12 R20 11 4QTR QM GW\_SP



**GROUNDWATER ELEVATION MAP**  
**October 10, 2011**

FORMER EXXON SERVICE STATION 70104  
1725 Park Street  
Alameda, California

**EXPLANATION**

- |  |  |                                   |
|--|--|-----------------------------------|
| MW7<br>Groundwater Monitoring Well<br>11.58 Groundwater elevation in feet; datum is mean sea level | MW4<br>Groundwater Monitoring Well By Others | OW2<br>Observation Well By Others |
| EW4<br>Recovery Well   | VW2<br>Vapor Extraction Well                 | AS1<br>Air Sparge/Soil Vapor Well |
| MW10<br>Destroyed Groundwater Monitoring Well  | EW5<br>Recovery Well By Others               |                                   |

**PROJECT NO.**  
2506

**PLATE**  
3

Analyte Concentrations in ug/L  
Sampled October 10, 2011 And March 8, 2012

Total Petroleum Hydrocarbons  
as gasoline  
Benzene  
Methyl Tertiary Butyl Ether 8260B  
Tertiary Butyl Alcohol

- < Less Than the Stated Laboratory Reporting Limit
- ug/L Micrograms per Liter
- NA Not analyzed
- NS Not sampled
- d Hydrocarbon pattern does not resemble the requested fuel.
- m Compound did not meet method-described based on additional GC/GS characteristics.

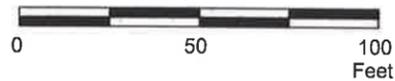
**NOTES:**

Wells MW12, EW2, and EW4 not routinely monitored or sampled.

Due to scheduling conflicts, concurrent sampling was not conducted during the fourth quarter.



APPROXIMATE SCALE



FN 2506 12 R20 11 4QTR QM\_SP



### SELECT GROUNDWATER ANALYTICAL RESULTS October 10, 2011 And March 8, 2012

FORMER EXXON SERVICE STATION 70104  
1725 Park Street  
Alameda, California

**EXPLANATION**

- MW12 Groundwater Monitoring Well
- EW4 Recovery Well
- MW10 Destroyed Groundwater Monitoring Well

- MW4 Groundwater Monitoring Well By Others
- VW2 Vapor Extraction Well
- AS1 Air Sparge/Soil Vapor Well
- EW5 Recovery Well By Others

- OW2 Observation Well By Others
- SB21 Soil Boring

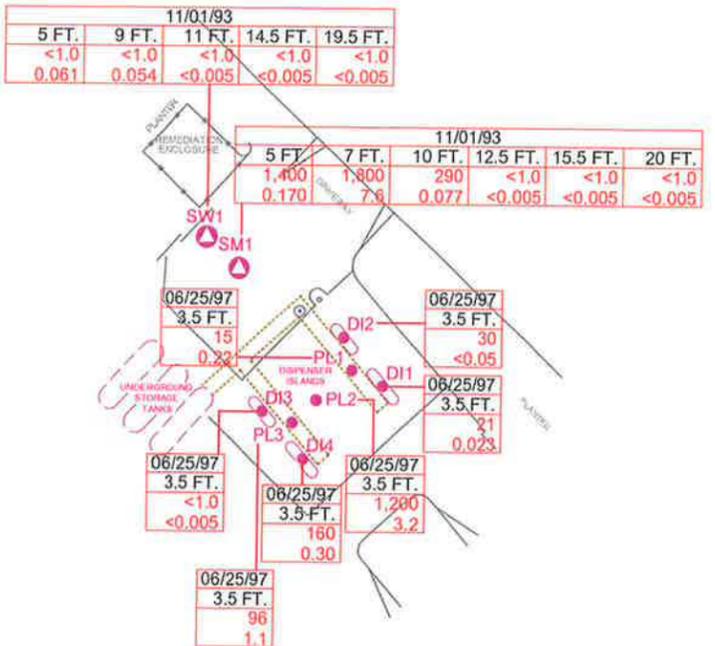
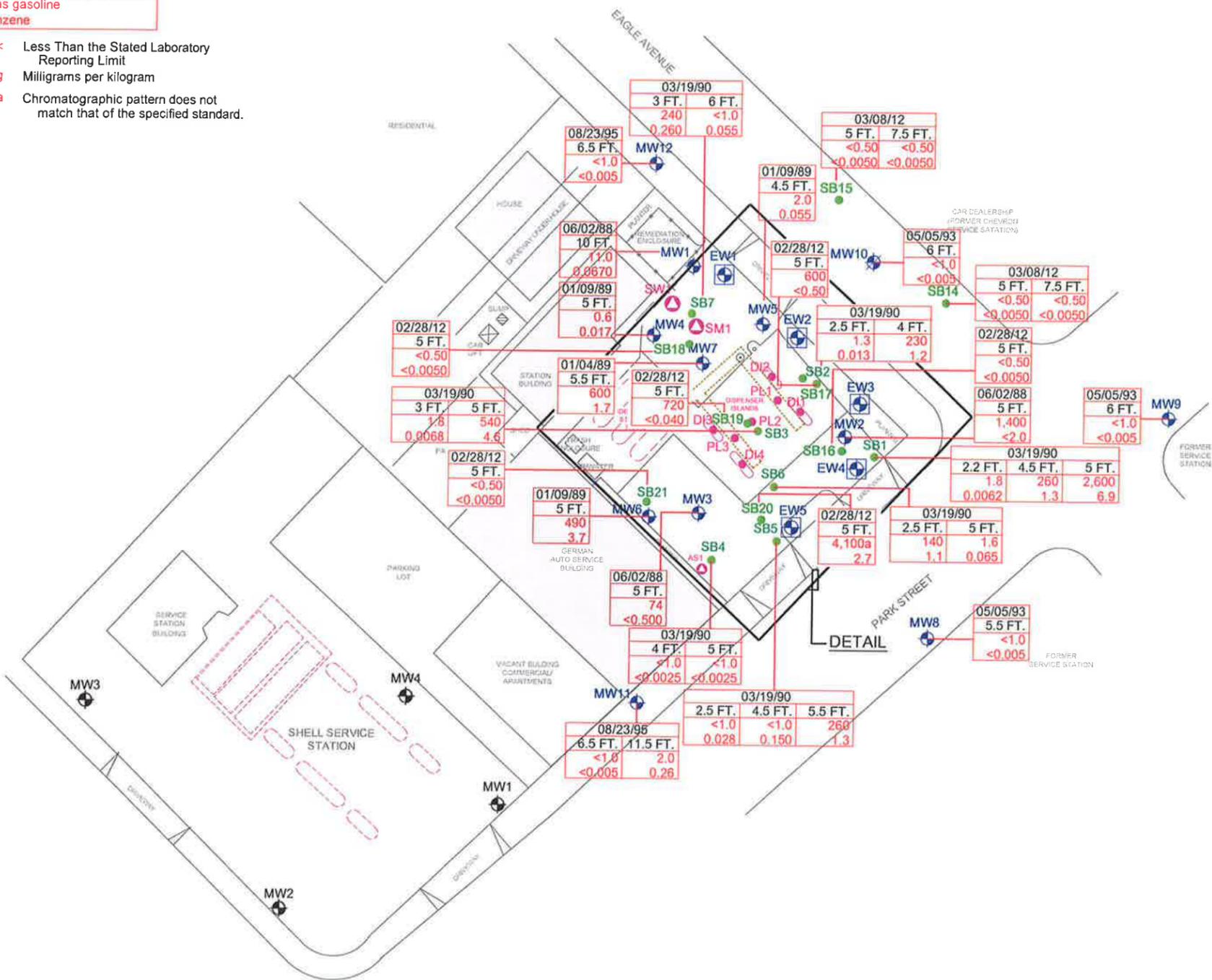
**PROJECT NO.**  
2506

**PLATE**  
4

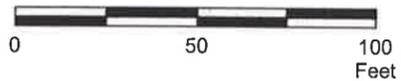
Analyte Concentrations in mg/kg

Sample Date
Sample Depth
Total Petroleum Hydrocarbons as gasoline
Benzene

- < Less Than the Stated Laboratory Reporting Limit
- mg/kg Milligrams per kilogram
- a Chromatographic pattern does not match that of the specified standard.



APPROXIMATE SCALE



FN 2506 12 R20 SOIL\_SP



**SELECT SOIL ANALYTICAL RESULTS**

FORMER  
 EXXON SERVICE STATION 70104  
 1725 Park Street  
 Alameda, California

**EXPLANATION**

- MW12 Groundwater Monitoring Well
- EW4 Recovery Well
- MW10 Destroyed Groundwater Monitoring Well
- MW4 Groundwater Monitoring Well By Others
- AS1 Air Sparge/Soil Vapor Well
- DI4 Dispenser Island Boring

- SB7 Soil Boring
- PL3 Product Line Boring

**PROJECT NO.**  
2506

**PLATE**  
5

**TABLE 1A**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
<b>Monitoring Well Samples</b>													
MW1	06/07/88	17.35	---	---	---	---	27,000	---	---	5,000	77	1,100	2,700
MW1	06/10/88	17.35	6.35	11.00	No	---	---	---	---	---	---	---	---
MW1	01/17/89	17.35	5.81	11.54	No	---	6,800	---	---	2,000	91	800	1,600
MW1	01/24/89	17.35	5.16	12.19	No	---	---	---	---	---	---	---	---
MW1	06/01/89	17.35	6.27	11.08	Sheen	---	1,700	---	---	170	6.9	13	230
MW1	09/18/89	17.35	7.11	10.24	No	---	2,100	---	---	9.0	53	18	130
MW1	10/20/89	17.35	7.28	10.07	No	---	---	---	---	---	---	---	---
MW1	11/22/89	17.35	7.03	10.15	No	---	---	---	---	---	---	---	---
MW1	12/11/89	17.35	6.60	10.75	No	---	5,800	---	---	200	42	290	330
MW1	02/13/90	17.35	6.02	11.33	No	---	---	---	---	---	---	---	---
MW1	03/07/90	17.35	---	---	---	---	---	---	---	---	---	---	---
MW1	03/13/90	17.35	5.91	11.44	No	---	2,300	---	---	430	14	16	220
MW1	04/18/90	17.35	6.18	11.17	No	---	---	---	---	---	---	---	---
MW1	05/23/90	17.35	6.29	11.06	No	---	---	---	---	---	---	---	---
MW1	06/14/90	17.35	6.19	11.16	No	---	32,000	---	---	1,400	19	<5	120
MW1	08/21/90	17.35	7.03	10.32	No	---	---	---	---	---	---	---	---
MW1	09/19/90	17.35	7.26	10.09	No	---	950	---	---	290	2.9	<0.5	27
MW1	12/17/90	17.35	6.75	10.60	No	---	2,100	---	---	550	13	350	110
MW1	01/31/91	17.35	6.78	10.57	No	---	---	---	---	---	---	---	---
MW1	02/25/91	17.35	6.59	10.76	No	---	---	---	---	---	---	---	---
MW1	03/19/91	17.35	5.85	11.50	No	---	1,400	---	---	900	45	390	150
MW1	04/22/91	17.35	5.72	11.63	Sheen	---	---	---	---	---	---	---	---
MW1	05/17/91	17.35	6.00	11.35	No	---	---	---	---	---	---	---	---
MW1	07/24/91	17.35	6.79	10.56	No	---	9,700	---	---	1,300	670	950	2,100
MW1	09/10/91	17.35	7.25	10.10	No	---	---	---	---	---	---	---	---
MW1	09/23/91	17.35	7.33	10.02	No	---	---	---	---	---	---	---	---
MW1	10/21/91	17.35	7.53	9.82	No	---	---	---	---	---	---	---	---
MW1	10/22/91	17.35	---	---	---	---	540	---	---	220	1.8	110	7.8
MW1	11/18/91	17.35	7.13	10.22	No	---	---	---	---	---	---	---	---
MW1	12/11/91	17.35	7.25	10.10	No	---	---	---	---	---	---	---	---
MW1	01/21/92	17.35	6.54	10.81	No	---	1,800	---	---	650	23	300	64
MW1	02/20/92	17.35	4.82	12.53	No	---	---	---	---	---	---	---	---
MW1	03/19/92	17.35	5.24	12.11	No	---	---	---	---	---	---	---	---
MW1	04/24/92	17.35	5.71	11.64	No	---	4,900	---	---	1,600	78	660	250
MW1	05/13/92	17.35	5.99	11.36	No	---	---	---	---	---	---	---	---
MW1	06/24/92	17.35	6.65	10.70	No	---	---	---	---	---	---	---	---
MW1	07/16/92	17.35	6.72	10.63	No	---	3,400	---	---	1,000	11	550	100
MW1	08/19/92	17.35	7.07	10.28	No	---	---	---	---	---	---	---	---
MW1	09/24/92	17.35	7.36	9.99	No	---	3,700	---	---	1,300	21	330	<10

**TABLE 1A**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW1	02/05/93	17.35	5.21	12.14	No	---	11,000	---	---	2,400	160	1,400	790
MW1	04/30/93	17.35	5.88	11.47	No	---	6,500	---	---	330	320	640	1,300
MW1	05/14/93	17.35	7.22	10.13	No	---	---	---	---	---	---	---	---
MW1	07/15/93	17.35	8.01	9.34	No	---	7,600	---	---	270	62	1,100	1,000
MW1	10/21/93	17.35	7.83	9.52	---	---	---	---	---	---	---	---	---
MW1	11/16/93	17.35	8.69	8.66	No	---	840	---	---	18	1.4	72	17
MW1	11/30/93	17.35	8.38	8.97	---	---	---	---	---	---	---	---	---
MW1	12/17/93	17.35	7.42	9.93	---	---	---	---	---	---	---	---	---
MW1	01/31/94	17.35	6.37	10.98	---	---	---	---	---	---	---	---	---
MW1	02/24/94 - 02/25/94	17.35	6.23	11.12	No	---	810	---	---	15	9.0	98	58
MW1	09/12/94	17.35	7.11	10.24	No	---	1,600a,d	---	---	200	1.9	210	6.6
MW1	10/01/94	17.35	7.44	9.91	No	---	1,400a	---	---	200	<0.5	160	6.6
MW1	01/13/95	17.35	5.13	12.22	No	---	2,100a	---	---	410b	17	280b	89
MW1	04/27/95	17.35	6.57	10.78	No	---	4,700	---	---	460	41	340	270
MW1	08/03/95	17.35	7.46	9.89	No	---	1,900	30	---	140	<5.0	160	9.9
MW1	10/17/95	17.35	7.67	9.68	No	---	280	5.5	---	6.2	<0.5	13	0.75
MW1	01/24/96	17.35	6.52	10.83	No	---	740	440	---	21	1.4	38	3.1
MW1	04/24/96	17.35	5.95	11.40	No	---	7,800	250	---	200	110	1,000	740
MW1	07/26/96	17.35	7.60	9.75	No	---	620	23	---	8.0	0.99	26	1.0
MW1	10/30/96	17.35	8.06	9.29	No	---	700	33	---	14	2.9	85	3.5
MW1	01/31/97	17.35	5.12	12.23	No	---	7,600	<200	---	420	33	1,400	480
MW1	04/10/97	17.35	---	---	---	---	---	---	---	---	---	---	---
MW1	07/10/97	17.35	7.54	9.81	No	---	580	12	---	10	<0.5	<0.5	<0.5
MW1	10/08/97	17.35	---	---	---	---	---	---	---	---	---	---	---
MW1	01/28/98	17.35	4.48	12.87	No	---	820	---	<2.5	110	2.8	170	14
MW1	04/14/98	17.35	4.69	12.66	---	---	---	---	---	---	---	---	---
MW1	07/30/98	17.35	6.19	11.16	No	---	2,700	41	---	210	<5.0	550	<5.0
MW1	10/19/98	17.35	6.72	10.63	No	---	---	---	---	---	---	---	---
MW1	01/13/99	17.35	6.52	10.83	No	---	491	9.78	---	8.0	<0.5	<0.5	<0.5
MW1	04/28/99	17.35	5.37	11.98	---	---	---	---	---	---	---	---	---
MW1	07/09/99	17.35	6.39	10.96	No	---	1,030	10.6	---	114	8.07	184	0.644
MW1	10/25/99	17.35	6.68	10.67	No	---	---	---	---	---	---	---	---
MW1	01/21/00	17.35	6.20	11.15	No	---	<50	5.1	---	<1.0	<1.0	<1.0	<1.0
MW1	04/14/00	17.35	5.18	12.17	No	---	---	---	---	---	---	---	---
MW1	06/16/00	17.35	Property transferred to Valero Refining Company.										---
MW1	07/05/00	17.35	5.93	11.42	No	---	88	200	---	4.3	<0.5	0.61	<0.5
MW1	10/03/00	17.35	6.51	10.84	No	---	<50	240	---	0.72	<0.5	<0.5	<0.5
MW1	01/02/01	17.35	6.17	11.18	No	---	<50	68	---	0.75	<0.5	<0.5	<0.5
MW1	04/02/01	17.35	7.42	9.93	No	---	140	4.3	---	<0.5	<0.5	4.1	1.1
MW1	07/02/01	17.35	6.27	11.08	No	---	74	14	---	<0.5	<0.5	<0.5	<0.5
MW1	10/15/01	17.35	6.64	10.71	No	---	110	83	---	2.6	<0.5	<0.5	<0.5



**TABLE 1A**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW2	01/17/89	16.67	5.96	10.71	No	---	30,000	---	---	6,600	3,300	1,600	7,700
MW2	01/24/89	16.67	5.04	11.63	No	---	---	---	---	---	---	---	---
MW2	06/01/89	16.67	6.32	10.35	Sheen	---	8,700	---	---	330	280	680	1,200
MW2	09/18/89	16.67	6.73	9.94	No	---	17,000	---	---	580	280	570	220
MW2	10/20/89	16.67	6.87	9.80	No	---	---	---	---	---	---	---	---
MW2	11/22/89	16.67	6.80	9.87	No	---	---	---	---	---	---	---	---
MW2	12/11/89	16.67	6.57	10.10	No	---	32,000	---	---	1,000	850	310	1,200
MW2	02/13/90	16.67	6.12	10.55	No	---	---	---	---	---	---	---	---
MW2	03/13/90	16.67	6.02	10.65	No	---	39,000	---	---	3,500	1,500	2,100	3,900
MW2	04/18/90	16.67	6.35	10.32	No	---	---	---	---	---	---	---	---
MW2	05/23/90	16.67	6.28	10.39	No	---	---	---	---	---	---	---	---
MW2	06/14/90	16.67	6.14	10.53	No	---	34,000	---	---	3,800	730	1,600	3,900
MW2	08/21/90	16.67	6.70	9.97	No	---	---	---	---	---	---	---	---
MW2	09/19/90	16.67	6.84	9.83	No	---	63,000	---	---	670	180	390	1,000
MW2	12/17/90	16.67	6.46	10.21	No	---	140,000	---	---	3,700	2,500	3,000	8,300
MW2	01/31/91	16.67	6.66	10.01	Sheen	---	---	---	---	---	---	---	---
MW2	02/25/91	16.67	6.50	10.17	No	---	---	---	---	---	---	---	---
MW2	03/19/91	16.67	5.76	10.91	Sheen	---	48,000	---	---	4,500	1,600	2,100	5,500
MW2	04/22/91	16.67	5.78	10.89	No	---	---	---	---	---	---	---	---
MW2	05/17/91	16.67	6.01	10.66	No	---	---	---	---	---	---	---	---
MW2	07/24/91	16.67	6.43	10.24	No	---	49,000	---	---	3,500	2,200	2,000	6,400
MW2	09/10/91	16.67	6.81	9.86	No	---	---	---	---	---	---	---	---
MW2	09/23/91	16.67	6.82	9.85	No	---	---	---	---	---	---	---	---
MW2	10/21/91	16.67	7.01	9.66	No	---	---	---	---	---	---	---	---
MW2	10/22/91	16.67	---	---	---	---	34,000	---	---	3,700	1,100	1,800	5,200
MW2	11/18/91	16.67	6.66	10.01	No	---	---	---	---	---	---	---	---
MW2	12/11/91	16.67	6.85	9.82	No	---	---	---	---	---	---	---	---
MW2	01/21/92	16.67	6.22	10.45	No	---	21,000	---	---	4,600	1,300	1,700	5,100
MW2	02/20/92	16.67	5.28	11.39	No	---	---	---	---	---	---	---	---
MW2	03/19/92	16.67	5.34	11.33	No	---	---	---	---	---	---	---	---
MW2	04/24/92	16.67	5.75	10.92	Sheen	---	36,000	---	---	5,000	970	2,300	5,200
MW2	05/13/92	16.67	5.95	10.72	No	---	---	---	---	---	---	---	---
MW2	06/24/92	16.67	6.39	10.28	No	---	---	---	---	---	---	---	---
MW2	07/16/92	16.67	6.50	10.17	Sheen	---	42,000	---	---	3,500	490	1,800	3,700
MW2	08/19/92	16.67	6.69	9.98	No	---	---	---	---	---	---	---	---
MW2	09/24/92	16.67	6.74	9.93	Sheen	---	26,000	---	---	3,600	670	1,700	3,300
MW2	02/05/93	16.67	5.56	11.12	0.01	---	---	---	---	---	---	---	---
MW2	04/30/93	16.67	5.78	10.89	Sheen	---	280,000	---	---	11,000	6,500	5,500	160,000
MW2	05/14/93	16.67	---	---	---	---	---	---	---	---	---	---	---
MW2	07/15/93	16.67	7.89	8.79	0.01	---	---	---	---	---	---	---	---
MW2	10/21/93	16.67	7.24	9.43	---	---	---	---	---	---	---	---	---





**TABLE 1A**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW3	12/11/89	17.11	6.37	10.74	No	---	14,000	---	---	1,100	150	670	690
MW3	02/13/90	17.11	5.58	11.53	No	---	---	---	---	---	---	---	---
MW3	03/13/90	17.11	5.48	11.63	No	---	18,000	---	---	6,300	200	1,100	1,100
MW3	04/18/90	17.11	6.01	11.10	No	---	---	---	---	---	---	---	---
MW3	05/23/90	17.11	6.14	10.97	No	---	---	---	---	---	---	---	---
MW3	06/14/90	17.11	5.83	11.28	No	---	9,500	---	---	1,300	880	310	1,800
MW3	08/21/90	17.11	6.67	10.44	No	---	---	---	---	---	---	---	---
MW3	09/19/90	17.11	6.88	10.23	No	---	16,000	---	---	5,000	65	1,500	450
MW3	12/17/90	17.11	6.46	10.65	No	---	6,700	---	---	1,500	64	650	460
MW3	01/31/91	17.11	6.24	10.87	No	---	---	---	---	---	---	---	---
MW3	02/25/91	17.11	6.18	10.93	No	---	---	---	---	---	---	---	---
MW3	03/19/91	17.11	5.35	11.76	No	---	18,000	---	---	4,200	2,100	1,100	1,200
MW3	04/22/91	17.11	5.72	11.39	No	---	---	---	---	---	---	---	---
MW3	05/17/91	17.11	5.55	11.56	No	---	---	---	---	---	---	---	---
MW3	07/24/91	17.11	6.41	10.70	No	---	38,000	---	---	6,200	990	2,900	9,600
MW3	09/10/91	17.11	6.80	10.31	No	---	---	---	---	---	---	---	---
MW3	09/23/91	17.11	6.80	10.31	No	---	---	---	---	---	---	---	---
MW3	10/21/91	17.11	7.09	10.02	No	---	---	---	---	---	---	---	---
MW3	10/22/91	17.11	---	---	---	---	23,000	---	---	3,400	150	2,500	4,400
MW3	11/18/91	17.11	6.74	10.37	No	---	---	---	---	---	---	---	---
MW3	12/11/91	17.11	6.79	10.32	No	---	---	---	---	---	---	---	---
MW3	01/21/92	17.11	6.16	10.95	No	---	13,000	---	---	2,700	30	1,800	740
MW3	02/20/92	17.11	4.89	12.22	No	---	---	---	---	---	---	---	---
MW3	03/19/92	17.11	4.85	12.26	No	---	---	---	---	---	---	---	---
MW3	04/24/92	17.11	5.28	11.83	No	---	17,000	---	---	4,200	170	1,600	600
MW3	05/13/92	17.11	5.58	11.53	No	---	---	---	---	---	---	---	---
MW3	06/24/92	17.11	6.22	10.89	No	---	---	---	---	---	---	---	---
MW3	07/16/92	17.11	6.36	10.75	No	---	11,000	---	---	2,700	230	1,100	570
MW3	08/19/92	17.11	6.65	10.46	No	---	---	---	---	---	---	---	---
MW3	09/24/92	17.11	6.93	10.18	No	---	7,100	---	---	2,000	44	1,000	220
MW3	02/05/93	17.11	4.71	12.40	No	---	13,000	---	---	3,600	110	1,300	430
MW3	04/30/93	17.11	5.46	11.65	No	---	13,000	---	---	1,600	370	1,600	1,800
MW3	05/14/93	17.11	6.53	10.58	No	---	---	---	---	---	---	---	---
MW3	07/15/93	17.11	7.28	9.83	No	---	2,100	---	---	310	15	230	58
MW3	10/21/93	17.11	7.42	9.69	---	---	---	---	---	---	---	---	---
MW3	11/16/93	17.11	8.02	9.09	No	---	4,000	---	---	400	400	120	490
MW3	11/30/93	17.11	7.79	9.32	---	---	---	---	---	---	---	---	---
MW3	12/17/93	17.11	7.13	9.98	---	---	---	---	---	---	---	---	---
MW3	01/31/94	17.11	6.32	10.79	---	---	---	---	---	---	---	---	---
MW3	02/24/94 - 02/25/94	17.11	6.04	11.07	No	---	3,300	---	---	280	52	150	400
MW3	09/12/94	17.11	6.58	10.53	No	---	3,100a,d	---	---	580	8	340	100

**TABLE 1A**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW3	10/01/94	17.11	6.85	10.26	No	---	3,800a	---	---	640	11	230	130
MW3	01/13/95	17.11	5.27	11.84	No	---	3,800a	---	---	690	24	210	130
MW3	04/27/95	17.11	6.05	11.06	No	---	7,500	---	---	940	35	810	530
MW3	08/03/95	17.11	6.71	10.40	No	---	1,900	24	---	380	<5.0	140	45
MW3	10/17/95	17.11	7.46	9.65	No	---	6,100	<5.0	---	950	29	230	190
MW3	01/24/96	17.11	5.83	11.28	No	---	3,000	<100	---	730	15	190	110
MW3	04/24/96	17.11	5.38	11.73	No	---	11,000	<100	---	1,200	130	1,000	1,400
MW3	07/26/96	17.11	6.80	10.31	No	---	2,500	250	---	800	16	24	56
MW3	10/30/96	17.11	7.20	9.91	No	---	5,200	2,900	---	1,300	28	170	180
MW3	01/31/97	17.11	4.31	12.80	No	---	---	---	---	---	---	---	---
MW3	04/10/97	17.11	---	---	---	---	---	---	---	---	---	---	---
MW3	07/10/97	17.11	---	---	---	---	---	---	---	---	---	---	---
MW3	10/08/97	17.11	---	---	---	---	---	---	---	---	---	---	---
MW3	01/28/98	17.11	4.03	13.08	No	---	---	---	---	---	---	---	---
MW3	04/14/98	17.11	3.80	13.31	No	---	---	---	---	---	---	---	---
MW3	07/30/98	17.11	5.84	11.27	No	---	---	---	---	---	---	---	---
MW3	10/19/98	17.11	6.25	10.86	No	---	---	---	---	---	---	---	---
MW3	01/13/99	17.11	6.14	10.97	No	---	---	---	---	---	---	---	---
MW3	04/28/99	17.11	4.95	12.16	---	---	---	---	---	---	---	---	---
MW3	07/09/99	17.11	---	---	---	---	---	---	---	---	---	---	---
MW3	10/25/99	17.11	---	---	---	---	---	---	---	---	---	---	---
MW3	01/21/00	17.11	---	---	---	---	---	---	---	---	---	---	---
MW3	04/14/00	17.11	---	---	---	---	---	---	---	---	---	---	---
MW3	06/16/00	17.11	Property transferred to Valero Refining Company.										
MW3	07/05/00	17.11	---	---	---	---	---	---	---	---	---	---	---
MW3	10/03/00	17.11	---	---	---	---	---	---	---	---	---	---	---
MW3	01/02/01	17.11	5.78	11.33	No	560c	2,700	3,100	---	1300	8.8	11	21.3
MW3	04/02/01	17.11	4.71	12.40	No	620	3,700	1,400	---	1,400	11	36	21
MW3	07/02/01	17.11	5.82	11.29	No	880	5,300	1,200	---	1,300	32	30	730
MW3	10/15/01	17.11	6.12	10.99	No	210d	2,300	1,800	---	630	2.5	8.2	3.34
MW3	Nov-01	17.02	Well surveyed in compliance with AB 2886 requirements.										
MW3	02/04/02	17.02	4.59	12.43	No	402	8,830	1,420	---	2,300	166	150	158
MW3	05/06/02	17.02	4.84	12.18	No	1,300	7,950	544	967	1,930	18.0	80.0	648
MW3	08/22/02	17.02	6.42	10.60	No	416	2,270	298	---	506	3.5	8.0	6.5
MW3	11/08/02	17.02	5.66	11.36	No	193	1,640	470	---	330	1.8	4.9	2.7
MW3	02/07/03	17.02	4.99	12.03	No	800	1,360	662	---	328	6.5	9.0	35.0
MW3	05/02/03	17.02	4.73	12.29	No	562	2,500	300	---	306	4.8	17.5	29.1
MW3	08/14/03	17.02	6.02	11.00	No	227d	2,040	367	---	356	3.4	3.9	3.2
MW3	11/14/03	17.02	6.01	11.01	No	280d	1,880	794	---	244	2.6	3.7	4.5
MW3	03/01/04	17.02	3.71	13.31	No	484d	3,660	---	288	865	11.5	22.5	20.5
MW3	06/15/04	17.02	5.28	11.74	No	866d	9,980	180	---	1,120	82.0	86.0	1,740



**TABLE 1A**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
 Former Exxon Service Station 70104  
 1725 Park Street  
 Alameda, California

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW4	08/21/90	17.34	6.83	10.51	No	---	---	---	---	---	---	---	---
MW4	09/19/90	17.34	7.07	10.27	No	---	5,500	---	---	670	180	390	1,000
MW4	12/17/90	17.34	6.50	10.84	No	---	14,000	---	---	1,400	620	540	2,100
MW4	01/31/91	17.34	6.66	10.68	No	---	---	---	---	---	---	---	---
MW4	02/25/91	17.34	6.21	11.13	No	---	---	---	---	---	---	---	---
MW4	03/19/91	17.34	5.29	12.05	No	---	11,000	---	---	1,500	740	620	2,100
MW4	04/22/91	17.34	5.26	12.08	No	---	---	---	---	---	---	---	---
MW4	05/17/91	17.34	5.60	11.74	No	---	---	---	---	---	---	---	---
MW4	07/24/91	17.34	6.54	10.80	No	---	10,000	---	---	1,200	440	410	1,200
MW4	09/10/91	17.34	7.04	10.30	No	---	---	---	---	---	---	---	---
MW4	09/23/91	17.34	7.14	10.20	No	---	---	---	---	---	---	---	---
MW4	10/21/91	17.34	7.30	10.04	Sheen	---	---	---	---	---	---	---	---
MW4	10/22/91	17.34	---	---	---	---	4,600	---	---	750	190	350	780
MW4	11/18/91	17.34	6.90	10.44	No	---	---	---	---	---	---	---	---
MW4	12/11/91	17.34	7.01	10.33	No	---	---	---	---	---	---	---	---
MW4	01/21/92	17.34	6.25	11.09	No	---	6,000	---	---	1,300	320	510	1,200
MW4	02/20/92	17.34	4.79	12.55	No	---	---	---	---	---	---	---	---
MW4	03/19/92	17.34	4.70	12.64	No	---	---	---	---	---	---	---	---
MW4	04/24/92	17.34	5.25	12.09	Sheen	---	11,000	---	---	1,700	630	710	1,600
MW4	05/13/92	17.34	5.62	11.72	Sheen	---	---	---	---	---	---	---	---
MW4	06/24/92	17.34	6.19	11.15	Sheen	---	---	---	---	---	---	---	---
MW4	07/16/92	17.34	6.51	10.83	Sheen	---	5,400	---	---	870	240	440	700
MW4	08/19/92	17.34	6.85	10.49	No	---	---	---	---	---	---	---	---
MW4	09/24/92	17.34	7.17	10.17	No	---	5,900	---	---	1,300	130	530	690
MW4	02/05/93	17.34	4.61	12.73	No	---	15,000	---	---	2,300	820	980	2,200
MW4	04/30/93	17.34	5.59	11.75	No	---	21,000	---	---	4,000	960	1,500	2,900
MW4	05/14/93	17.34	6.50	10.84	No	---	---	---	---	---	---	---	---
MW4	07/15/93	17.34	7.50	9.84	No	---	2,300	---	---	440	55	130	220
MW4	10/21/93	17.34	7.77	9.57	---	---	---	---	---	---	---	---	---
MW4	11/16/93	17.34	8.27	9.07	No	---	5,100	---	---	820	160	260	760
MW4	11/30/93	17.34	8.02	9.32	---	---	---	---	---	---	---	---	---
MW4	12/17/93	17.34	7.04	10.30	---	---	---	---	---	---	---	---	---
MW4	01/31/94	17.34	6.36	10.98	---	---	---	---	---	---	---	---	---
MW4	02/24/94 - 02/25/94	17.34	5.78	11.56	No	---	9,800	---	---	2,200	190	660	1,200
MW4	09/12/94	17.34	6.80	10.54	No	---	5,200a	---	---	900	57	310	490
MW4	10/01/94	17.34	7.09	10.25	No	---	9,100a	---	---	1,200	66	360	380
MW4	01/13/95	17.34	4.66	12.68	No	---	25,000a	---	---	1,300	200	550	1,000
MW4	04/27/95	17.34	5.54	11.80	No	---	5,900	---	---	650	130	350	590
MW4	08/03/95	17.34	6.92	10.42	No	---	4,200	5,700	---	1,000	<12	170	140
MW4	10/17/95	17.34	7.50	9.84	No	---	6,900	1,700	---	1,300	30	360	380
MW4	01/24/96	17.34	5.81	11.53	No	---	6,300	830	---	1,900	46	290	330

**TABLE 1A**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW4	04/24/96	17.34	5.44	11.90	No	---	5,000	1,600	---	1,800	<20	190	130
MW4	07/26/96	17.34	7.03	10.31	No	---	9,100	1,200	---	1,700	<25	340	280
MW4	10/30/96	17.34	7.57	9.77	No	---	5,300	1,500	---	1,100	35	420	300
MW4	01/31/97	17.34	4.22	13.12	No	---	6,500	40,000	---	1,200	28	490	130
MW4	04/10/97	17.34	---	---	---	---	---	---	---	---	---	---	---
MW4	07/10/97	17.34	7.56	9.78	No	---	10,000	11,000	---	1,100	120	470	720
MW4	10/08/97	17.34	---	---	---	---	---	---	---	---	---	---	---
MW4	01/28/98	17.34	3.70	13.64	No	---	1,700	---	4,900	450	6.8	220	73
MW4	04/14/98	17.34	3.81	13.53	---	---	---	---	---	---	---	---	---
MW4	07/30/98	17.34	5.96	11.38	No	---	2,900	2,800	---	680	<10	220	56
MW4	10/19/98	17.34	6.51	10.83	No	---	---	---	---	---	---	---	---
MW4	01/13/99	17.34	6.24	11.10	No	---	2,140	1,800	---	146	<10	60.9	16.2
MW4	04/28/99	17.34	4.80	12.54	---	---	---	---	---	---	---	---	---
MW4	07/09/99	17.34	6.04	11.30	No	---	1,300	1,310	---	322	<2.5	76.1	<2.5
MW4	10/25/99	17.34	6.51	10.83	No	---	---	---	---	---	---	---	---
MW4	01/21/00	17.34	5.75	11.59	No	---	2,200	1,000	---	410	3.70	40	14.4
MW4	04/14/00	17.34	4.39	12.95	No	---	---	---	---	---	---	---	---
MW4	06/16/00	17.34	Property transferred to Valero Refining Company.										
MW4	07/05/00	17.34	5.48	11.86	No	---	1,600	260	---	400	3.9	100	84
MW4	10/03/00	17.34	6.22	11.12	No	---	1,600	190	---	280	2	64	34.10
MW4	01/02/01	17.34	5.93	11.41	No	---	840	1,000	---	210	2.5	45	28.10
MW4	04/02/01	17.34	4.89	12.45	No	---	1,900	320	---	340	8.5	110	116
MW4	07/02/01	17.34	5.83	11.51	No	---	100	<2	---	3.9	<0.5	0.65	<0.5
MW4	10/15/01	17.34	6.36	10.98	No	---	930	360	---	140	7	24	10
MW4	Nov-01	17.29	Well surveyed in compliance with AB 2886 requirements.										
MW4	02/04/02	17.29	4.35	12.94	No	774	1,250	46.1	---	124	4.40	46.7	43.5
MW4	05/06/02	17.29	4.95	12.34	No	776	2,040	1,410	2,120	165	5.0	42.0	39.0
MW4	08/22/02	17.29	6.65	10.64	No	445	1,570	1,070	---	73.3	<0.5	9.9	6.8
MW4	11/08/02	17.29	5.60	11.69	No	680	2,340	1,200	---	169	4.3	34.9	23.3
MW4	02/07/03	17.29	4.97	12.32	No	429	2,250	672	---	125	24.9	60.0	109
MW4	05/02/03	17.29	4.92	12.37	No	631	2,450	1,230	---	82.9	2.8	26.4	24.7
MW4	08/14/03	17.29	6.35	10.94	No	444	1,160	286	---	97.0	2.8	14.6	7.4
MW4	11/14/03	17.29	Well inaccessible.										
MW4	03/01/04	17.29	3.65	13.64	No	571d	1,860	---	66.7	104	4.4	38.3	25.4
MW4	06/15/04	17.29	5.60	11.69	No	453d	632	35.0	---	63.8	1.6	7.3	5.9
MW4	09/13/04	17.29	6.23	11.06	No	444d	1,120	93.4	---	126	3.9	17.8	9.7
MW4	12/22/04	17.29	5.01	12.28	No	561d,f	1,600	31.2	---	105	3.9	24.8	13.3
MW4	03/24/05	17.29	3.64	13.65	No	756d	2,120	---	255	94.9	4.9	44.6	32.3
MW4	06/14/05	17.29	4.84	12.45	No	992d	1,760	---	20.3	105	5.2	25.2	15.1
MW4	09/12/05	17.29	7.41	9.88	No	351d	922	---	524	48.2	<0.50	1.63	1.70
MW4	12/13/05	17.29	6.18	11.11	No	728d	1,970	---	836h	144	4.63	15.9	8.64







**TABLE 1A**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW5	11/29/07	16.64	6.67	9.97	No	480d	1,400	---	4.8	150	7.2	<5.0	6.9
MW5	02/27/08	16.64	5.22	11.42	No	830d	2,600	---	2.8	260	22	79	65
MW5	05/28/08	16.64	6.10	10.54	No	1,630d	2,040f	---	4.17f	249	10.7	16.8	29.0
MW5	08/27/08	16.64	6.32	10.32	No	1,100	2,300	---	<5.0	170	5.1	5.5	9.4
MW5	11/25/08	16.64	6.36	10.28	No	1,000	2,700	---	<5.0	220	8.7	10	12
MW5	02/25/09	16.64	4.25	12.39	No	950	3,100	---	<5.0	290	22	68	50
MW5	05/27/09	16.64	5.26	11.38	No	1,600	3,100	---	<5.0	47	2.5	7.7	8.3
MW5	09/08/09	16.64	6.65	9.99	No	---	---	---	---	---	---	---	---
MW5	09/09/09	16.64	---	---	---	720d	2,300	---	<2.5	100	<0.50	6.2	14
MW5	12/02/09	16.64	6.75	9.89	No	910d	2,400d	---	<2.0	110	4.5	11	11
MW5	04/28/10	16.64	6.20	10.44	No	1,600d	3,700d	---	1.2	160	30	120	110
MW5	11/18/10	16.64	7.03	9.61	No	1,000	3,100d	---	8.9	180	11	8.7	16
MW5	05/25/11	16.64	4.71	11.93	No	---	---	---	---	---	---	---	---
MW5	05/26/11	16.64	---	---	---	670d	1,800d	---	<2.0	140	5.5	15	14
<b>MW5</b>	<b>10/10/11</b>	<b>16.64</b>	<b>5.70</b>	<b>10.94</b>	<b>No</b>	<b>370d</b>	<b>2,200d</b>	<b>---</b>	<b>&lt;2.0</b>	<b>120</b>	<b>4.5</b>	<b>6.0</b>	<b>7.0</b>
MW6	01/17/89	17.56	5.59	11.97	No	---	38,000	---	---	7,400	9,300	2,000	9,900
MW6	01/24/89	17.56	5.27	12.29	No	---	---	---	---	---	---	---	---
MW6	06/01/89	17.56	6.25	11.31	Sheen	---	23,000	---	---	1,900	2,500	2,000	6,000
MW6	09/18/89	17.56	6.95	10.61	No	---	17,000	---	---	650	410	650	320
MW6	10/20/89	17.56	7.24	10.32	No	---	---	---	---	---	---	---	---
MW6	11/22/89	17.56	7.05	10.51	No	---	---	---	---	---	---	---	---
MW6	12/11/89	17.56	6.63	10.93	No	---	29,000	---	---	1,100	810	330	1,500
MW6	02/13/90	17.56	5.70	11.86	No	---	---	---	---	---	---	---	---
MW6	03/07/90	17.56	---	---	---	---	---	---	---	---	---	---	---
MW6	03/13/90	17.56	5.63	11.93	No	---	38,000	---	---	12,000	15,000	2,500	12,000
MW6	04/18/90	17.56	6.26	11.30	No	---	---	---	---	---	---	---	---
MW6	05/23/90	17.56	6.42	11.14	No	---	---	---	---	---	---	---	---
MW6	06/14/90	17.56	6.19	11.37	No	---	38,000	---	---	9,100	7,800	2,900	12,000
MW6	08/21/90	17.56	7.01	10.55	No	---	---	---	---	---	---	---	---
MW6	09/19/90	17.56	7.23	10.33	No	---	22,000	---	---	4,200	300	1,400	3,400
MW6	12/17/90	17.56	6.66	10.90	No	---	20,000	---	---	3,100	4,100	890	2,700
MW6	01/31/91	17.56	6.39	11.17	No	---	---	---	---	---	---	---	---
MW6	02/25/91	17.56	6.39	11.17	No	---	---	---	---	---	---	---	---
MW6	03/19/91	17.56	5.57	11.99	No	---	180,000	---	---	11,000	55,000	5,600	28,000
MW6	04/22/91	17.56	5.42	12.14	No	---	---	---	---	---	---	---	---
MW6	05/17/91	17.56	5.73	11.83	No	---	---	---	---	---	---	---	---
MW6	07/24/91	17.56	6.72	10.84	No	---	48,000	---	---	5,400	2,300	2,000	9,000
MW6	09/10/91	17.56	7.15	10.41	No	---	---	---	---	---	---	---	---
MW6	09/23/91	17.56	7.25	10.31	No	---	---	---	---	---	---	---	---
MW6	10/21/91	17.56	7.42	10.14	No	---	---	---	---	---	---	---	---
MW6	10/22/91	17.56	---	---	---	---	18,000	---	---	3,100	700	1,400	2,900

TABLE 1A  
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW6	11/18/91	17.56	7.08	10.48	No	---	---	---	---	---	---	---	---
MW6	12/11/91	17.56	7.17	10.39	No	---	---	---	---	---	---	---	---
MW6	01/21/92	17.56	6.40	11.16	No	---	9,400	---	---	2,100	370	1,000	1,100
MW6	02/20/92	17.56	5.06	12.50	No	---	---	---	---	---	---	---	---
MW6	03/19/92	17.56	4.86	12.70	No	---	---	---	---	---	---	---	---
MW6	04/24/92	17.56	5.44	12.12	No	---	42,000	---	---	3,500	8,000	2,100	8,000
MW6	05/13/92	17.56	5.83	11.73	No	---	---	---	---	---	---	---	---
MW6	06/24/92	17.56	6.50	11.06	No	---	---	---	---	---	---	---	---
MW6	07/16/92	17.56	6.68	10.88	No	---	14,000	---	---	1,600	1,000	1,000	2,500
MW6	08/19/92	17.56	7.00	10.56	No	---	---	---	---	---	---	---	---
MW6	09/24/92	17.56	7.28	10.28	No	---	4,700	---	---	790	97	640	540
MW6	02/05/93	17.56	4.84	12.72	No	---	26,000	---	---	2,500	4,300	1,700	5,300
MW6	04/30/93	17.56	5.69	11.87	No	---	9,600	---	---	1,000	410	1,100	1,600
MW6	05/14/93	17.56	6.52	11.04	No	---	---	---	---	---	---	---	---
MW6	07/15/93	17.56	7.51	10.05	No	---	4,600	---	---	250	72	540	650
MW6	10/21/93	17.56	7.85	9.71	---	---	---	---	---	---	---	---	---
MW6	11/16/93	17.56	8.29	9.27	No	---	410	---	---	41	12	47	71
MW6	11/30/93	17.56	8.08	9.48	---	---	---	---	---	---	---	---	---
MW6	12/17/93	17.56	7.27	10.29	---	---	---	---	---	---	---	---	---
MW6	01/31/94	17.56	6.62	10.94	---	---	---	---	---	---	---	---	---
MW6	02/24/94 - 02/25/94	17.56	6.23	11.33	No	---	4,300	---	---	190	190	300	460
MW6	09/12/94	17.56	6.88	10.68	No	---	1,500a,d	---	---	150	4.4	170	85
MW6	10/01/94	17.56	7.15	10.41	No	---	87a	---	---	120	<0.5	99	38
MW6	01/13/95	17.56	4.80	12.76	No	---	9,900a	---	---	710	220	780	1,100
MW6	04/27/95	17.56	6.14	11.42	No	---	3,900	---	---	340	40	460	320
MW6	08/03/95	17.56	6.83	10.73	No	---	1,100	65	---	89	<2.5	110	63
MW6	10/17/95	17.56	7.66	9.90	No	---	8,500	<5.0	---	410	74	850	110
MW6	01/24/96	17.56	5.86	11.70	No	---	31,000	<5.0	---	560	1,500	2,200	7,500
MW6	04/24/96	17.56	5.39	12.17	No	---	15,000	280	---	460	570	1,400	3,300
MW6	07/26/96	17.56	6.97	10.59	No	---	27,000	1,300	---	270	660	1,600	5,500
MW6	10/30/96	17.56	7.45	10.11	No	---	28,000	900	---	490	440	1,800	6,200
MW6	01/31/97	17.56	4.30	13.26	No	---	7,000	770	---	190	1,000	380	1,400
MW6	04/10/97	17.56	---	---	---	---	---	---	---	---	---	---	---
MW6	07/10/97	17.56	7.57	9.99	No	---	6,800	1,100	---	200	<50	300	860
MW6	10/08/97	17.56	7.48	10.08	No	---	51,000	580	---	870	7,300	2,600	12,000
MW6	01/28/98	17.56	3.74	13.82	No	---	15,000	---	2,400	650	2,300	900	2,700
MW6	04/14/98	17.56	3.92	13.64	No	---	25,000	---	2,100	850	3,300	1,200	4,300
MW6	07/30/98	17.56	6.09	11.47	No	---	5,900	910	---	270	65	500	630
MW6	10/19/98	17.56	6.56	11.00	No	---	---	---	---	---	---	---	---
MW6	01/13/99	17.56	6.35	11.21	No	---	3,150	422	---	204	107	297	304
MW6	04/28/99	17.56	4.89	12.67	No	---	15,300	---	436	1,270	980	1,100	3,320





**TABLE 1A  
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW7	11/16/93	17.12	7.85	9.27	No	---	7,400	---	---	300	85	480	120
MW7	11/30/93	17.12	7.66	9.46	---	---	---	---	---	---	---	---	---
MW7	12/17/93	17.12	6.75	10.37	---	---	---	---	---	---	---	---	---
MW7	01/31/94	17.12	6.22	10.90	---	---	---	---	---	---	---	---	---
MW7	02/24/94 - 02/25/94	17.12	5.52	11.60	No	---	7,200	---	---	470	120	400	300
MW7	09/12/94	17.12	6.43	10.69	No	---	6,000a,d	---	---	490	50	280	70
MW7	10/01/94	17.12	6.71	10.41	No	---	8,900a	---	---	940	670	310	160
MW7	01/13/95	17.12	4.29	12.83	No	---	20,000a	---	---	590	780	970	4,200
MW7	04/27/95	17.12	5.00	12.12	No	---	8,800	---	---	410	32	410	230
MW7	08/03/95	17.12	6.53	10.59	No	---	4,900	17,000	---	390	<50	290	<50
MW7	10/17/95	17.12	7.23	9.89	No	---	6,700	17,000	---	530	26	240	25
MW7	01/24/96	17.12	5.26	11.86	No	---	9,300	60,000	---	2,000	390	350	230
MW7	04/24/96	17.12	5.06	12.06	No	---	9,000	360,000	---	2,400	850	150	130
MW7	07/26/96	17.12	6.62	10.50	No	---	4,800	86,000	---	530	25	60	46
MW7	10/30/96	17.12	7.09	10.03	No	---	3,400	28,000	---	180	9.8	58	38
MW7	01/31/97	17.12	3.65	13.47	No	---	3,800	45,000	---	300	18	48	37
MW7	04/10/97	17.12	---	---	---	---	---	---	---	---	---	---	---
MW7	07/10/97	17.12	7.44	9.68	No	---	3,500	18,000	---	70	<25	<25	<25
MW7	10/08/97	17.12	---	---	---	---	---	---	---	---	---	---	---
MW7	01/28/98	17.12	3.06	14.06	No	---	100	---	250	1.0	<0.5	<0.5	0.67
MW7	04/14/98	17.12	3.10	14.02	---	---	---	---	---	---	---	---	---
MW7	07/30/98	17.12	5.78	11.34	No	---	100	670	---	1.4	<0.5	<0.5	<0.5
MW7	10/19/98	17.12	6.25	10.87	No	---	---	---	---	---	---	---	---
MW7	01/13/99	17.12	5.98	11.14	No	---	273	530	---	<2.5	<2.5	<2.5	<2.5
MW7	04/28/99	17.12	4.32	12.80	---	---	---	---	---	---	---	---	---
MW7	07/09/99	17.12	5.67	11.45	No	---	139	860	---	3.79	7.10	1.19	8.65
MW7	10/25/99	17.12	6.23	10.89	No	---	<50	<1.0	---	<1.0	<1.0	<1.0	<1.0
MW7	01/21/00	17.12	5.41	11.71	No	---	410	500	---	10	2.5	<1.0	2.5
MW7	04/14/00	17.12	3.84	13.28	No	---	---	---	---	---	---	---	---
MW7	06/16/00	17.12	Property transferred to Valero Refining Company.										
MW7	07/05/00	17.12	5.05	12.07	No	---	140	480	---	<0.5	<0.5	<0.5	0.56
MW7	10/03/00	17.12	5.88	11.24	No	---	370	1,900	---	<0.5	0.62	<0.5	3.20
MW7	01/02/01	17.12	5.52	11.60	No	---	120	1,500	---	2.2	<0.5	<0.5	<0.5
MW7	04/02/01	17.12	4.26	12.86	No	---	120	1,500	---	0.91	<0.5	<0.5	<0.5
MW7	07/02/01	17.12	5.42	11.70	No	---	110	740	---	4.1	<0.5	0.75	0.84
MW7	10/15/01	17.12	7.50	9.62	No	---	170	740	---	<0.5	<0.5	<0.5	0.69
MW7	Nov-01	17.06	Well surveyed in compliance with AB 2886 requirements.										
MW7	02/04/02	17.06	3.81	13.25	No	88.0	928	610	---	<0.50	<0.50	<0.50	<0.50
MW7	05/06/02	17.06	4.51	12.55	No	72	591	565	712.0	2.4	<0.5	2.5	4.1
MW7	08/22/02	17.06	6.25	10.81	No	<50	586	482	---	2.5	<2.5	<2.5	3.0
MW7	11/08/02	17.06	5.03	12.03	No	<50	463	319	---	1.7	<0.5	<0.5	0.6



**TABLE 1A**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW8	10/01/94	16.33	6.62	9.71	No	---	<50a	---	---	<0.5	<0.5	<0.5	<0.5
MW8	01/13/95	16.33	5.25	11.08	No	---	<50a	---	---	<0.5	<0.5	<0.5	<0.5
MW8	04/27/95	16.33	6.00	10.33	No	---	<50	---	---	<0.5	<0.5	<0.5	<0.5
MW8	08/03/95	16.33	6.28	10.05	No	---	<50	<2.5	---	<0.5	<0.5	<0.5	<0.5
MW8	10/17/95	16.33	6.93	9.40	No	---	<50	<5.0	---	<0.5	<0.5	<0.5	<0.5
MW8	01/24/96	16.33	5.71	10.62	No	---	<50	<5.0	---	<0.5	<0.5	<0.5	<0.5
MW8	04/24/96	16.33	5.52	10.81	No	---	<50	<5.0	---	<0.5	<0.5	<0.5	<0.5
MW8	07/26/96	16.33	6.27	10.06	No	---	<50	230	---	<0.5	<0.5	<0.5	<0.5
MW8	10/30/96	16.33	6.69	9.64	No	---	<50	<5.0	---	<0.5	<0.5	<0.5	<0.5
MW8	01/31/97	16.33	5.18	11.15	No	---	---	---	---	---	---	---	---
MW8	04/10/97	16.33	---	---	---	---	---	---	---	---	---	---	---
MW8	07/10/97	16.33	---	---	---	---	---	---	---	---	---	---	---
MW8	10/08/97	16.33	---	---	---	---	---	---	---	---	---	---	---
MW8	01/28/98	16.33	5.11	11.22	No	---	---	---	---	---	---	---	---
MW8	04/14/98	16.33	5.02	11.31	No	---	<50	<2.5	---	<0.5	<0.5	<0.5	<0.5
MW8	07/30/98	16.33	5.84	10.49	No	---	<50	6.6	---	<0.5	<0.5	<0.5	<0.5
MW8	10/19/98	16.33	6.07	10.26	No	---	<50	<2.5	---	<0.5	<0.5	<0.5	<0.5
MW8	01/13/99	16.33	5.59	10.74	No	---	<50	<2.0	---	<0.5	<0.5	<0.5	<0.5
MW8	04/28/99	16.33	5.38	10.95	No	---	<50	---	<0.5	<0.5	<0.5	<0.5	<0.5
MW8	07/09/99	16.33	5.71	10.62	No	---	<50	3.01	---	<0.5	<0.5	<0.5	<0.5
MW8	10/25/99	16.33	6.15	10.18	No	---	<50	<1.0	---	<1.0	<1.0	<1.0	<1.0
MW8	01/21/00	16.33	6.51	9.82	No	---	<50	<1.0	---	<1.0	<1.0	<1.0	<1.0
MW8	04/14/00	16.33	5.54	10.79	Brown	---	<50	<1	---	<1	<1	<1	<1
MW8	06/16/00	16.33	Property transferred to Valero Refining Company.										
MW8	07/05/00	16.33	5.67	10.66	No	---	<50	<2	---	<0.5	<0.5	<0.5	<0.5
MW8	10/03/00	16.33	6.02	10.31	No	---	<50	<2	---	<0.5	<0.5	<0.5	<0.5
MW8	01/02/01	16.33	5.95	10.38	No	140c	<50	<2	---	<0.5	<0.5	<0.5	<0.5
MW8	04/02/01	16.33	---	---	---	---	---	---	---	---	---	---	---
MW8	07/02/01	16.33	5.76	10.57	No	<50	<50	<2	---	<0.5	<0.5	<0.5	<0.5
MW8	10/15/01	16.33	6.19	10.14	No	<50	<50	<2	---	<0.5	<0.5	<0.5	<0.5
MW8	Nov-01	16.24	Well surveyed in compliance with AB 2886 requirements.										
MW8	02/04/02	16.24	Well inaccessible.										
MW8	05/06/02	16.24	5.31	10.93	No	<50	<50.0	0.5	<0.50	<0.5	<0.5	<0.5	<0.5
MW8	08/22/02	16.24	6.07	10.17	No	<50	<50.0	<0.5	---	<0.5	<0.5	<0.5	<0.5
MW8	11/08/02	16.24	5.91	10.33	No	<50	<50.0	<0.5	---	<0.5	<0.5	<0.5	<0.5
MW8	02/07/03	16.24	5.34	10.90	No	<50	<50.0	<0.5	---	<0.5	<0.5	<0.5	<0.5
MW8	05/02/03	16.24	5.27	10.97	No	<50	<50.0	<0.5	---	<0.50	<0.5	<0.5	<0.5
MW8	08/14/03	16.24	5.60	10.64	No	<50	<50.0	<0.5	---	<0.50	<0.5	<0.5	<0.5
MW8	11/14/03	16.24	6.01	10.23	No	55d	<50.0	<0.5	---	<0.50	<0.5	0.7	1.7
MW8	03/01/04	16.24	5.16	11.08	No	<50	<50.0	---	<0.50	<0.50	<0.5	<0.5	<0.5
MW8	06/15/04	16.24	5.36	10.88	No	<50	<50.0	<0.50	---	<0.50	<0.5	<0.5	<0.5











**TABLE 1A**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW12	01/13/99	16.30	5.19	11.11	No	---	---	---	---	---	---	---	---
MW12	04/28/99	16.30	4.53	11.77	---	---	---	---	---	---	---	---	---
MW12	07/09/99 - 04/14/00 Not monitored or sampled.												
MW12	06/16/00	16.30	Property transferred to Valero Refining Company.										
MW12	07/05/00 - 04/02/01 Not monitored or sampled.												
MW12	07/02/01	16.30	8.34	7.96	No	---	---	---	---	---	---	---	---
MW12	10/15/01	16.30	---	---	---	---	---	---	---	---	---	---	---
MW12	Nov-01	16.15	Well surveyed in compliance with AB 2886 requirements.										
MW12	02/04/02 - Present Not monitored or sampled.												
EW1	10/21/93	16.22	6.67	9.55	---	---	---	---	---	---	---	---	---
EW1	12/17/93	16.22	10.09	6.13	---	---	---	---	---	---	---	---	---
EW1	01/31/94	16.22	5.38	10.84	---	---	---	---	---	---	---	---	---
EW1	02/24/94 - 02/25/94	16.22	5.58	10.64	No	---	1,000	---	---	140	4.5	15	120
EW1	09/12/94	16.22	6.13	10.09	No	---	400a	---	---	40	<0.5	10	5.4
EW1	10/01/94	16.22	7.63	8.59	No	---	3,400a	---	---	<0.5	4.4	30	11
EW1	01/13/95	16.22	11.46	4.76	No	---	680a	---	---	40	<0.5	12	16
EW1	04/27/95	16.22	15.47	0.75	No	---	---	---	---	---	---	---	---
EW1	08/03/95	16.22	13.85	2.37	No	---	<125	590	---	2.7	<1.2	<1.2	<1.2
EW1	10/17/95	16.22	8.05	8.17	No	---	3,600	400	---	220	<0.5	160	36
EW1	01/24/96	16.22	11.07	5.15	No	---	64	260	---	4.3	<0.5	1.3	0.53
EW1	04/24/96	16.22	6.20	10.02	No	---	740	3,000	---	130	2.3	35	2.1
EW1	07/26/96	16.22	13.93	2.29	No	---	<50	960	---	<0.5	<0.5	<0.5	<0.5
EW1	10/30/96	16.22	13.74	2.48	No	---	<50	5,300	---	0.52	<0.5	<0.5	<0.5
EW1	01/31/97	16.22	8.40	7.82	No	---	---	---	---	---	---	---	---
EW1	04/10/97	16.22	---	---	---	---	---	---	---	---	---	---	---
EW1	07/10/97	16.22	---	---	---	---	---	---	---	---	---	---	---
EW1	10/08/97	16.22	---	---	---	---	---	---	---	---	---	---	---
EW1	01/28/98	16.22	3.35	12.87	No	---	---	---	---	---	---	---	---
EW1	04/14/98	16.22	3.52	12.70	No	---	---	---	---	---	---	---	---
EW1	07/30/98	16.22	5.48	10.74	No	---	---	---	---	---	---	---	---
EW1	10/19/98	16.22	5.77	10.45	No	---	---	---	---	---	---	---	---
EW1	01/13/99	16.22	5.49	10.73	No	---	---	---	---	---	---	---	---
EW1	04/28/99	16.22	4.31	11.91	No	---	---	---	---	---	---	---	---
EW1	07/09/99 - 04/14/00 Not monitored or sampled.												
EW1	06/16/00	16.22	Property transferred to Valero Refining Company.										
EW1	07/05/00 - 10/15/01 Not monitored or sampled.												
EW1	Nov-01	16.27	Well surveyed in compliance with AB 2886 requirements.										
EW1	02/04/02	16.27	---	---	---	---	---	---	---	---	---	---	---
EW1	05/06/02	16.27	4.94	11.33	No	---	---	---	---	---	---	---	---
EW1	08/22/02	16.27	Well inaccessible.										
EW1	11/08/02	16.27	3.80	12.47	No	---	---	---	---	---	---	---	---

**TABLE 1A**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
EW1	02/07/03	16.27	12.45	3.82	No	---	---	---	---	---	---	---	---
EW1	05/02/03	16.27	6.55	9.72	No	---	---	---	---	---	---	---	---
EW1	08/14/03	16.27	---	---	No	---	---	---	---	---	---	---	---
EW1	11/14/03	16.27	---	---	No	---	---	---	---	---	---	---	---
EW1	03/01/04	16.27	---	---	No	---	---	---	---	---	---	---	---
EW1	06/15/04	16.27	4.47	11.80	No	---	---	---	---	---	---	---	---
EW1	09/13/04	16.27	5.12	11.15	No	---	---	---	---	---	---	---	---
EW1	12/22/04	16.27	4.17	12.10	No	---	---	---	---	---	---	---	---
EW1	03/24/05	16.27	2.97	13.30	No	---	---	---	---	---	---	---	---
EW1	06/14/05	16.27	3.98	12.29	No	---	---	---	---	---	---	---	---
EW1	09/12/05	16.27	14.39	1.88	No	---	---	---	---	---	---	---	---
EW1	12/13/05	16.27	12.7	3.57	No	---	---	---	---	---	---	---	---
EW1	03/13/06	16.27	11.43	4.84	No	---	---	---	---	---	---	---	---
EW1	06/12/06	16.27	11.78	4.49	No	---	---	---	---	---	---	---	---
EW1	09/08/06	16.27	5.18	11.09	No	---	---	---	---	---	---	---	---
EW1	12/05/06	16.27	10.48	5.79	No	---	---	---	---	---	---	---	---
EW1	03/12/07	16.27	3.82	12.45	No	---	---	---	---	---	---	---	---
EW1	05/29/07	16.27	14.9	1.37	No	---	---	---	---	---	---	---	---
EW1	08/29/07	16.27	7.82	8.45	No	---	---	---	---	---	---	---	---
EW1	11/29/07	16.27	6.23	10.04	No	---	---	---	---	---	---	---	---
EW1	02/27/08	16.27	4.38	11.89	No	---	---	---	---	---	---	---	---
EW1	05/28/08	16.27	6.51	9.76	No	---	---	---	---	---	---	---	---
EW1	08/27/08	16.27	4.75	11.52	No	---	---	---	---	---	---	---	---
EW1	11/25/08	16.27	7.21	9.06	No	---	---	---	---	---	---	---	---
EW1	02/25/09	16.27	3.45	12.82	No	---	---	---	---	---	---	---	---
EW1	05/27/09	16.27	4.14	12.13	No	---	---	---	---	---	---	---	---
EW1	09/08/09	16.27	8.13	8.14	No	---	---	---	---	---	---	---	---
EW1	12/02/09	16.27	14.70	1.57	No	---	---	---	---	---	---	---	---
EW1	04/28/10	16.27	13.16	3.11	No	---	---	---	---	---	---	---	---
EW1	11/18/10	16.27	13.58	2.69	No	---	---	---	---	---	---	---	---
EW1	05/25/11	16.27	3.96	12.31	No	---	---	---	---	---	---	---	---
<b>EW1</b>	<b>10/10/11</b>	<b>16.27</b>	<b>Well inaccessible.</b>										
EW2	10/21/93	16.05	6.71	9.34	---	---	---	---	---	---	---	---	---
EW2	12/17/93	16.05	14.95	1.10	---	---	---	---	---	---	---	---	---
EW2	01/31/94	16.05	5.35	10.70	---	---	---	---	---	---	---	---	---
EW2	02/24/94 - 02/25/94	16.05	14.30	1.75	k	---	5,200	---	---	1,200	390	63	410
EW2	09/12/94	16.05	6.09	9.96	No	---	8,800a	---	---	2,000	79	180	290
EW2	10/01/94	16.05	7.32	8.73	No	---	9,500a	---	---	1,400	6.7	700	310
EW2	01/13/95	16.05	14.38	1.67	No	---	5,700a	---	---	930	270	21	280
EW2	04/27/95	16.05	15.23	0.82	No	---	---	---	---	---	---	---	---
EW2	08/03/95	16.05	7.19	8.86	No	---	830	1,600	---	170	27	36	64

**TABLE 1A**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
EW2	10/17/95	16.05	18.97	-2.92	No	---	180	3,600	---	<0.5	<0.5	<0.5	5.1
EW2	01/24/96	16.05	20.32	-4.27	No	---	1,700	6,400	---	290	82	14	170
EW2	04/24/96	16.05	9.46	6.59	No	---	3,500	7,300	---	670	200	110	490
EW2	07/26/96	16.05	16.50	-0.45	No	---	1,400	14,000	---	250	56	10	220
EW2	10/30/96	16.05	20.30	-4.25	No	---	1,500	13,000	---	200	44	8.8	190
EW2	01/31/97	16.05	19.21	-3.16	No	---	---	---	---	---	---	---	---
EW2	04/10/97	16.05	---	---	---	---	---	---	---	---	---	---	---
EW2	07/10/97	16.05	---	---	---	---	---	---	---	---	---	---	---
EW2	10/08/97	16.05	---	---	---	---	---	---	---	---	---	---	---
EW2	01/28/98	16.05	3.35	12.70	No	---	---	---	---	---	---	---	---
EW2	04/14/98	16.05	3.45	12.60	No	---	---	---	---	---	---	---	---
EW2	07/30/98	16.05	11.50	4.55	No	---	---	---	---	---	---	---	---
EW2	10/19/98	16.05	5.67	10.38	No	---	---	---	---	---	---	---	---
EW2	01/13/99	16.05	9.57	6.48	No	---	---	---	---	---	---	---	---
EW2	04/28/99	16.05	10.15	5.90	No	---	---	---	---	---	---	---	---
EW2	07/09/99 - 04/14/00 Not monitored or sampled.												
EW2	06/16/00	16.05	Property transferred to Valero Refining Company.										
EW2	07/05/00 - 10/15/01 Not monitored or sampled.												
EW2	Nov-01	16.07	Well surveyed in compliance with AB 2886 requirements.										
EW2	02/04/02 - Present Not monitored or sampled.												
EW3	10/21/93	16.02	6.55	9.47	---	---	---	---	---	---	---	---	---
EW3	12/17/93	16.02	15.65	0.37	---	---	---	---	---	---	---	---	---
EW3	01/31/94	16.02	5.34	10.68	---	---	---	---	---	---	---	---	---
EW3	02/24/94 - 02/25/94	16.02	21.00	-4.98	No	---	91	---	---	<0.5	<0.5	<0.5	<0.5
EW3	09/12/94	16.02	6.12	9.90	No	---	300a	---	---	44	5.9	12	31
EW3	10/01/94	16.02	10.52	5.50	No	---	140a	---	---	12	0.42	1.7	3.7
EW3	01/13/95	16.02	18.13	-2.11	No	---	230a	---	---	4.6	7.6	1.2	6.6
EW3	04/27/95	16.02	23.07	-7.05	No	---	---	---	---	---	---	---	---
EW3	08/03/95	16.02	22.90	-6.88	No	---	<200	1,400	---	<2.0	<2.0	<2.0	<2.0
EW3	10/17/95	16.02	22.87	-6.85	No	---	74	2,400	---	4.4	<0.5	<0.5	<0.5
EW3	01/24/96	16.02	20.97	-4.95	No	---	120	2,300	---	16	<0.5	<0.5	<0.5
EW3	04/24/96	16.02	18.10	-2.08	No	---	180	3,800	---	34	3.7	8.9	11
EW3	07/26/96	16.02	13.14	2.88	No	---	180	2,000	---	45	0.7	<0.5	2.1
EW3	10/30/96	16.02	9.24	6.78	No	---	660	2,800	---	60	8.2	<0.5	100
EW3	01/31/97	16.02	11.10	4.92	No	---	---	---	---	---	---	---	---
EW3	04/10/97	16.02	---	---	---	---	---	---	---	---	---	---	---
EW3	07/10/97	16.02	---	---	---	---	---	---	---	---	---	---	---
EW3	10/08/97	16.02	---	---	---	---	---	---	---	---	---	---	---
EW3	01/28/98	16.02	3.42	12.60	No	---	---	---	---	---	---	---	---
EW3	04/14/98	16.02	3.50	12.52	No	---	---	---	---	---	---	---	---
EW3	07/30/98	16.02	18.57	-2.55	No	---	---	---	---	---	---	---	---

**TABLE 1A**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
EW3	10/19/98	16.02	5.65	10.37	No	---	---	---	---	---	---	---	---
EW3	01/13/99	16.02	13.85	2.17	No	---	---	---	---	---	---	---	---
EW3	04/28/99	16.02	4.52	11.50	No	---	---	---	---	---	---	---	---
EW3	07/09/99 - 04/14/00 Not monitored or sampled.												
EW3	06/16/00	16.02	Property transferred to Valero Refining Company.										
EW3	07/05/00 - 10/15/01 Not monitored or sampled.												
EW3	Nov-01	16.08	Well surveyed in compliance with AB 2886 requirements.										
EW3	02/04/02	16.08	---	---	---	---	---	---	---	---	---	---	---
EW3	05/06/02	16.08	5.38	10.70	No	---	---	---	---	---	---	---	---
EW3	08/22/02	16.08	13.00	3.08	No	---	---	---	---	---	---	---	---
EW3	11/08/02	16.08	4.19	11.89	No	---	---	---	---	---	---	---	---
EW3	02/07/03	16.08	21.15	-5.07	No	---	---	---	---	---	---	---	---
EW3	05/02/03	16.08	23.50	-7.42	No	---	---	---	---	---	---	---	---
EW3	08/14/03	16.08	6.07	10.01	No	---	---	---	---	---	---	---	---
EW3	11/14/03	16.08	6.04	10.04	No	---	---	---	---	---	---	---	---
EW3	03/01/04	16.08	3.98	12.10	No	---	---	---	---	---	---	---	---
EW3	06/15/04	16.08	4.80	11.28	No	---	---	---	---	---	---	---	---
EW3	09/13/04	16.08	5.56	10.52	No	---	---	---	---	---	---	---	---
EW3	12/22/04	16.08	4.51	11.57	No	---	---	---	---	---	---	---	---
EW3	03/24/05	16.08	3.23	12.85	No	---	---	---	---	---	---	---	---
EW3	06/14/05	16.08	4.31	11.77	No	---	---	---	---	---	---	---	---
EW3	09/12/05	16.08	32.48	-16.40	No	---	---	---	---	---	---	---	---
EW3	12/13/05	16.08	5.66	10.42	No	---	---	---	---	---	---	---	---
EW3	03/13/06	16.08	4.48	11.60	No	---	---	---	---	---	---	---	---
EW3	06/12/06	16.08	4.97	11.11	No	---	---	---	---	---	---	---	---
EW3	09/08/06	16.08	5.65	10.43	No	---	---	---	---	---	---	---	---
EW3	12/05/06	16.08	6.99	9.09	No	---	---	---	---	---	---	---	---
EW3	03/12/07	16.08	4.36	11.72	No	---	---	---	---	---	---	---	---
EW3	05/29/07	16.08	5.84	10.24	No	---	---	---	---	---	---	---	---
EW3	08/29/07	16.08	7.38	8.70	No	---	---	---	---	---	---	---	---
EW3	11/29/07	16.08	5.99	10.09	No	---	---	---	---	---	---	---	---
EW3	02/27/08	16.08	4.53	11.55	No	---	---	---	---	---	---	---	---
EW3	05/28/08	16.08	5.52	10.56	No	---	---	---	---	---	---	---	---
EW3	08/27/08	16.08	6.03	10.05	No	---	---	---	---	---	---	---	---
EW3	11/25/08	16.08	6.05	10.03	No	---	---	---	---	---	---	---	---
EW3	02/25/09	16.08	3.88	12.20	No	---	---	---	---	---	---	---	---
EW3	05/27/09	16.08	4.88	11.20	No	---	---	---	---	---	---	---	---
EW3	09/08/09	16.08	6.31	9.77	No	---	---	---	---	---	---	---	---
EW3	12/02/09	16.08	6.09	9.99	No	---	---	---	---	---	---	---	---
EW3	04/28/10	16.08	5.25	10.83	No	---	---	---	---	---	---	---	---
EW3	11/18/10	16.08	6.03	10.05	No	---	---	---	---	---	---	---	---

**TABLE 1A**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
EW3	05/25/11	16.08	4.29	11.79	No	---	---	---	---	---	---	---	---
<b>EW3</b>	<b>10/10/11</b>	<b>16.08</b>	<b>5.21</b>	<b>10.87</b>	<b>No</b>	---	---	---	---	---	---	---	---
EW4	10/21/93	15.61	6.13	9.48	---	---	---	---	---	---	---	---	---
EW4	12/17/93	15.61	14.60	1.01	---	---	---	---	---	---	---	---	---
EW4	01/31/94	15.61	5.08	10.53	---	---	---	---	---	---	---	---	---
EW4	02/24/94 - 02/25/94	15.61	14.88	0.73	k	---	4,600	---	---	1,900	140	13	450
EW4	09/12/94	16.61	5.69	10.92	No	---	4,000a,d	---	---	1,700	12	210	77
EW4	10/01/94	16.61	7.90	8.71	No	---	460a	---	---	100	1.5	15	11
EW4	01/13/95	16.61	11.36	5.25	No	---	520a	---	---	89	8.8	1.6	82
EW4	04/27/95	16.61	16.30	0.31	No	---	---	---	---	---	---	---	---
EW4	08/03/95	16.61	6.45	10.16	No	---	42,000	17,000	---	3,100	1,100	2,000	8,200
EW4	10/17/95	16.61	15.89	0.72	No	---	92	2,500	---	6.3	<0.5	<0.5	<0.5
EW4	01/24/96	16.61	6.03	10.58	No	---	220	9,200	---	79	2.5	2.9	10
EW4	04/24/96	16.61	4.97	11.64	No	---	4,600	860	---	49	36	69	1,100
EW4	07/26/96	16.61	6.54	10.07	No	---	2,900	15,000	---	610	6.2	200	300
EW4	10/30/96	16.61	6.53	10.08	No	---	550	3,400	---	68	11	<2.5	71
EW4	01/31/97	16.61	3.98	12.63	No	---	---	---	---	---	---	---	---
EW4	04/10/97	16.61	---	---	---	---	---	---	---	---	---	---	---
EW4	07/10/97	16.61	---	---	---	---	---	---	---	---	---	---	---
EW4	10/08/97	16.61	---	---	---	---	---	---	---	---	---	---	---
EW4	01/28/98	16.61	3.22	13.39	No	---	---	---	---	---	---	---	---
EW4	04/14/98	16.61	3.20	13.41	No	---	---	---	---	---	---	---	---
EW4	07/30/98	16.61	4.89	11.72	No	---	---	---	---	---	---	---	---
EW4	10/19/98	16.61	5.16	11.45	No	---	---	---	---	---	---	---	---
EW4	01/13/99	16.61	5.57	11.04	No	---	---	---	---	---	---	---	---
EW4	04/28/99	16.61	4.27	12.34	No	---	---	---	---	---	---	---	---
EW4	07/09/99 - 04/14/00	Not monitored or sampled.											
EW4	06/16/00	16.61	Property transferred to Valero Refining Company.										
EW4	07/05/00 - 10/15/01	Not monitored or sampled.											
EW4	Nov-01	15.69	Well surveyed in compliance with AB 2886 requirements.										
EW4	02/04/02 - Present	Not monitored or sampled.											
EW5	10/21/93	16.51	6.77	9.74	---	---	---	---	---	---	---	---	---
EW5	12/17/93	16.51	14.20	2.31	---	---	---	---	---	---	---	---	---
EW5	01/31/94	16.51	5.64	10.87	---	---	---	---	---	---	---	---	---
EW5	02/24/94 - 02/25/94	16.51	11.95	4.56	No	---	1,000	---	---	140	45	3.4	190
EW5	09/12/94	16.51	6.30	10.21	No	---	180a	---	---	26	1.7	11	12
EW5	10/01/94	16.51	11.83	4.68	No	---	130a	---	---	16	0.92	5.7	8.5
EW5	01/13/95	16.51	12.54	3.97	No	---	130a	---	---	0.6	0.8	0.6	2.9
EW5	04/27/95	16.51	13.11	3.40	No	---	---	---	---	---	---	---	---
EW5	08/03/95	16.51	11.99	4.52	No	---	70	210	---	<0.5	<0.5	<0.5	<0.5

**TABLE 1A**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
EW5	10/17/95	16.51	13.43	3.08	No	---	78	50	---	1.5	<0.5	<0.5	3.0
EW5	01/24/96	16.51	9.72	6.79	No	---	2,500	350	---	280	66	22	370
EW5	04/24/96	16.51	8.13	8.38	No	---	6,400	400	---	690	240	380	1,300
EW5	07/26/96	16.51	10.00	6.51	No	---	850	84	---	82	2.5	2.4	100
EW5	10/30/96	16.51	9.82	6.69	No	---	1,200	68	---	110	5.1	2.2	120
EW5	01/31/97	16.51	9.00	7.51	No	---	---	---	---	---	---	---	---
EW5	04/10/97	16.51	---	---	---	---	---	---	---	---	---	---	---
EW5	07/10/97	16.51	---	---	---	---	---	---	---	---	---	---	---
EW5	10/08/97	16.51	---	---	---	---	---	---	---	---	---	---	---
EW5	01/28/98	16.51	3.54	12.97	No	---	---	---	---	---	---	---	---
EW5	04/14/98	16.51	3.65	12.86	No	---	---	---	---	---	---	---	---
EW5	07/30/98	16.51	7.63	8.88	No	---	---	---	---	---	---	---	---
EW5	10/19/98	16.51	5.75	10.76	No	---	---	---	---	---	---	---	---
EW5	01/13/99	16.51	7.03	9.48	No	---	---	---	---	---	---	---	---
EW5	04/28/99	16.51	8.80	7.71	No	---	---	---	---	---	---	---	---
EW5	07/09/99 - 04/14/00	Not monitored or sampled.											
EW5	06/16/00	16.51	Property transferred to Valero Refining Company.										
EW5	07/05/00 - 10/15/01	Not monitored or sampled.											
EW5	Nov-01	16.67	Well surveyed in compliance with AB 2886 requirements.										
EW5	02/04/02	16.67	---	---	---	---	---	---	---	---	---	---	---
EW5	05/06/02	16.67	4.78	11.89	No	---	---	---	---	---	---	---	---
EW5	08/22/02	16.67	6.61	10.06	No	---	---	---	---	---	---	---	---
EW5	11/08/02	16.67	3.74	12.93	No	---	---	---	---	---	---	---	---
EW5	02/07/03	16.67	6.40	10.27	No	---	---	---	---	---	---	---	---
EW5	05/02/03	16.67	5.91	10.76	No	---	---	---	---	---	---	---	---
EW5	08/14/03	16.67	6.28	10.39	No	---	---	---	---	---	---	---	---
EW5	11/14/03	16.67	6.19	10.48	No	---	---	---	---	---	---	---	---
EW5	03/01/04	16.67	4.02	12.65	No	---	---	---	---	---	---	---	---
EW5	06/15/04	16.67	4.97	11.70	No	---	---	---	---	---	---	---	---
EW5	09/13/04	16.67	5.47	11.20	No	---	---	---	---	---	---	---	---
EW5	12/22/04	16.67	4.71	11.96	No	---	---	---	---	---	---	---	---
EW5	03/24/05	16.67	3.15	13.52	No	---	---	---	---	---	---	---	---
EW5	06/14/05	16.67	4.28	12.39	No	---	---	---	---	---	---	---	---
EW5	09/12/05	16.67	7.46	9.21	No	---	---	---	---	---	---	---	---
EW5	12/13/05	16.67	5.47	11.20	No	---	---	---	---	---	---	---	---
EW5	03/13/06	16.67	3.71	12.96	No	---	---	---	---	---	---	---	---
EW5	06/12/06	16.67	4.36	12.31	No	---	---	---	---	---	---	---	---
EW5	09/08/06	16.67	5.70	10.97	No	---	---	---	---	---	---	---	---
EW5	12/05/06	16.67	6.41	10.26	No	---	---	---	---	---	---	---	---
EW5	03/12/07	16.67	4.48	12.19	No	---	---	---	---	---	---	---	---
EW5	05/29/07	16.67	5.76	10.91	No	---	---	---	---	---	---	---	---

**TABLE 1A**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
EW5	08/29/07	16.67	6.36	10.31	No	---	---	---	---	---	---	---	---
EW5	11/29/07	16.67	6.04	10.63	No	---	---	---	---	---	---	---	---
EW5	02/27/08	16.67	4.38	12.29	No	---	---	---	---	---	---	---	---
EW5	05/28/08	16.67	5.25	11.42	No	---	---	---	---	---	---	---	---
EW5	08/27/08	16.67	5.94	10.73	No	---	---	---	---	---	---	---	---
EW5	11/25/08	16.67	5.84	10.83	No	---	---	---	---	---	---	---	---
EW5	02/25/09	16.67	3.51	13.16	No	---	---	---	---	---	---	---	---
EW5	05/27/09	16.67	4.75	11.92	No	---	---	---	---	---	---	---	---
EW5	09/08/09	16.67	5.72	10.95	No	---	---	---	---	---	---	---	---
EW5	12/02/09	16.67	5.79	10.88	No	---	---	---	---	---	---	---	---
EW5	04/28/10	16.67	4.66	12.01	No	---	---	---	---	---	---	---	---
EW5	11/18/10	16.67	6.33	10.34	No	---	---	---	---	---	---	---	---
EW5	05/25/11	16.67	4.27	12.40	No	---	---	---	---	---	---	---	---
<b>EW5</b>	<b>10/10/11</b>	<b>16.67</b>	<b>5.23</b>	<b>11.44</b>	<b>No</b>	<b>---</b>	<b>---</b>	<b>---</b>	<b>---</b>	<b>---</b>	<b>---</b>	<b>---</b>	<b>---</b>
<b>Grab Groundwater Samples</b>													
W-8-SB14	03/08/12	---	---	---	---	510d	1,500d	---	<0.50	<0.50	<0.50	3.0	2.2
W-8-SB15	03/08/12	---	---	---	---	<61	<50	---	3.4	<0.50	<0.50	<0.50	<1.0

**TABLE 1A**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

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Notes:	Total Dissolved Solids were reported in samples collected from wells MW1 and MW4 at 910 ppm and 370 ppm, respectively, on March 7, 1990.
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.
TPHd	= Total petroleum hydrocarbons as diesel using EPA Method 5030/8015 (modified).
TPHg	= Total petroleum hydrocarbons as gasoline analyzed using EPA Method 5030/8015B (modified).
MTBE 8021B	= Methyl tertiary butyl ether analyzed using EPA Method 8021B.
MTBE 8260B	= Methyl tertiary butyl ether analyzed using EPA Method 8260B.
BTEX	= Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8021B.
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.
<	= Less than the stated laboratory method reporting limit.
---	= Not measured/Not sampled/Not analyzed.
a	= Total volatile hydrocarbons by DHS /LUFT Manual Method.
b	= Results obtained from a 1:10 dilution analyzed on January 17, 1995.
c	= Diesel-range hydrocarbons reportedly detected in bailer blank; result is suspect.
d	= Hydrocarbon pattern does not resemble the requested fuel.
e	= Analyte presence not confirmed by second column or GC/MS analysis.
f	= Analyte detected in laboratory method blank; result is suspect.
g	= Concentration estimated. Analyte exceeded calibration range. Reanalysis not performed due to holding time requirements.
h	= Initial analysis within holding time. Reanalysis for required dilution, confirmation, or QA/QC was past holding time.
i	= Elevated result due to single analyte peak(s) in the quantitation range.
j	= Calibration verification recovery above the method control limit. A high bias may be indicated.
k	= Liquid-phase petroleum hydrocarbons present in well, thickness not measured, or not measurable.
l	= A peak eluting before benzene was present in the groundwater sample, and is suspected to be MTBE.
m	= Compound did not meet method-described identification guidelines. Identification was based on additional GC/MS characteristics.

**TABLE 1B**  
**ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Ethanol (µg/L)
<b>Monitoring Well Samples</b>								
MW1	06/07/88 - 04/14/00	Not analyzed for these analytes.						
MW1	06/16/00	Property transferred to Valero Refining Company.						
MW1	07/05/00 - 02/04/02	Not analyzed for these analytes.						
MW1	05/06/02	<0.50	<0.50	<0.50	297	<0.50	<0.50	---
MW1	08/22/02 - 11/14/03	Not analyzed for these analytes.						
MW1	03/01/04	<0.50	<0.50	<0.50	42.3	<0.50	<0.50	---
MW1	06/15/04	---	---	---	---	---	---	<100
MW1	09/13/04	---	---	---	---	---	---	---
MW1	12/22/04	---	---	---	---	---	---	---
MW1	03/24/05	<0.50	<0.50	<0.50	3,020	<0.50	<0.50	<50.0
MW1	06/14/05	<0.50	<0.50	<0.50	6,590	<0.50	<0.50	<50.0
MW1	09/12/05	<0.500	<0.500	<0.500	10,900	<0.500	<0.500	<50.0
MW1	12/13/05	<0.500	<0.500	<0.500	6,590h	<0.500	<0.500	<50.0
MW1	03/13/06	<50	<50	<50	15,000	<50	<50	---
MW1	06/12/06	<50	<50	<50	26,000	<50	<50	---
MW1	09/08/06	<25	<25	<25	22,000	<25	<25	---
MW1	12/05/06	<25	<25	<25	12,000	<25	<25	---
MW1	03/12/07	<100	<100	<100	9,000	<100	<100	---
MW1	05/29/07	<0.500	<0.500	1.11	12,100	<0.500	<0.500	---
MW1	08/29/07	<50	<50	<50	12,000	<50	<50	---
MW1	11/29/07	<50	<50	<50	11,000	<50	<50	---
MW1	02/27/08	<50	<50	<50	11,000	<50	<50	---
MW1	05/28/08	<0.500	<0.500	<25.0	14,100	<0.500	<0.500	---
MW1	08/27/08	<0.50	<0.50	1.5	11,000	<0.50	<0.50	<50
MW1	11/25/08	<50	<50	<50	4,700	<50	<50	<5,000
MW1	02/25/09	<50	<50	<50	5,100	<50	<50	---
MW1	05/27/09	<25	<25	<25	9,100	<25	<25	---
MW1	09/09/09	<50	<50	<50	5,800	<50	<50	---
MW1	12/02/09	<50	<50	<50	3,000	<50	<50	---
MW1	04/28/10	<20	<20	<20	2,600	<20	<20	---
MW1	11/18/10	<0.50	<0.50	<0.50	490	<0.50	<0.50	---
MW1	05/26/11	<1.0	<1.0	<1.0	210	<1.0	<1.0	---
<b>MW1</b>	<b>10/10/11</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>160</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>---</b>

**TABLE 1B**  
**ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Ethanol (µg/L)
MW2	06/07/88 - 04/14/00	Not analyzed for these analytes.						
MW2	06/16/00	Property transferred to Valero Refining Company.						
MW2	07/05/00 - 10/15/01	Not analyzed for these analytes.						
MW2	02/04/02	---	---	---	---	69	---	---
MW2	05/06/02	<0.50	<0.50	<0.50	44.8	252	<0.50	---
MW2	08/22/02	---	---	---	---	178	---	---
MW2	11/08/02	---	---	---	---	83	---	---
MW2	02/07/03	---	---	---	---	<50	---	---
MW2	05/02/03	---	---	---	---	56	---	---
MW2	08/14/03	---	---	---	---	62	---	---
MW2	11/14/03	---	---	---	---	132	---	---
MW2	03/01/04	<0.50	<0.50	<0.50	<10.0	<0.50	<0.50	---
MW2	06/15/04	---	---	---	---	---	---	<100
MW2	09/13/04	---	---	---	---	---	---	---
MW2	12/22/04	---	---	---	---	---	---	---
MW2	03/24/05	<0.50	<0.50	<0.50	37	<0.50	<0.50	<50.0
MW2	06/14/05	<0.50	1.90	<0.50	41.1	<0.50	<0.50	<50.0
MW2	09/12/05	<0.500	<0.500	<0.500	181	<0.500	<0.500	<50.0
MW2	12/13/05	<0.500	<0.500	<0.500	159	<0.500	0.680	<50.0
MW2	03/13/06	<0.50	<0.50	<0.50	28	<0.50	<0.50	<100
MW2	06/12/06	<0.50	<0.50	<0.50	40	<0.50	<0.50	<100
MW2	09/08/06	<0.50	<0.50	<0.50	440	<0.50	<0.50	<100
MW2	12/05/06	<0.50	<0.50	<0.50	620	<0.50	0.51	<100
MW2	03/12/07	<0.50	<0.50	<0.50	290	<0.50	<0.50	<100
MW2	05/29/07	<0.500	<0.500	<0.500	235	<0.500	<0.500	<50.0
MW2	08/29/07	<0.50	<0.50	<0.50	900	<0.50	0.50	<100
MW2	11/29/07	<0.50	<0.50	<0.50	1,300	<0.50	0.66	<100
MW2	02/27/08	<0.50	<0.50	<0.50	83	<0.50	<0.50	<100
MW2	05/28/08	<0.500	<0.500	<0.500	60.6	<0.500	<0.500	<50.0
MW2	08/27/08	<0.50	<0.50	<0.50	66	<0.50	<0.50	<50
MW2	11/25/08	<0.50	<0.50	<0.50	69	<0.50	<0.50	<50
MW2	02/25/09	<0.50	<0.50	<0.50	46	<0.50	<0.50	<50
MW2	05/27/09	<0.50	<0.50	<0.50	47	<0.50	<0.50	<50
MW2	09/08/09	<0.50	<0.50	<0.50	42	<0.50	<0.50	<50
MW2	12/02/09	<0.50	<0.50	<0.50	29	<0.50	<0.50	<50
MW2	04/28/10	<0.50	<0.50	<0.50	11	<0.50	<0.50	<50

**TABLE 1B**  
**ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Ethanol (µg/L)
MW2	11/18/10	<0.50	<0.50	<0.50	27	<0.50	<0.50	<50
MW2	05/25/11	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<50
<b>MW2</b>	<b>10/10/11</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>95</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;50</b>
MW3	06/07/88 - 04/14/00	Not analyzed for these analytes.						
MW3	06/16/00	Property transferred to Valero Refining Company.						
MW3	07/05/00 - 02/04/02	Not analyzed for these analytes.						
MW3	05/06/02	<0.50	<0.50	<0.50	194.0	<0.50	<0.50	---
MW3	08/22/02 - 11/14/03	Not analyzed for these analytes.						
MW3	03/01/04	<0.50	<0.50	<0.50	3550.0	<0.50	<0.50	---
MW3	06/15/04	---	---	---	---	---	---	<100
MW3	09/13/04	---	---	---	---	---	---	---
MW3	12/22/04	---	---	---	---	---	---	---
MW3	03/24/05	<0.50	<0.50	<0.50	12,600	<0.50	<0.50	<50.0
MW3	06/14/05	<0.50	<0.50	<0.50	10,500	<0.50	<0.50	<50.0
MW3	09/12/05	<0.500	10.4	<0.500	16,100	<0.500	<0.500	<50.0
MW3	12/13/05	<0.500	5.04	<0.500	3,530h	<0.500	<0.500	<50.0
MW3	03/13/06	<0.50	<0.50	<0.50	12,000h	<0.50	<0.50	<100
MW3	06/12/06	<5.0	<5.0	<5.0	8,000	<5.0	<5.0	<1,000
MW3	09/08/06	<2.5	<2.5	<2.5	6,700	<2.5	<2.5	<500
MW3	12/05/06	<2.5	<2.5	<2.5	6,700	<2.5	<2.5	<500
MW3	03/12/07	<2.5	<2.5	<2.5	5,900	<2.5	<2.5	<500
MW3	05/29/07	<0.500	<0.500	<0.500	4,330	<0.500	<0.500	<50.0
MW3	08/29/07	<1.0	<1.0	<1.0	2,800	<1.0	<1.0	<200
MW3	11/29/07	<1.0	<1.0	<1.0	3,700	<1.0	<1.0	<200
MW3	02/27/08	<5.0	<5.0	<5.0	4,300	<5.0	<5.0	<1,000
MW3	05/28/08	<0.500	<0.500	<0.500	920	<0.500	<0.500	<50.0
MW3	08/27/08	<0.50	<0.50	<0.50	450	<0.50	<0.50	<50
MW3	11/25/08	<2.5	<2.5	<2.5	230	<2.5	<2.5	<250
MW3	02/25/09	<2.5	<2.5	<2.5	460	<2.5	<2.5	<250
MW3	05/27/09	<2.5	<2.5	<2.5	220	<2.5	<2.5	<250
MW3	09/09/09	<0.50	<0.50	<0.50	79	<0.50	<0.50	<50
MW3	12/02/09	<0.50	<0.50	<0.50	120	<0.50	<0.50	<50
MW3	04/28/10	<1.0	<1.0	<1.0	140	<1.0	<1.0	<100
MW3	11/18/10	<0.50	<0.50	<0.50	43	<0.50	<0.50	<50
MW3	05/26/11	<5.0	<5.0	<5.0	100	<5.0	<5.0	<500
<b>MW3</b>	<b>10/10/11</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>170</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;250</b>

**TABLE 1B**  
**ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Ethanol (µg/L)
MW4	01/17/89 - 04/14/00	Not analyzed for these analytes.						
MW4	06/16/00	Property transferred to Valero Refining Company.						
MW4	07/05/00 - 02/04/02	Not analyzed for these analytes.						
MW4	05/06/02	<0.50	<0.50	<0.50	499.0	0.8	<0.50	---
MW4	08/22/02 - 11/14/03	Not analyzed for these analytes.						
MW4	03/01/04	<0.50	<0.50	<0.50	1,780	<0.50	<0.50	---
MW4	06/15/04	---	---	---	---	---	---	<100
MW4	09/13/04	---	---	---	---	---	---	---
MW4	12/22/04	---	---	---	---	---	---	---
MW4	03/24/05	<0.50	<0.50	<0.50	8,860	<0.50	<0.50	<50.0
MW4	06/14/05	<0.50	2.20	<0.50	5,890	<0.50	<0.50	<50.0
MW4	09/12/05	<0.500	<0.500	<0.500	7,230	<0.500	<0.500	<50.0
MW4	12/13/05	<0.500	3.49	<0.500	3,750g	<0.500	<0.500	<50.0
MW4	03/13/06	<0.50	<0.50	<0.50	2,000	<0.50	<0.50	<100
MW4	06/12/06	<0.50	<0.50	<0.50	740	<0.50	<0.50	<100
MW4	09/08/06	<0.50	<0.50	<0.50	2,800	<0.50	<0.50	<100
MW4	12/05/06	<0.50	<0.50	<0.50	3,900	<0.50	<0.50	<100
MW4	03/12/07	<1.0	<1.0	<1.0	2,800	<1.0	<1.0	<200
MW4	05/29/07	<0.500	<0.500	<0.500	1,350	<0.500	<0.500	<50.0
MW4	08/29/07	<0.50	<0.50	<0.50	940	<0.50	<0.50	<100
MW4	11/29/07	<0.50	<0.50	<0.50	810	<0.50	<0.50	<100
MW4	02/27/08	<0.50	<0.50	<0.50	220	<0.50	<0.50	<100
MW4	05/28/08	<0.500	<0.500	<0.500	107	<0.500	<0.500	<50.0
MW4	08/27/08	<0.50	<0.50	<0.50	130	<0.50	<0.50	<50
MW4	11/25/08	<0.50	<0.50	<0.50	69	<0.50	<0.50	<50
MW4	02/25/09	<2.5	<2.5	<2.5	46	<2.5	<2.5	<250
MW4	05/27/09	<2.5	<2.5	<2.5	<25	<2.5	<2.5	<250
MW4	09/08/09	<1.0	<1.0	<1.0	18	<1.0	<1.0	<100
MW4	12/02/09	<0.50	<0.50	<0.50	38	<0.50	<0.50	<50
MW4	04/28/10	<0.50	<0.50	<0.50	23	<0.50	<0.50	<50
MW4	11/18/10	<0.50	<0.50	<0.50	33	<0.50	<0.50	<50
MW4	05/26/11	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<50
<b>MW4</b>	<b>10/10/11</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>15m</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;100</b>
MW5	01/17/89 - 04/14/00	Not analyzed for these analytes.						
MW5	06/16/00	Property transferred to Valero Refining Company.						

**TABLE 1B**  
**ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Ethanol (µg/L)
MW5	07/05/00 - 02/04/02	Not analyzed for these analytes.						
MW5	05/06/02	<0.50	<0.50	<0.50	306	<0.50	3	---
MW5	08/22/02 - 11/14/03	Not analyzed for these analytes.						
MW5	03/01/04	<0.50	<0.50	<0.50	528	<0.50	1	---
MW5	06/15/04	---	---	---	---	---	---	<100
MW5	09/13/04	---	---	---	---	---	---	---
MW5	12/22/04	---	---	---	---	---	---	---
MW5	03/24/05	<0.50	<0.50	<0.50	1,560	<0.50	1.30	<50.0
MW5	06/14/05	<0.50	<0.50	<0.50	908	<0.50	1.70	<50.0
MW5	09/12/05	<0.500	13.6	<0.500	1,130	<0.500	<0.500	<50.0
MW5	12/13/05	<0.500	16.5	<0.500	878	<0.500	1.01	<50.0
MW5	03/13/06	<0.50	<0.50	<0.50	1,800h	<0.50	<0.50	<100
MW5	06/12/06	<2.5	<2.5	<2.5	800	<2.5	<2.5	<500
MW5	09/08/06	<2.5	<2.5	<2.5	79	<2.5	<2.5	<500
MW5	12/05/06	<0.50	<0.50	<0.50	230	<0.50	<0.50	<100
MW5	03/12/07	<0.50	<0.50	<0.50	290	<0.50	<0.50	<100
MW5	05/29/07	<0.500	<0.500	<0.500	171	<0.500	<0.500	<50.0
MW5	08/29/07	<0.50	<0.50	<0.50	190	<0.50	<0.50	<100
MW5	11/29/07	<0.50	<0.50	<0.50	110	<0.50	<0.50	<100
MW5	02/27/08	<0.50	<0.50	<0.50	78	<0.50	<0.50	<100
MW5	05/28/08	<0.500	<0.500	<0.500	68.3	<0.500	<0.500	<50.0
MW5	08/27/08	<5.0	<5.0	<5.0	<50	<5.0	<5.0	<500
MW5	11/25/08	<5.0	<5.0	<5.0	51	<5.0	<5.0	<500
MW5	02/25/09	<5.0	<5.0	<5.0	<50	<5.0	<5.0	<500
MW5	05/27/09	<5.0	<5.0	<5.0	<50	<5.0	<5.0	<500
MW5	09/09/09	<2.5	<2.5	<2.5	<25	<2.5	<2.5	<250
MW5	12/02/09	<2.0	<2.0	<2.0	<20	<2.0	<2.0	<200
MW5	04/28/10	<0.50	<0.50	<0.50	6.7	<0.50	<0.50	<50
MW5	11/18/10	<5.0	<5.0	<5.0	<50	<5.0	<5.0	<500
MW5	05/26/11	<2.0	<2.0	<2.0	<20	<2.0	<2.0	<200
<b>MW5</b>	<b>10/10/11</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;20</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;200</b>
MW6	01/17/89 - 04/14/00	Not analyzed for these analytes.						
MW6	06/16/00	Property transferred to Valero Refining Company.						
MW6	07/05/00 - 02/04/02	Not analyzed for these analytes.						
MW6	05/06/02	<0.50	<0.50	<0.50	32	<0.50	<0.50	---
MW6	08/22/02 - 11/14/03	Not analyzed for these analytes.						

**TABLE 1B**  
**ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Ethanol (µg/L)
MW6	03/01/04	<0.50	<0.50	<0.50	2,000	<0.50	<0.50	---
MW6	06/15/04	---	---	---	---	---	---	<100
MW6	09/13/04	---	---	---	---	---	---	---
MW6	12/22/04	---	---	---	---	---	---	---
MW6	03/24/05	<0.50	<0.50	<0.50	14,700	<0.50	<0.50	<50.0
MW6	06/14/05	<0.50	<0.50	<0.50	22,800	<0.50	<0.50	<50.0
MW6	09/12/05	<0.500	<0.500	<0.500	15,400	<0.500	<0.500	<50.0
MW6	12/13/05	<0.500	<0.500	<0.500	5,640g	<0.500	<0.500	<50.0
MW6	03/13/06	<5.0	<5.0	<5.0	11,000	<5.0	<5.0	<1,000
MW6	06/12/06	<5.0	<5.0	<5.0	7,700	<5.0	<5.0	<1,000
MW6	09/08/06	<5.0	<5.0	<5.0	6,000	<5.0	<5.0	<1,000
MW6	12/05/06	<2.5	<2.5	<2.5	11,000	<2.5	<2.5	<500
MW6	03/12/07	<2.5	<2.5	<2.5	5,200	<2.5	<2.5	<500
MW6	05/29/07	<0.500	<0.500	<0.500	3,640	<0.500	<0.500	<50.0
MW6	08/29/07	<2.5	<2.5	<2.5	4,400	<2.5	<2.5	<500
MW6	11/29/07	<2.5	<2.5	<2.5	7,800	<2.5	<2.5	<500
MW6	02/27/08	<25	<25	<25	2,600	<25	<25	<5,000
MW6	05/28/08	<0.500	<0.500	<0.500	156	<0.500	<0.500	<50.0
MW6	08/27/08	<50	<50	<50	<500	<50	<50	<5,000
MW6	11/25/08	<50	<50	<50	890	<50	<50	<5,000
MW6	02/25/09	<50	<50	<50	580	<50	<50	<5,000
MW6	05/27/09	<10	<10	<10	860	<10	<10	<1,000
MW6	09/09/09	<10	<10	<10	120	<10	<10	<1,000
MW6	12/02/09	<5.0	<5.0	<5.0	450	<5.0	<5.0	<500
MW6	04/28/10	<1.0	<1.0	<1.0	210	<1.0	<1.0	<100
MW6	11/18/10	<0.50	<0.50	<0.50	53	<0.50	<0.50	<50
MW6	05/25/11	<2.0	<2.0	<2.0	29m	<2.0	<2.0	<200
<b>MW6</b>	<b>10/10/11</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>51</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;50</b>
MW7	01/09/90 - 04/14/00	Not analyzed for these analytes.						
MW7	06/16/00	Property transferred to Valero Refining Company.						
MW7	07/05/00 - 02/04/02	Not analyzed for these analytes.						
MW7	05/06/02	<0.50	<0.50	<0.50	144	<0.50	<0.50	---
MW7	08/22/02 - 11/14/03	Not analyzed for these analytes.						
MW7	03/01/04	<0.50	<0.50	<0.50	295	<0.50	<0.50	---
MW7	06/15/04	---	---	---	---	---	---	<100
MW7	09/13/04	---	---	---	---	---	---	---

**TABLE 1B**  
**ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
 Former Exxon Service Station 70104  
 1725 Park Street  
 Alameda, California

Well ID	Sampling Date	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Ethanol (µg/L)	
MW7	12/22/04	---	---	---	---	---	---	---	
MW7	03/24/05	<0.50	<0.50	<0.50	163	<0.50	<0.50	<50.0	
MW7	06/14/05	<0.50	<0.50	<0.50	878	<0.50	<0.50	<50.0	
MW7	09/12/05	<0.500	<0.500	<0.500	6,910	<0.500	<0.500	<50.0	
MW7	12/13/05	<0.500	<0.500	<0.500	683	<0.500	<0.500	<50.0	
MW7	03/13/06	<0.50	<0.50	<0.50	120	<0.50	<0.50	<100	
MW7	06/12/06	<0.50	<0.50	<0.50	31	<0.50	<0.50	<100	
MW7	09/08/06	<0.50	<0.50	<0.50	550	<0.50	<0.50	<100	
MW7	12/05/06	<0.50	<0.50	<0.50	200	<0.50	<0.50	<100	
MW7	03/12/07	<0.50	<0.50	<0.50	370	<0.50	<0.50	<100	
MW7	05/29/07	<0.500	<0.500	<0.500	270	<0.500	<0.500	<50.0	
MW7	08/29/07	<0.50	<0.50	<0.50	150	<0.50	<0.50	<100	
MW7	11/29/07	<0.50	<0.50	<0.50	98	<0.50	<0.50	<100	
MW7	02/27/08	<0.50	<0.50	<0.50	49	<0.50	<0.50	<100	
MW7	05/28/08	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	<50.0	
MW7	08/27/08	<0.50	<0.50	<0.50	7.9	<0.50	<0.50	<50	
MW7	11/25/08	<0.50	<0.50	<0.50	19	<0.50	<0.50	<50	
MW7	02/25/09	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<50	
MW7	05/27/09	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<50	
MW7	09/08/09	<0.50	<0.50	<0.50	9.6	<0.50	<0.50	<50	
MW7	12/02/09	<0.50	<0.50	<0.50	5.1	<0.50	<0.50	<50	
MW7	04/28/10	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<50	
MW7	11/18/10	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<50	
MW7	05/25/11	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<50	
<b>MW7</b>	<b>10/10/11</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;5.0</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;50</b>	
MW8	09/12/94 - 01/13/99	Not analyzed for these analytes.							
MW8	04/28/99	<0.50	<0.50	<0.50	<10.0	<0.50	<0.50	---	
MW8	07/09/99 - 04/14/00	Not analyzed for these analytes.							
MW8	06/16/00	Property transferred to Valero Refining Company.							
MW8	07/05/00 - 02/04/02	Not analyzed for these analytes.							
MW8	05/06/02	<0.50	<0.50	<0.50	<10.0	<0.50	<0.50	---	
MW8	08/22/02 - 11/14/03	Not analyzed for these analytes.							
MW8	03/01/04	<0.50	<0.50	<0.50	<10.0	<0.50	<0.50	---	
MW8	06/15/04	---	---	---	---	---	---	<100	
MW8	09/13/04	---	---	---	---	---	---	---	
MW8	12/22/04	---	---	---	---	---	---	---	

**TABLE 1B  
ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California**

Well ID	Sampling Date	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Ethanol (µg/L)
MW8	03/24/05	<0.50	<0.50	<0.50	<10.0	<0.50	<0.50	<50.0
MW8	06/14/05	<0.50	<0.50	<0.50	<10.0	<0.50	<0.50	<50.0
MW8	09/12/05	<0.500	<0.500	<0.500	46.2	<0.500	<0.500	<50.0
MW8	12/13/05	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	<50.0
MW8	03/13/06	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW8	06/12/06	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW8	09/08/06	<0.50	<0.50	<0.50	6.9	<0.50	<0.50	---
MW8	12/05/06	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW8	03/12/07	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW8	05/29/07	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	---
MW8	08/29/07	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---
MW8	11/29/07	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---
MW8	02/27/08	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW8	05/28/08	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	---
MW8	08/27/08	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<50
MW8	11/25/08	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<50
MW8	02/25/09	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW8	05/27/09	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW8	09/09/09	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW8	12/02/09	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW8	04/28/10	Well inaccessible.						
MW8	11/18/10	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW8	05/25/11	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
<b>MW8</b>	<b>10/10/11</b>	<b>Well inaccessible.</b>						
MW9	05/14/93 - 04/14/00	Not analyzed for these analytes.						
MW9	06/16/00	Property transferred to Valero Refining Company.						
MW9	07/05/00 - 02/04/02	Not analyzed for these analytes.						
MW9	05/06/02	<0.50	<0.50	<0.50	<10.0	<0.50	<0.50	---
MW9	08/22/02 - 11/14/03	Not analyzed for these analytes.						
MW9	03/01/04	<0.50	<0.50	<0.50	<10.0	<0.50	<0.50	---
MW9	06/15/04	---	---	---	---	---	---	<100
MW9	09/13/04	---	---	---	---	---	---	---
MW9	12/22/04	---	---	---	---	---	---	---
MW9	03/24/05	<0.50	<0.50	<0.50	<10.0	<0.50	<0.50	<50.0
MW9	06/14/05	<0.50	<0.50	<0.50	<10.0	<0.50	<0.50	<50.0
MW9	09/12/05	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	<50.0

**TABLE 1B**  
**ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Ethanol (µg/L)
MW9	12/13/05	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	<50.0
MW9	03/13/06	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW9	06/12/06	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW9	09/08/06	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW9	12/05/06	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW9	03/12/07	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW9	05/29/07	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	---
MW9	08/29/07	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---
MW9	11/29/07	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---
MW9	02/27/08	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW9	05/28/08	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	---
MW9	08/27/08	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<50
MW9	11/25/08	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<50
MW9	02/25/09	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW9	05/27/09	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW9	09/09/09	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW9	12/02/09	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW9	04/28/10	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW9	11/18/10	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW9	05/25/11	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
<b>MW9</b>	<b>10/10/11</b>	<b>Well inaccessible.</b>						
MW10	05/14/93 - 10/08/97	Not analyzed for these analytes.						
MW10	12/12/97	Well destroyed.						
MW11	09/12/94 - 04/14/00	Not analyzed for these analytes.						
MW11	06/16/00	Property transferred to Valero Refining Company.						
MW11	07/05/00 - 02/04/02	Not analyzed for these analytes.						
MW11	05/06/02	<0.50	<0.50	<0.50	311	1.00	<0.50	---
MW11	08/22/02 - 11/14/03	Not analyzed for these analytes.						
MW11	03/01/04	<0.50	<0.50	<0.50	21	<0.50	<0.50	---
MW11	06/15/04	---	---	---	---	---	---	<100
MW11	09/13/04	---	---	---	---	---	---	---
MW11	12/22/04	---	---	---	---	---	---	---
MW11	03/24/05	<0.50	<0.50	<0.50	<10.0	<0.50	<0.50	<50.0
MW11	06/14/05	<0.50	<0.50	<0.50	49.0	<0.50	<0.50	<50.0
MW11	09/12/05	<0.500	<0.500	<0.500	24.2	<0.500	<0.500	<50.0

**TABLE 1B**  
**ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
 Former Exxon Service Station 70104  
 1725 Park Street  
 Alameda, California

Well ID	Sampling Date	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Ethanol (µg/L)
MW11	12/13/05	<0.500	<0.500	<0.500	70.8	<0.500	<0.500	<50.0
MW11	03/13/06	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW11	06/12/06	<0.50	<0.50	<0.50	56	<0.50	<0.50	---
MW11	09/08/06	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW11	12/05/06	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---
MW11	03/12/07	<0.50	<0.50	<0.50	45	<0.50	<0.50	---
MW11	05/29/07	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	---
MW11	08/29/07	<0.50	<0.50	<0.50	100	<0.50	<0.50	---
MW11	11/29/07	<0.50	<0.50	<0.50	110	<0.50	<0.50	---
MW11	02/27/08	<0.50	<0.50	<0.50	31	<0.50	<0.50	---
MW11	05/28/08	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	---
MW11	08/27/08	<25	<25	<25	<250	<25	<25	<2,500
MW11	11/25/08	<25	<25	<25	<250	<25	<25	<2,500
MW11	02/25/09	<2.5	<2.5	<2.5	<25	<2.5	<2.5	---
MW11	05/27/09	<10	18	<10	120	<10	<10	---
MW11	09/09/09	<50	<50	<50	<500	<50	<50	---
MW11	12/02/09	<25	<25	<25	<250	<25	<25	---
MW11	04/28/10	<12	<12	<12	<120	<12	<12	---
MW11	11/18/10	<10	<10	<10	<100	<10	<10	---
MW11	05/26/11	<10	<10	<10	<100	<10	<10	---
<b>MW11</b>	<b>10/10/11</b>	<b>Well inaccessible.</b>						
MW12	10/17/95 - 04/14/00	Not analyzed for these analytes.						
MW12	06/16/00	Property transferred to Valero Refining Company.						
MW12	07/05/00 - Present	Not analyzed for these analytes.						
EW1	10/21/93 - 04/14/00	Not analyzed for these analytes.						
EW1	06/16/00	Property transferred to Valero Refining Company.						
EW1	07/05/00 - Present	Not analyzed for these analytes.						
EW2	10/21/93 - 04/14/00	Not analyzed for these analytes.						
EW2	06/16/00	Property transferred to Valero Refining Company.						
EW2	07/05/00 - Present	Not analyzed for these analytes.						
EW3	10/21/93 - 04/14/00	Not analyzed for these analytes.						
EW3	06/16/00	Property transferred to Valero Refining Company.						
EW3	07/05/00 - Present	Not analyzed for these analytes.						

**TABLE 1B**  
**ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

Well ID	Sampling Date	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Ethanol (µg/L)
EW4	10/21/93 - 04/14/00	Not analyzed for these analytes.						
EW4	06/16/00	Property transferred to Valero Refining Company.						
EW4	07/05/00 - Present	Not analyzed for these analytes.						
EW5	10/21/93 - 04/14/00	Not analyzed for these analytes.						
EW5	06/16/00	Property transferred to Valero Refining Company.						
EW5	07/05/00 - Present	Not analyzed for these analytes.						
<b>Grab Groundwater Samples</b>								
W-8-SB14	03/08/12	<0.50	<0.50	<0.50	5.8	<0.50	<0.50	---
W-8-SB15	03/08/12	<0.50	<0.50	<0.50	6.8	<0.50	<0.50	---

**TABLE 1B**  
**ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California

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Notes:	Total Dissolved Solids were reported in samples collected from wells MW1 and MW4 at 910 ppm and 370 ppm, respectively, on March 7, 1990.
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.
TPHd	= Total petroleum hydrocarbons as diesel using EPA Method 5030/8015 (modified).
TPHg	= Total petroleum hydrocarbons as gasoline analyzed using EPA Method 5030/8015B (modified).
MTBE 8021B	= Methyl tertiary butyl ether analyzed using EPA Method 8021B.
MTBE 8260B	= Methyl tertiary butyl ether analyzed using EPA Method 8260B.
BTEX	= Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8021B.
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.
<	= Less than the stated laboratory method reporting limit.
---	= Not measured/Not sampled/Not analyzed.
a	= Total volatile hydrocarbons by DHS /LUFT Manual Method.
b	= Results obtained from a 1:10 dilution analyzed on January 17, 1995.
c	= Diesel-range hydrocarbons reportedly detected in bailer blank; result is suspect.
d	= Hydrocarbon pattern does not resemble the requested fuel.
e	= Analyte presence not confirmed by second column or GC/MS analysis.
f	= Analyte detected in laboratory method blank; result is suspect.
g	= Concentration estimated. Analyte exceeded calibration range. Reanalysis not performed due to holding time requirements.
h	= Initial analysis within holding time. Reanalysis for required dilution, confirmation, or QA/QC was past holding time.
i	= Elevated result due to single analyte peak(s) in the quantitation range.
j	= Calibration verification recovery above the method control limit. A high bias may be indicated.
k	= Liquid-phase petroleum hydrocarbons present in well, thickness not measured, or not measurable.
l	= A peak eluting before benzene was present in the groundwater sample, and is suspected to be MTBE.
m	= Compound did not meet method-described identification guidelines. Identification was based on additional GC/MS characteristics.

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**TABLE 2**  
**WELL CONSTRUCTION DETAILS**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, 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 a	1988	---	17.29	NS	22	NS	4	NS	6-22	NS	NS	NS
MW2 a	1988	---	16.39	NS	16	NS	4	NS	3-15	NS	NS	NS
MW3 a	1988	---	17.02	NS	16	NS	4	NS	4-15	NS	NS	NS
MW4 a	1988	---	17.29	NS	21	NS	4	NS	4-19	NS	NS	NS
MW5 a	1988	---	16.64	NS	21	NS	4	NS	5-20	NS	NS	NS
MW6 a	1988	---	17.31	NS	21	NS	4	NS	5-20	NS	NS	NS
MW7 a	1988	---	17.06	NS	40	NS	4	NS	3-19	NS	NS	NS
MW8	05/05/93	---	16.24	8	21.5	19	2	PVC	5-19	0.020	3.5-19	#3 Sand
MW9	05/05/93	---	15.56	8	19	19	2	PVC	5-19	0.020	3.5-19	#3 Sand
MW10	NS	12/12/97	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW11b	1995	---	17.98	8	20	20	2	PVC	5-20	0.020	4-20	#3 Sand
MW12b	1995	---	16.15	8	20	20	2	PVC	5-20	0.020	4-20	#3 Sand
EW1 a	Dec. 1991	---	16.27	NS	41	NS	4	NS	5-36	NS	NS	NS
EW2 a	Dec. 1991	---	16.07	NS	40	NS	NS	NS	5-35.5	NS	NS	NS
EW3 a	Dec. 1991	---	16.08	NS	40	NS	4	NS	5-35.5	NS	NS	NS
EW4 a	Dec. 1991	---	15.69	NS	40.5	NS	NS	NS	4-35.5	NS	NS	NS
EW5 a	Dec. 1991	---	16.67	NS	41	NS	4	NS	5-40	NS	NS	NS
SW1	11/10/93	---	NS	8	20.5	20	2	PVC	17.5-20	0.010	16-20	Pea Gravel

**TABLE 2**  
**WELL CONSTRUCTION DETAILS**  
 Former Exxon Service Station 70104  
 1725 Park Street  
 Alameda, 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
SM1	11/10/93	---	NS	8	20.5	20	2	PVC	17.5-20	0.010	16-20	Pea Gravel
VW1	11/10/93	---	NS	8	7	7	2	PVC	4.5-7	0.020	4-7	#3 Sand
VW2	11/10/93	---	NS	8	7.5	7	2	PVC	4.5-7	0.020	4-7	#3 Sand

**Notes:**

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

PVC = Polyvinyl chloride.

feet bgs = feet below ground surface.

NS = Not specified.

--- = Not measured.

a = Boring logs unavailable; data obtained by using cross sections from Environmental Resolutions Inc.'s Site Conceptual Model, dated August 2, 2002.

b = Boring logs unavailable; data obtained from Delta Environmental's Proposed Additional Hydrogeologic Investigative Work, dated November 15, 1994; data are approximate values.

**TABLE 3**  
**CUMULATIVE SOIL ANALYTICAL RESULTS**

Former Exxon Service Station 70104

1725 Park Street

Alameda, California

(Page 1 of 3)

Sample ID	Sampling Date	Sample Depth (feet)	TPHd (mg/kg)	TPHg (mg/kg)	MTBE (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	Add'l VOCs (mg/kg)	Lead (mg/kg)
<b>Soil and Monitoring Well Boring Samples</b>											
MW1	06/02/88	10	---	11.0	---	0.0670	<0.025	0.150	0.370	---	---
MW2	06/02/88	5	---	1,400	---	<2.0	32.0	25.0	150.0	---	---
MW3	06/02/88	5	---	74	---	<0.500	<0.500	<0.500	2.4	---	---
MW4	01/09/89	5	---	0.6	---	0.017	0.002	0.007	0.012	---	---
MW5	01/09/89	4.5	---	2.0	---	0.055	0.007	0.066	0.240	---	---
MW6	01/09/89	5	---	490	---	3.7	0.970	23.0	94.0	---	---
MW7	01/04/89	5.5	---	600	---	1.7	3.2	10.0	29.0	---	---
SB-1	03/19/90	2.2	---	1.8	---	0.0062	<0.0025	0.016	0.0092	---	---
SB-1	03/19/90	4.5	---	260	---	1.3	1.3	1.4	4.9	---	---
SB-1	03/19/90	5	---	2,600	---	6.9	23.0	32.0	14.0	---	---
SB-2	03/19/90	2.5	---	1.3	---	0.013	0.018	0.10	0.54	---	---
SB-2	03/19/90	4	---	230	---	1.2	3.7	2.1	1.3	---	---
SB-3	03/19/90	3	---	1.8	---	0.0068	0.047	0.011	0.230	---	---
SB-3	03/19/90	5	---	540	---	4.6	12.0	3.2	44.0	---	---
SB-4	03/19/90	4	---	<1.0	---	<0.0025	<0.0025	0.0053	0.018	---	---
SB-4	03/19/90	5	---	<1.0	---	<0.0025	<0.0025	<0.0025	<0.0025	---	---
SB-5	03/19/90	2.5	---	<1.0	---	0.028	0.006	0.0065	0.016	---	---
SB-5	03/19/90	4.5	---	<1.0	---	0.150	0.080	0.016	0.069	---	---
SB-5	03/19/90	5.5	---	260	---	1.3	6.5	4.0	24.0	---	---
SB-6	03/19/90	2.5	---	140	---	1.1	1.2	1.7	6.7	---	---
SB-6	03/19/90	5	---	1.6	---	0.065	0.020	0.019	0.060	---	---
SB-7	03/19/90	3	---	240	---	0.260	1.4	1.2	4.7	---	---
SB-7	03/19/90	6	---	<1.0	---	0.055	0.0041	0.012	0.011	---	---
MW8/SB-8	05/05/93	5.5	<5.0	<1.0	---	<0.005	<0.005	<0.005	<0.005	---	---
MW9/SB-9	05/05/93	6	<5.0	<1.0	---	<0.005	<0.005	<0.005	<0.005	---	---
MW10/SB-10	05/05/93	6	<5.0	<1.0	---	<0.005	<0.005	<0.005	<0.005	---	---
S-5-B11/SW-1	11/01/93	5	---	<1.0	---	0.061	<0.005	0.018	<0.005	---	---
S-9-B11/SW-1	11/01/93	9	---	<1.0	---	0.054	0.0075	0.020	0.029	---	---
S-11-B11/SW-1	11/01/93	11	---	<1.0	---	<0.005	<0.005	<0.005	<0.005	---	---
S-4.5-B11/SW-1	11/01/93	14.5	---	<1.0	---	<0.005	<0.005	<0.005	<0.005	---	---
S-19.5-B11/SW-1	11/01/93	19.5	---	<1.0	---	<0.005	<0.005	<0.005	<0.005	---	---
S-5-B13/SM-1	11/01/93	5	---	1,400	---	0.170	<0.005	0.060	0.0073	---	---
S-9-B13/SM-1	11/01/93	7	---	1,800	---	7.6	10.0	37.0	98.0	---	---

**TABLE 3**  
**CUMULATIVE SOIL ANALYTICAL RESULTS**  
Former Exxon Service Station 70104  
1725 Park Street  
Alameda, California  
(Page 2 of 3)

Sample ID	Sampling Date	Sample Depth (feet)	TPHd (mg/kg)	TPHg (mg/kg)	MTBE (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	Add'l VOCs (mg/kg)	Lead (mg/kg)
S-10-B13/SM-1	11/01/93	10	---	290	---	0.077	0.031	0.085	0.270	---	---
S-12.5-B13/SM-1	11/01/93	12.5	---	<1.0	---	<0.005	<0.005	<0.005	<0.005	---	---
S-15.5-B13/SM-1	11/01/93	15.5	---	<1.0	---	<0.005	<0.005	<0.005	<0.005	---	---
S-20-B13/SM-1	11/01/93	20	---	<1.0	---	<0.005	<0.005	<0.005	0.0079	---	---
MW-11-6.5	08/23/95	6.5	---	<1.0	<0.025	<0.005	<0.005	<0.005	0.024	---	---
MW-11-11.5	08/23/95	11.5	---	2.0	<0.025	0.26	<0.005	0.021	0.16	---	---
MW-12-6.5	08/23/95	6.5	---	<1.0	<0.025	<0.005	<0.005	<0.005	<0.005	---	---
S-5-SB14	03/08/12	5	<5.0	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	NDc	---
S-7.5-SB14	03/08/12	7.5	<5.0	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	NDc	---
S-5-SB15	03/08/12	5	<5.0	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	NDc	---
S-7.5-SB15	03/08/12	7.5	<5.0	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	NDc	---
S-5-SB16	02/28/12	5	<5.0	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	NDc	---
S-5-SB17	02/28/12	5	120a	600	<0.50	<0.0050	<0.0050	<0.0050	<0.010	NDc	---
S-5-SB18	02/28/12	5	<5.0	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	NDc	---
S-5-SB19	02/28/12	5	83a	720	<0.50	<0.040	<0.040	5.4	17	NDc	---
S-5-SB20	02/28/12	5	880a	4,100a	<1.0	2.7	<0.40	26	420	NDc	---
S-5-SB21	02/28/12	5	<5.0	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	NDc	---
<b>Dispenser and Product Line Samples</b>											
DI-1-3.5	06/25/97	3.5	---	21	---	0.023	0.050	0.076	0.45	---	---
DI-2-3.5	06/25/97	3.5	---	30	---	<0.05	0.051	0.083	0.52	---	---
DI-3-3.5	06/25/97	3.5	---	<1.0	---	<0.005	<0.005	<0.005	0.012	---	---
DI-4-3.5	06/25/97	3.5	---	160	---	0.30	<0.12	2.1	0.81	---	---
PL-1-3.5	06/25/97	3.5	---	15	---	0.22	0.042	0.19	0.32	---	---
PL-2-3.5	06/25/97	3.5	---	1,200	---	3.2	2.2	7.7	66	---	---
PL-3-3.5	06/25/97	3.5	---	96	---	1.1	0.22	0.37	0.82	---	---
<b>Soil Stockpile Samples</b>											
SP-1-(A-D)	03/08/12	---	<5.0	11	<0.0050	<0.050	<0.050	0.036	0.14	b	5.12

**TABLE 3**  
**CUMULATIVE SOIL ANALYTICAL RESULTS**

Former Exxon Service Station 70104

1725 Park Street

Alameda, California

(Page 3 of 3)

Notes:	=	
TPHd	=	Total petroleum hydrocarbons as diesel using EPA Method 8015 (modified).
TPHg	=	Total petroleum hydrocarbons as gas analyzed using EPA Method 8015 (modified).
MTBE	=	Methyl tertiary butyl ether analyzed using EPA method 8260B; prior to 2012, analyzed using EPA Method 8020.
BTEX	=	Benzene, toluene, ethylbenzene and total xylenes using EPA Method 8020 or 8021B.
Add'l VOCs	=	Additional volatile organic compounds analyzed using EPA Method 8260B.
Lead	=	Total lead analyzed using EPA Method 6010B.
feet bgs	=	Feet below ground surface.
mg/kg	=	Milligrams per kilogram.
<	=	Less than the stated laboratory detection limit.
---	=	Not Analyzed.
a	=	Chromatographic pattern does not match that of the specified standard.
b	=	0.74 1,2,4-trimethylbenzene, 0.66 1,3,5-trimethylbenzene, 0.022 n-butylbenzene, and 0.0067 p-isopropyltoluene.
c	=	Fuel oxygenates and lead scavengers only.

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**APPENDIX A**

**CORRESPONDENCE**



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

December 20, 2011

Ms. Jennifer Sedlachek  
ExxonMobil  
4096 Piedmont Ave., #194  
Oakland, CA 94611  
(Sent via E-mail to: [jennifer.c.sedlachek@exxonmobil.com](mailto:jennifer.c.sedlachek@exxonmobil.com))

Fuad Ateyeh  
1725 Park St.  
Alameda, CA 94501

Subject: Fuel Leak Case No. RO0000448 and Geotracker Global ID T0600100555, Exxon 7-0104, 1725 Park St., Alameda, CA

Dear Ms. Sedlachek and Mr. Ateyeh:

Thank you for submitting the document entitled, *Addendum and Confirmation Soil Boring Work Plan* dated January 27, 2011 which was prepared by Cardno ERI for the subject site. Alameda County Environmental Health (ACEH) staff has reviewed the case file including the above-mentioned reports for the above-referenced site. The work plan presents an alternative plan to collect confirmation soil and groundwater data rather than reinstalling well MW-10.

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

#### **TECHNICAL COMMENTS**

1. **Confirmation Results** – In addition to the standard data table, please present the confirmation sample data alongside the original results in the report requested below. These can be displayed in either a table format, figure or on a cross-section.

#### **NOTIFICATION OF FIELDWORK ACTIVITIES**

Please schedule the fieldwork activities and provide ACEH with at least three (3) business days notification prior to conducting the fieldwork, preferably by e-mail to [barbara.jakub@acgov.org](mailto:barbara.jakub@acgov.org).

Ms. Sedlachek  
RO000448  
December 20, 2011, Page 2

### TECHNICAL REPORT REQUEST

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

- **March 20, 2012 – Soil and Water Investigation Report**

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

Sincerely,

Digitally signed by Barbara J.  
Jakub  
DN: cn=Barbara J. Jakub, o, ou,  
email=barbara.jakub@acgov.org,  
c=US  
Date: 2011.12.20 09:37:16 -08'00'

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

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

cc: Paula Sime, Environmental Resolutions, Inc., 601 North McDowell Blvd. Petaluma, CA 94954 (*Sent via E-mail to: [psime@ERI-US.com](mailto:psime@ERI-US.com)*)

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

Barbara Jakub, ACEH (*Sent via E-mail to: [barbara.jakub@acgov.org](mailto:barbara.jakub@acgov.org)*)

GeoTracker, file

## Paula Sime

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**From:** Jakub, Barbara, Env. Health <barbara.jakub@acgov.org>  
**Sent:** Monday, March 12, 2012 11:53 AM  
**To:** Paula Sime  
**Subject:** RE: RO#448 Request for Extension

Paula,

Your request for an extension until April 20, 2012 due to the extra time it took to obtain an encroachment permit from City of Alameda is approved.

Regards,  
Barb Jakub

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**From:** Paula Sime [mailto:paula.sime@cardno.com]  
**Sent:** Monday, March 12, 2012 10:21 AM  
**To:** Jakub, Barbara, Env. Health  
**Subject:** RO#448 Request for Extension



Hi Barb,

We had some delays in the confirmation boring field work at Former Exxon Service Station 70104 (1725 Park Street, Alameda, RO#448) due to encroachment permitting. The work was completed last week. Would it be acceptable to extend the deadline for the report from March 20<sup>th</sup> to April 20<sup>th</sup>?

Thanks,  
Paula

**Paula Sime**  
Senior Project Manager  
**Cardno ERI**

601 North McDowell Blvd., Petaluma, CA 94954  
**Phone:** 707 766 2000 **Direct:** 707 766 2026 **Mobile:** 707 338 8012 **Fax:** 707 789 0414  
Email: [paula.sime@cardno.com](mailto:paula.sime@cardno.com)  
Cardno ERI Web: [www.cardnoeri.com](http://www.cardnoeri.com)  
Cardno Web: [www.cardno.com](http://www.cardno.com)

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**Privileged and Confidential Communication:** This electronic mail communication and any documents attached hereto may contain confidential and privileged material for the sole use of the intended recipient(s) named above. If you are not the intended recipient (or authorized to receive for the recipient) of this message, any review, use, distribution or disclosure by you or others is strictly prohibited. Please contact the sender by reply email and delete and/or destroy the accompanying message.



**State Water Resources Control Board**

November 29, 2011

Donna Drogos, Division Chief  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502

**SECOND 5-YEAR REVIEW SUMMARY REPORT FOR CLAIM NUMBER 1895;  
LOCATED AT 1725 PARK STREET, OAKLAND, CA**

The UST Cleanup Fund (Fund) has completed our review of Alameda County Environmental Health (Alameda County) Case No. RO0000448. The 5-Year Review Summary Report for this case is enclosed for your information and comment. Please note that the Fund's recommendations are based on review of information contained in the Fund's case files, data currently in the GeoTracker database and any other sources of information that were readily available to Fund staff at the time the review was conducted. Consequently, they may not reflect historical information that has not been uploaded to the GeoTracker database or available in the Fund's case files and any data that has been recently submitted to your office.

The Fund requests that Alameda County staff notify the Fund within 45 days from the date of this letter as to whether you agree or disagree with our recommendations for this case. If you agree with our recommendation, we request that you provide the Fund with an estimated timeframe to either implement the recommendations for additional corrective action or for closing this case. If you do not agree with our recommendations, we request that you provide the Fund with a summary of the reasons for disagreeing and/or impediments to implementing the recommendations for additional corrective action or closing this case. Responses to the Fund may be provided by e-mail, letter or a copy of correspondence to the RP, if the correspondence addresses all the information requested by the Fund. Please direct your response to:

Pat G. Cullen, P.G.  
Underground Storage Tank Cleanup Fund  
State Water Resources Control Board  
P.O. Box 944212  
Sacramento, CA 94244-2120  
([PCullen@waterboards.ca.gov](mailto:PCullen@waterboards.ca.gov))

Fund staff will be sending copies of the completed 5-Year Review Summary Report to applicable claimants 45 days from the date of this letter unless Alameda County notifies the Fund that they wish to discuss this case prior to transmittal to the claimant. If you or your staff has any questions or concerns on specific reports that you would like to discuss with the Fund prior to transmittal of the report to the claimant, please contact Pat G. Cullen at (916) 341-5735 or by email (PCullen@waterboards.ca.gov) within this period.

Sincerely,



Robert Trommer  
Senior Engineering Geologist  
Chief, Technical Review Unit  
Underground Storage Tank Cleanup Fund

CC: Ms. Mary Rose Cassa  
San Francisco RWQCB (Region 2)  
1515 Clay Street, Suite 1400  
Oakland, CA 94612



**State Water Resources Control Board**

**SECOND USTCF  
5-YEAR REVIEW SUMMARY**

**Agency Information**

Agency Name: Alameda County LOP	Address: 1131 Harbor Bay Parkway Alameda, CA 94501
Agency Caseworker: Barbara Jakub	

**Case Information**

Case No: RO0000448	Global ID: T0600100555
Site Name: Exxon #7-0104	Site Address: 1725 Park Street Oakland, CA 94612
Responsible Party: Jennifer C. Sedlachek	Address: ExxonMobil Environmental Services, 4096 Piedmont Avenue #194, Oakland, CA 94611
USTCF Claim No.: 1895	Number of Years Case Open: 20
USTCF Expenditures to Date: \$ 366,555	

**Tank Information**

Tank No.	Size in Gallons	Contents	Closed in Place/ Removed/Active ?	Date
1	?	Gasoline	Removed	1986
2	?	Gasoline	Removed	1986
3	?	Gasoline	Removed	1986
4	?	Gasoline	Active	1986
5	?	Gasoline	Active	1986
6	?	Gasoline	Active	1986

**Release Information**

- Source of Release: UST System
- Date of Release: The reported date of the release is 25 July 1991
- Affected Media: Soil and groundwater.

**Site Information**

- GW Basin: Santa Clara Valley - East Bay Plain
- Beneficial Uses: Municipal and domestic supply
- Land Use Designation: Commercial
- Distance to Nearest Supply Well: According to the California Department of Public Health (CDPH) data available in GeoTracker, there are no water supply wells within 1/2 mile of the Site.
- Minimum Groundwater Depth: 2.01 feet below ground surface (bgs) at monitoring well MW-1.
- Maximum Groundwater Depth: 32.48 feet bgs at monitoring well EW-3.

- Groundwater Flow Direction: Predominately to the east northeast with a gradient of 0.016 feet per foot.
- Soil Types: The Site is underlain by thin beds of sand, silty sand clay and a persistent one to three inch lens of gravel at approximately 14 feet bgs.
- Maximum Depth Sampled: 40 feet bgs

**Monitoring Well Information**

Well Designation	Date Installed	Screen Interval (feet bgs)	Depth To Water (feet bgs) (5/25/2011)
MW-1	1988	6-22	5.31
MW-2	1988	3-15	NM
MW-3	1988	4-15	NM
MW-4	1988	4-19	4.80
MW-5	1988	5-20	4.71
MW-6	1988	5-20	4.60
MW-7	1988	3-19	4.26
MW-8	May 1993	5-19	4.61
MW-9	May 1993	5-19	5.95
MW-10	Destroyed 1997	--	--
MW-11	1995	5-20	5.26
MW-12	1995	5-20	NM
EW-1	December 1991	5-36	NM
EW-2	December 1991	5-35.5	NM
EW-3	December 1991	5-35.5	4.29
EW-4	December 1991	4-35.5	NM
EW-5	December 1991	5-40	4.27
SW-1	November 1993	17.5-20	NM
SM-1	November 1993	17.5-20	NM
VW-1	November 1993	4.5-7	NM
VW-2	November 1993	4.5-7	NM

NA: Not Available  
NM: Not Measured

**Petroleum Hydrocarbon Constituent Concentration**

Contaminant	Soil (mg/kg)		Water (µg/L)		WQOs (µg/L)
	Maximum	Latest	Maximum	Latest (6/3/2011)	
TPH-g	2,600	NA	50,000	9,800	--
TPH-d	<5.0	NA	10,400	1,800	--
Benzene	7.6	NA	3,660	260	1
Toluene	12.0	NA	4,500	180	300
Ethylbenzene	37	NA	2,430	510	700
Xylenes	98	NA	10,100	1,400	1750
MTBE	NA	NA	16,000	68	5
TBA	NA	NA	26,000	210	1,200a

NA: Not Analyzed, Not Applicable or Data Not Available

mg/kg: milligrams per kilogram, parts per million  
µg/L: micrograms per liter, parts per billion  
WQOs: Water Quality Objectives  
a CDPH, Response Level

#### **Site Description**

The Site is located on the western corner of Park Street and Eagle Avenue in a commercial area of Oakland, CA. There are two active service stations a Shell-branded service station located at 1701 Park Street and a Chevron across Eagle Avenue and two former service stations are located on the opposite corners across Park Street. Multiple other auto repair type businesses operate along Park Street and Eagle Avenue.

#### **Site History/Assessments**

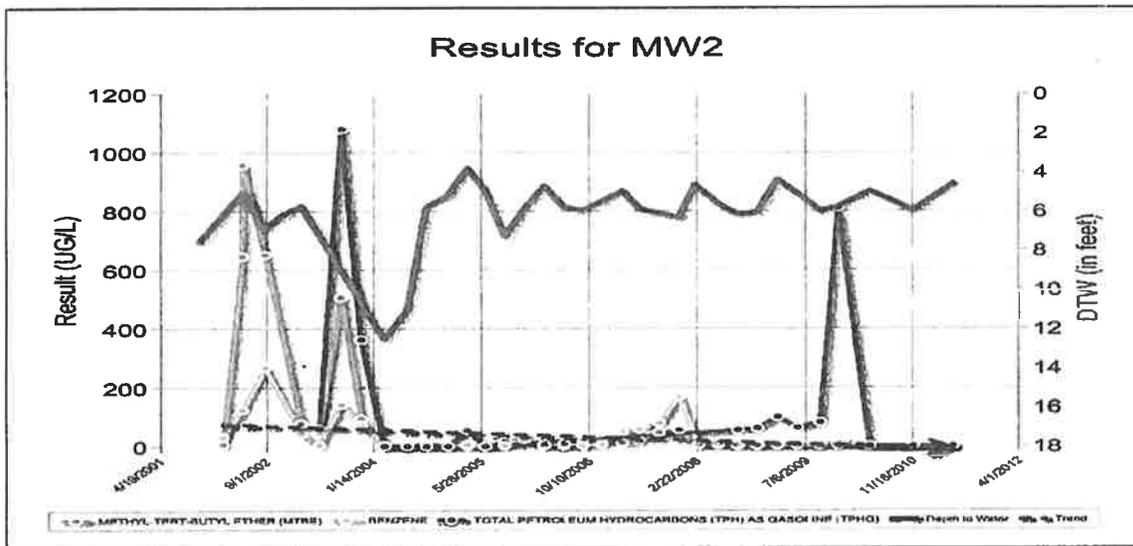
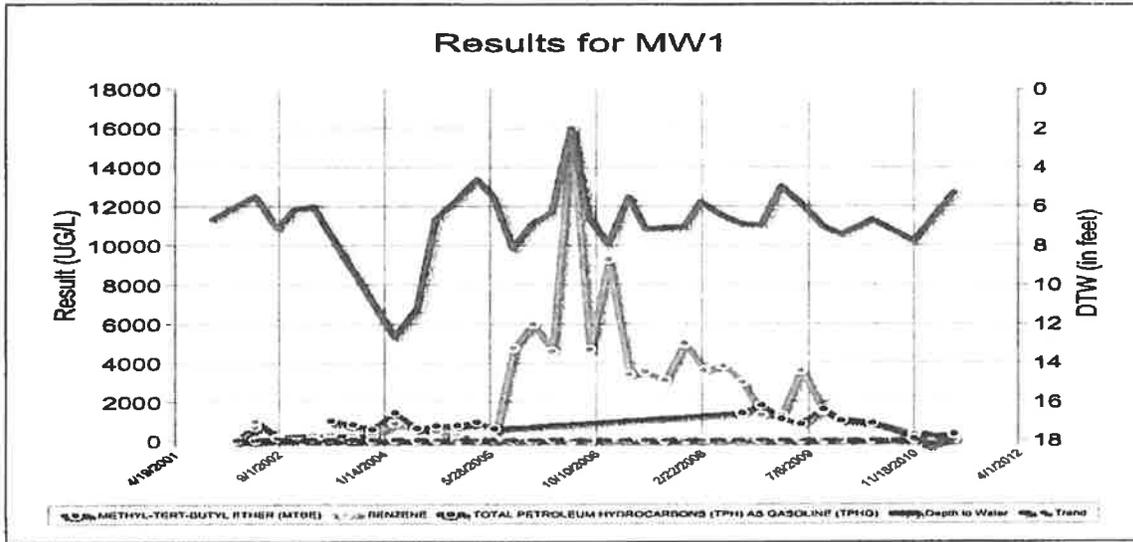
Beginning in 1986 the existing three USTs were replaced with three new USTs. Assessment activities began in 1988 resulting in multiple borings drilled and various wells installed to accommodate monitoring and remediation system needs. Ongoing remediation has been in place since 1994 with various upgrades and system modifications.

#### **Remediation Summary**

- **Free Product:** Free product was observed in the field in January 1995 in MW-5, however, concentrations of petroleum hydrocarbons were not indicative of free product. No free product has been observed since that isolated incident.
- **Soil Excavation:** No data was found in the files reviewed.
- **In-Situ Soil Remediation:** An air sparge/soil vapor extraction (AS/SVE) system operated at the Site from February 1998 to March 2000. The AS/SVE was upgraded and again operated between June 2000 and February 2004. In 2005, the AS/SVE and GWETS were reconfigured and upgraded to work in unison and operated till December 2010. A total of 1,747 pounds of TPH-g was removed during the operation of the AS/SVE.
- **Groundwater Remediation:** A groundwater extraction and treatment system (GWETS) operated at the Site from October 1994 to March 2000. The system was retrofitted and again operated from June 2002 to February 2004. In 2005 the GWETS was upgraded once again and operated till December 2010. A total of 5,044,070 gallons of groundwater has been pumped recovering 73 pounds of TPH-g during the system operation.

#### **General Site Conditions**

- **Geology and Hydrogeology:** The Site is underlain by thin beds of sand, silty sand clay and a persistent one to three inch lens of gravel at approximately 14 feet bgs. The Site is located on the eastern side of Alameda Island, approximately 1,400 feet west of the tidal canal and approximately one mile north and east of the San Francisco Bay. Due to the fact that the Site is located on an island, with shallow groundwater and potential for saltwater intrusion, the groundwater does not have current or potential use.
- **Estimate of Hydrocarbon Mass in Soil:** No estimates were found in the files reviewed.
- **Groundwater Trends:** There are more than 16 years of groundwater monitoring data for this Site. The graphs below present historic concentrations of TPH-g, benzene and MTBE for Site monitoring wells MW-1 and MW-2 plotted against water levels.



Note: The spike in 2009 for TPH-g concentrations was a one time anomaly that has since been confirmed in 2010 & 2011 groundwater monitoring.

**Sensitive Receptor Survey**

In January 2002, ERI conducted a well search and Site visit. The purpose of the search was to identify preferential pathways of migration and locate the presence of water supply wells within a 2,000-foot radius of the Site. This survey found no private or municipal wells within 2,000 feet of the Site. East Bay Municipal Utility District provides water service for this area.

**Risk Evaluation**

In 2001, ERI conducted a RBCA Tier II Risk Assessment and concluded the active groundwater remediation at the Site be conducted to reduce the dissolved petroleum hydrocarbon concentrations in groundwater.

**Recommendation**

The UST Fund staff have conducted a Preliminary 5-Year Review on this Site and offer these recommendations for LOP Consideration.

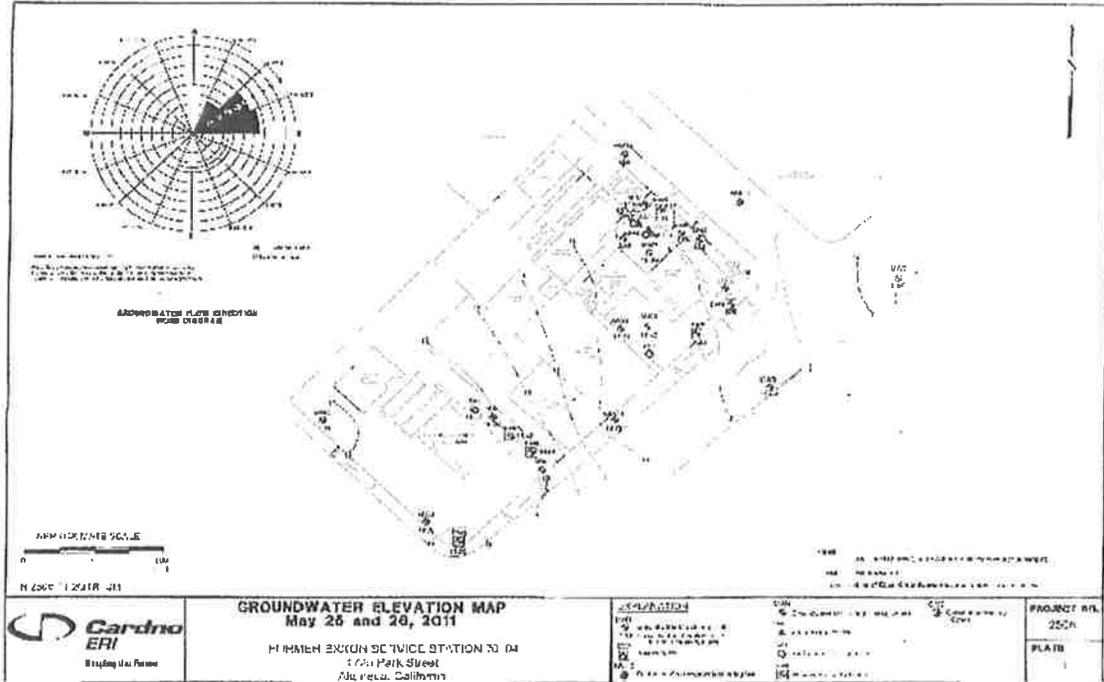
- The UST Fund staff concurs with the LOP requirement for the replacement of groundwater monitoring well MW-10 which was inadvertently destroyed.
- It appears the petroleum hydrocarbon concentrations in the groundwater have reached asymptotic conditions. The UST Fund staff recommends assessing the impacts of continued groundwater extraction, general water chemistry; assess the feasibility of achieving WQO's and the potential negative impacts on local hydrologic conditions.
- Dependant upon the results of the groundwater study and assessment of risk for leaving the remaining mass in place the Site could possibly be considered for closure.

UPDATE November 2011, based on the hydrology, geology and other factors at and in the vicinity of the Site, the residual petroleum hydrocarbons that remain in soil and groundwater pose a low risk to public health, safety and the environment. The remaining mass of residual petroleum hydrocarbons is limited to a small area, the dissolved petroleum constituents in the source area are biodegrading and the plume in groundwater is decreasing. Affected groundwater is not currently used as a source for beneficial uses and it is highly unlikely that it will be used for beneficial uses in the foreseeable future. The Fund recommends the LOP consider this Site for closure.

---

Pat G. Cullen, P.G.      Date  
Water Resources Control Engineer  
Technical Review Unit  
(916) 341-5735

 11/28/11  
Robert Trommer, CHG      Date  
Senior Engineering Geologist  
Chief, Technical Review Unit  
(916) 341-5684



## **APPENDIX B**

### **FIELD PROTOCOLS**

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

**Preliminary Activities**

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

**Drilling and Soil Sampling Procedures**

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

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

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

**Field Screening Procedures**

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

**Air Monitoring Procedures**

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

### **Groundwater Sampling**

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

### **Backfilling of Soil Boring**

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

### **Well Construction**

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

### **Well Development and Sampling**

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

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

**Surveying**

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

**Decontamination Procedures**

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

**Waste Treatment and Soil Disposal**

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

## **APPENDIX C**

### **PERMITS**



**CITY OF ALAMEDA**  
 2263 SANTA CLARA AVENUE, ROOM 190  
 ALAMEDA, CA 94501

*Jimmy Ng*

CITY OF ALAMEDA HQ  
 2263 SANTA CLARA AVE  
 ALAMEDA, CA 94501

**Right-of-Way Permit: EX12-0004**

TERMINAL ID: 007496441  
 MERCHANT #: 172185580997  
 MC  
 #XXXXXXXXXXXX1668  
 SALE  
 BATCH: 000213 INVOICE: 8131000100  
 DATE: MAR 05, 12 TIME: 08:49  
 SQ: 004 AUTH NO: 005364

**Applicant Information**

ALAMEDA CA

**Contractor Information**

ENVIRONMENTAL RESOLUTIONS INC  
 601 N. MCDOWELL BLVD  
 PETALUMA CA 92630  
 707-766-2000

**Owner Info**

**TOTAL \$8.80**

**CUSTOMER COPY**

**Project Information**

Status: **Issued** Applied: **01/23/2012** Issued: **03/05/2012**  
 Type: **Right-of-Way Permit** Finaled: Expired: **01/23/2015**  
 Category: **NA**  
 Sub-Type: **NA**  
 Parcel Number: Valuation: **\$1,000.00**  
 Job Address: **1725 PARK ST**  
 Work Description: **EXCAVATE ~ ADVANCING TO 4-INCH DIAMETER SOIL BORINGS**

**INSPECTIONS**

**Building:** (510) 747-8830 (7:30 - 8:30 AM) **Electrical:** (510) 747-8830 (7:30 - 8:30 AM)  
**Plumbing & Mechanical:** (510) 747-8830 (7:30 - 8:30 AM) **Fire:** (510) 337-2120  
**Design Review:** (510) 747-8850

<b><u>FEE DESCRIPTION</u></b>	<b><u>ACCOUNT CODE</u></b>	<b><u>UNITS</u></b>	<b><u>FEE AMOUNT</u></b>	<b><u>PAID</u></b>
Filing Fee	481003-37450 (1050)	1	\$44.00	\$44.00
Technology Fee	481003-33063 (1051)	1	\$5.80	\$5.80
Engineering - Encroachment Temp <1 week	4210-33410 (1584)	1	\$72.00	\$72.00
Deposit - Public Works	001-22531 (8209)	1000	\$1,000.00	\$1,000.00
Community Planning Fee	481005-33064 (8765)	1	\$3.00	\$3.00
<b>TOTALS:</b>			<b>\$1,124.80</b>	<b>\$1,124.80</b>

<b><u>RECEIPT #</u></b>	<b><u>PAYMENT METHOD</u></b>	<b><u>CHECK #</u></b>	<b><u>PAYOR:</u></b>	<b><u>RECEIPT DATE</u></b>	<b><u>RECEIPT AMOUNT</u></b>
475008	Check	13434	ENVIRONMENTAL RESOLUTIONS INC	01/23/2012	\$1,116.00
475867	Credit Card		ENVIRONMENTAL RESOLUTIONS INC	03/05/2012	\$8.80
<b>Cashier: LFOYE</b>				<b>Total Payments:</b>	<b>\$1,124.80</b>
				<b>Balance Due:</b>	<b>\$0.00</b>

*747-1930*

# Alameda County Public Works Agency - Water Resources Well Permit



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

Application Approved on: 02/01/2012 By Jamesy

Permit Numbers: W2012-0090  
Permits Valid from 02/28/2012 to 02/29/2012

Application Id: 1326935109288  
Site Location: 1725 Park St, Alameda, CA  
Project Start Date: 02/28/2012  
Assigned Inspector: Contact Steve Miller at (510) 670-5517 or [stevem@acpwa.org](mailto:stevem@acpwa.org)  
Applicant: Cardno ERI - Rebekah A Westrup  
Property Owner: Fuad M Ateyeh  
Client: \*\* same as Property Owner \*\*  
City of Project Site: Alameda  
Completion Date: 02/29/2012  
Phone: 707-766-2000  
Phone: 510-522-6813

Receipt Number: WR2012-0038  
Payer Name : Environmental Resolutions Inc. Total Due: \$265.00  
Total Amount Paid: \$265.00  
Paid By: CHECK PAID IN FULL

## Works Requesting Permits:

Borehole(s) for Investigation-Geotechnical Study/CPT's - 8 Boreholes

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

Work Total: \$265.00

### Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2012-0090	02/01/2012	05/28/2012	8	4.00 in.	10.00 ft

### Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site.
2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
4. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.
5. Applicant shall contact Steve Miller for an inspection time at (510) 670-5517 or email to [stevem@acpwa.org](mailto:stevem@acpwa.org) at least

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

five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

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

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

8. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

---

**APPENDIX D**

**BORING LOGS**

# UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS	LTR	DESCRIPTION	MAJOR DIVISIONS	LTR	DESCRIPTION		
<b>COARSE GRAINED SOILS</b>	<b>GRAVEL AND GRAVELLY SOILS</b>	GW	Well-graded gravels or gravel sand mixtures, little or no fines	<b>FINE GRAINED SOILS</b>	<b>SILTS AND CLAYS LL&lt;50</b>	ML	Inorganic silts and very fine-grained sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
		GP	Poorly-graded gravels or gravel sand mixture, little or no fines			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		GM	Silty gravels, gravel-sand-clay mixtures			OL	Organic silts and organic silt-clays of low plasticity
		GC	Clayey gravels, gravel-sand-clay mixtures		<b>SILTS AND CLAYS LL&gt;50</b>	MH	Inorganic silts, micaceous or diatomaceous fine-grained sandy or silty soils, elastic silts
	<b>SAND AND SANDY SOILS</b>	SW	Well-graded sands or gravelly sands, little or no fines			CH	Inorganic clays of high plasticity, fat clays
		SP	Poorly-graded sands or gravelly sands, little or no fines			OH	Organic clays of medium to high plasticity
		SM	Silty sands, sand-silt mixtures			<b>HIGHLY ORGANIC SOILS</b>	Pt
	SC	Clayey sands, sand-clay mixtures					

**SAMPLE CONDITION**



NO RECOVERY



SAMPLED INTERVAL



DESCRIBED SAMPLE



PRESERVED SAMPLE



GROUNDWATER LEVEL OBSERVED FROM FIRST WET SOIL SAMPLE IN BORING



STATIC GROUNDWATER LEVEL

OVM

ORGANIC VAPOR METER READING IN PARTS PER MILLION BY VOLUME

PID

PHOTO-IONIZATION DETECTOR READING IN PARTS PER MILLION BY VOLUME

BLOW/FT. REPRESENTS THE NUMBER OF BLOWS OF A 140-POUND HAMMER FALLING 30 INCHES TO DRIVE THE SAMPLER THROUGH THE LAST 12 INCHES OF AN 18-INCH OR 24-INCH PENETRATION.

**WELL DESIGN**



SAND PACK



BENTONITE ANNULAR SEAL



NEAT CEMENT ANNULAR SEAL



BLANK CASING



SLOTTED CASING

NR

NOT RECORDED

NA

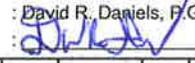
NOT ANALYZED

DASHED LINES SEPARATING UNITS ON THE LOG REPRESENT APPROXIMATE BOUNDARIES ONLY. ACTUAL BOUNDARIES MAY BE GRADUAL. LOGS REPRESENT SUBSURFACE CONDITIONS AT THE BORING LOCATION AT THE TIME OF DRILLING ONLY.



**UNIFIED SOIL CLASSIFICATION SYSTEM  
AND LOG OF BORINGS SYMBOL KEY**

Date Drilled: : 3/8/2012  
 Drilling Co.: : Cascade Drilling  
 Drilling Method: : Hand Auger  
 Sampling Method: : Hand Auger  
 Borehole Diameter: : 3.25"  
 Casing Diameter: : NA  
 Latitude: : 37.76907384  
 Longitude: : -122.23901960  
 Total Depth: : 8' bgs  
 First GW Depth: : 7' bgs

Project No.: : 022506C  
 Site: : Former Exxon 70104, 1725 Park Street, Alameda, CA  
 Logged By: : Rebekah A. Westrup  
 Reviewed By: : David R. Daniels, P.G. 8737  
 Signature: : 

Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	USCS	Sample Condition	Water Levels	Boring: SB14 Elevation: 13.42'
						<input checked="" type="checkbox"/> No Recovery <input type="checkbox"/> Not Sampled <input type="checkbox"/> Described Sample <input checked="" type="checkbox"/> Preserved Sample	<input type="checkbox"/> Groundwater After Completion 4.58' <input checked="" type="checkbox"/> Groundwater During Drilling 7.0'	
DESCRIPTION (%clay/silt/sand/gravel)								
0	Hand Auger					6" of Asphalt		
					GP	GRAVEL [FILL]: fine-grained, brown, dry, angular, poorly graded (0/0/0/100)		 Concrete
					SP	SAND: fine-grained, brown, dry, subangular, poorly graded (0/0/100/0) @ 2' bgs: becoming yellow-brown  @ 5' bgs: becoming brown, moist  @ 7' bgs: becoming light brown, wet		 Neat Cement
		0.0						
		0.6						
						Total Depth = 8.0' bgs, 1135, 03/08/2012 Collect groundwater sample W-8-SB14, 1140, 04/08/2012  Backfill Materials  Approximately one 47-lb. bag of Neat Cement Part of one 47-lb. bag of Concrete  The descriptive information for classification symbol and name of soil is based on ASTM D2488 Standard Practice for Description and Identification of Soils (Visual-Manual Procedure).		
10								
15								
20								

04-17-2012 L:\EXXONMOBIL\ExxonMobil Projects\022506C (70104) Alameda\2506 AutoCad\BORING LOGS\SB14.bor

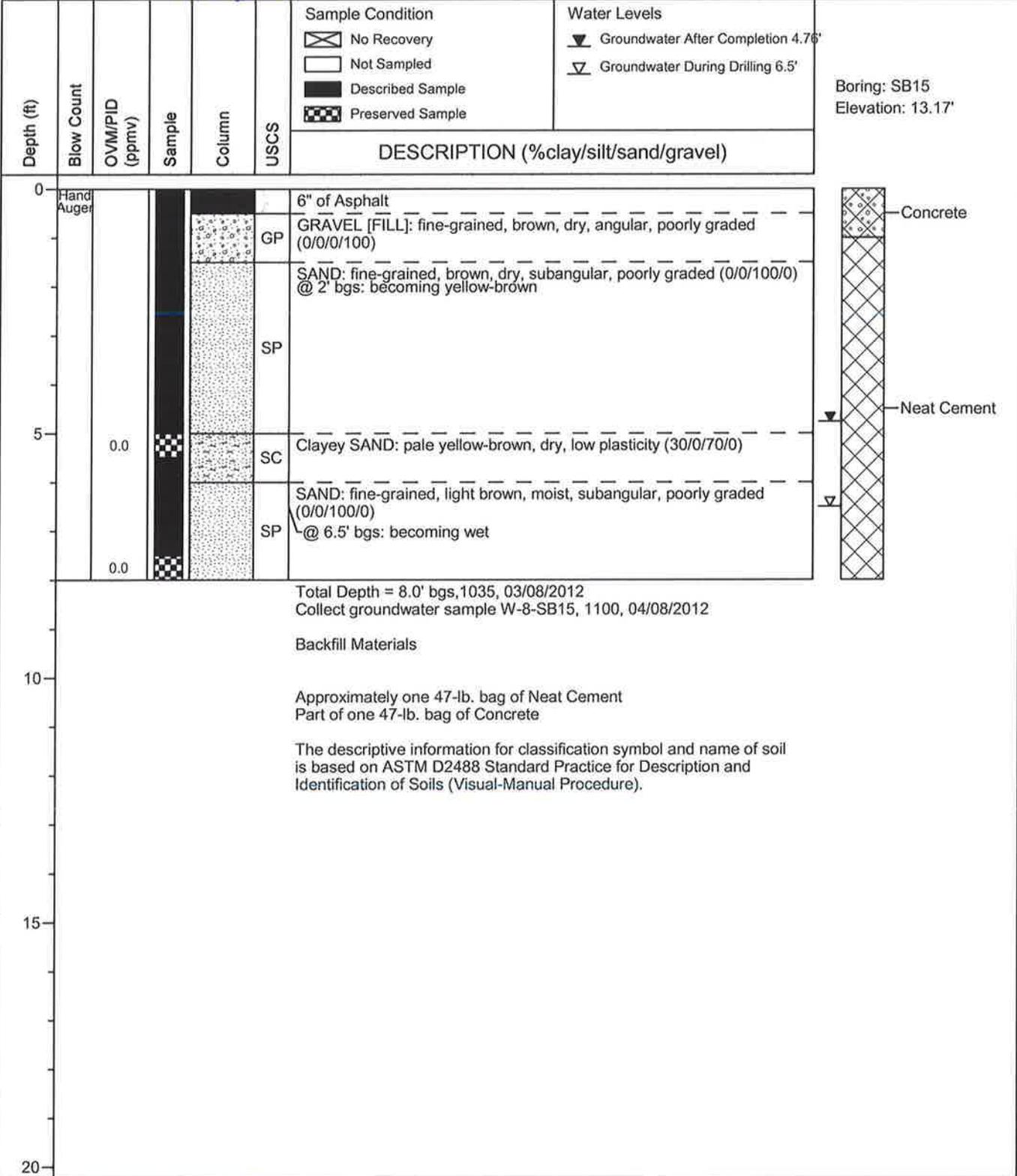


# BORING LOG SB15

(Page 1 of 1)

Date Drilled: : 3/8/2012  
 Drilling Co.: : Cascade Drilling  
 Drilling Method: : Hand Auger  
 Sampling Method: : Hand Auger  
 Borehole Diameter: : 3.25"  
 Casing Diameter: : NA  
 Latitude: : 37.76914934  
 Longitude: : -122.23919160  
 Total Depth: : 8' bgs  
 First GW Depth: : 6.5' bgs

Project No.: : 022506C  
 Site: : Former Exxon 70104, 1725 Park Street, Alameda, CA  
 Logged By: : Rebekah A. Westrup  
 Reviewed By: : David R. Daniels, P.G. 8737  
 Signature: : *[Signature]*

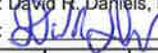


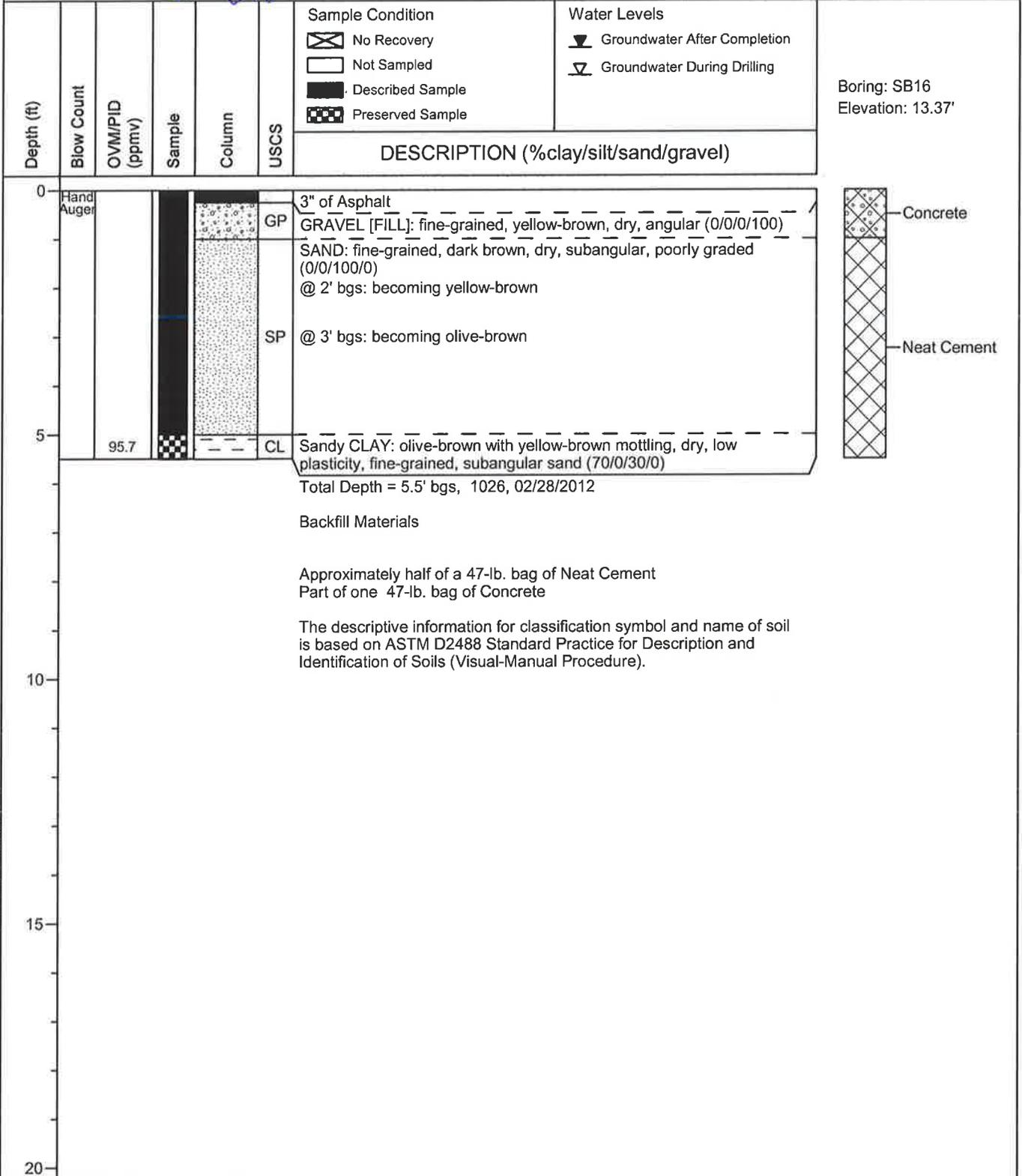
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**BORING LOG SB16**

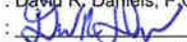
(Page 1 of 1)

Date Drilled: : 2/28/2012  
 Drilling Co.: : Cascade Drilling  
 Drilling Method: : Hand Auger  
 Sampling Method: : Hand Auger  
 Borehole Diameter: : 3.25"  
 Casing Diameter: : NA  
 Latitude: : 37.76889874  
 Longitude: : -122.23910380  
 Total Depth: : 5.5' bgs  
 First GW Depth: : NA

Project No.: : 022506C  
 Site: : Former Exxon 70104, 1725 Park Street, Alameda, CA  
 Logged By: : Rebekah A. Westrup  
 Reviewed By: : David R. Daniels, P.G. 8737  
 Signature: 



Date Drilled: : 2/28/2012  
 Drilling Co.: : Cascade Drilling  
 Drilling Method: : Hand Auger  
 Sampling Method: : Hand Auger  
 Borehole Diameter: : 3.25"  
 Casing Diameter: : NA  
 Latitude: : 37.76896139  
 Longitude: : -122.23917760  
 Total Depth: : 5.5' bgs  
 First GW Depth: : NA

Project No.: : 022506C  
 Site: : Former Exxon 70104, 1725 Park Street. Alameda, CA  
 Logged By: : Rebekah A. Westrup  
 Reviewed By: : David R. Daniels, P.G. 8737  
 Signature: : 

Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	USCS	Sample Condition	Water Levels	DESCRIPTION (%clay/silt/sand/gravel)
						<input type="checkbox"/> No Recovery <input type="checkbox"/> Not Sampled <input type="checkbox"/> Described Sample <input type="checkbox"/> Preserved Sample	<input type="checkbox"/> Groundwater After Completion <input type="checkbox"/> Groundwater During Drilling	
								Boring: SB17 Elevation: 13.61'
0	Hand Auger					6" of Concrete		Concrete
					GP	SAND: fine-grained, brown, dry, subangular, poorly graded, (0/0/100/0)  @ 2' bgs: becoming yellow-brown  @ 3' bgs: becoming olive-gray		Neat Cement
5		>9,999			CL	Sandy CLAY: brown with yellow-brown mottling, dry, moderate plasticity, fine-grained and subangular sand (70/0/30/0)		
Total Depth = 5.5' bgs, 1050, 02/28/2012  Backfill Materials  Approximately half of a 47-lb. bag of Neat Cement Part of one 47-lb. bag of Concrete  The descriptive information for classification symbol and name of soil is based on ASTM D2488 Standard Practice for Description and Identification of Soils (Visual-Manual Procedure).								
10								
15								
20								

04-17-2012 L:\EXXONMOBIL\ExxonMobil Projects\022506C (70104) Alameda\2506 AutoCad\BORING LOGS\SB17.bor

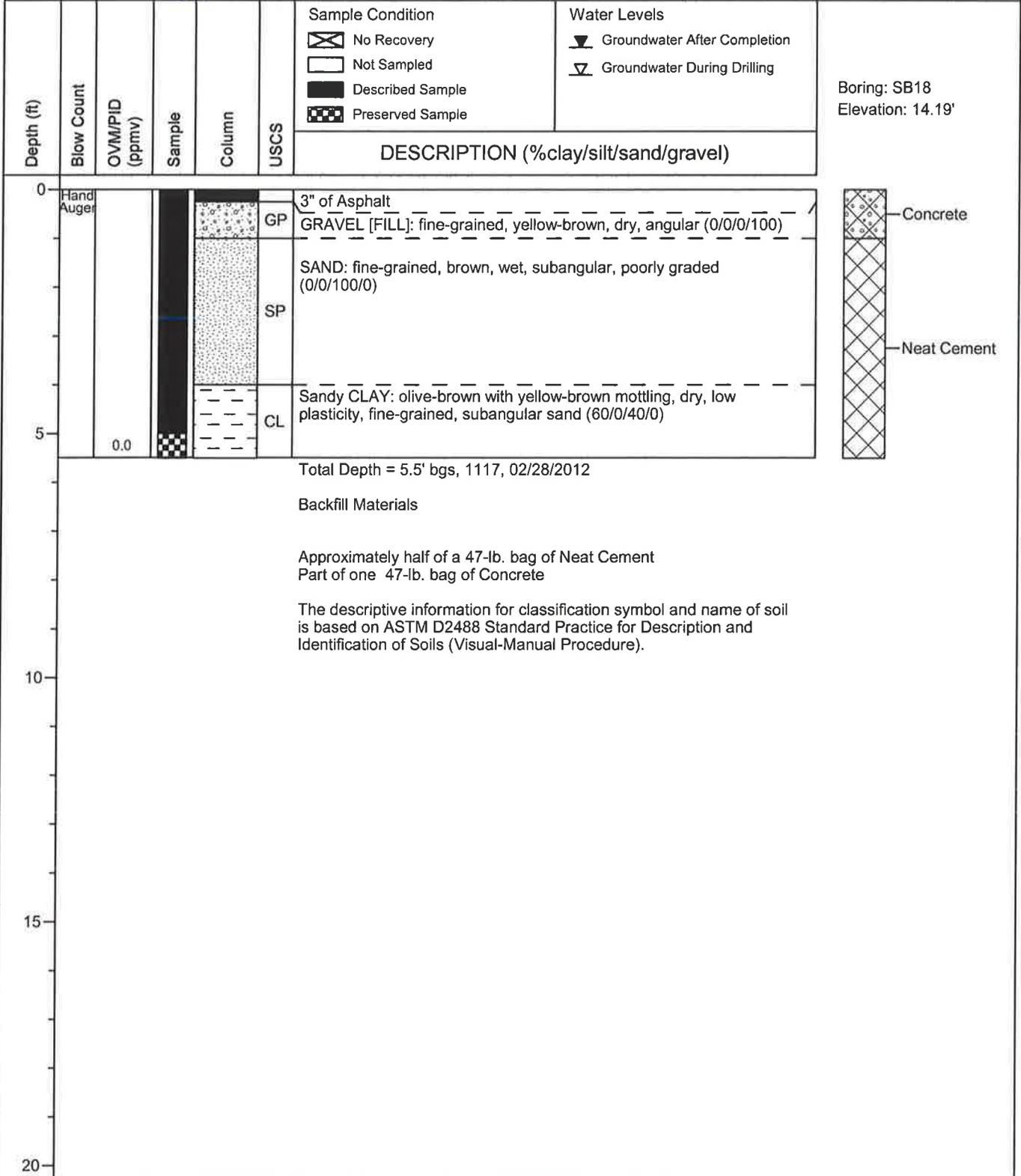


# BORING LOG SB18

(Page 1 of 1)

Date Drilled: : 2/28/2012  
 Drilling Co.: : Cascade Drilling  
 Drilling Method: : Hand Auger  
 Sampling Method: : Hand Auger  
 Borehole Diameter: : 3.25"  
 Casing Diameter: : NA  
 Latitude: : 37.76896541  
 Longitude: : -122.23933580  
 Total Depth: : 5.5' bgs  
 First GW Depth: : NA

Project No.: : 022506C  
 Site: : Former Exxon 70104, 1725 Park Street, Alameda, CA  
 Logged By: : Rebekah A. Westrup  
 Reviewed By: : David R. Daniels, P.G. 8737  
 Signature: : *[Signature]*



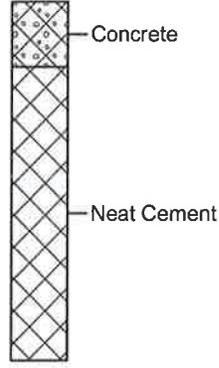
04-17-2012 L:\EXXONMOBIL\ExxonMobil Projects\022506C (70104)\_Alameda\2506 AutoCad\BORING LOGS\SB18.bor

Date Drilled: : 2/28/2012  
 Drilling Co.: : Cascade Drilling  
 Drilling Method: : Hand Auger  
 Sampling Method: : Hand Auger  
 Borehole Diameter: : 3.25"  
 Casing Diameter: : NA  
 Latitude: : 37.76890124  
 Longitude: : -122.23923360  
 Total Depth: : 5.5' bgs  
 First GW Depth: : NA

Project No.: : 022506C  
 Site: : Former Exxon 70104, 1725 Park Street, Alameda, CA  
 Logged By: : Rebekah A. Westrup  
 Reviewed By: : David R. Daniels, P.G. 8737  
 Signature: : 

Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	USCS	Sample Condition	Water Levels	DESCRIPTION (%clay/silt/sand/gravel)
						<input checked="" type="checkbox"/> No Recovery <input type="checkbox"/> Not Sampled <input type="checkbox"/> Described Sample <input checked="" type="checkbox"/> Preserved Sample	<input type="checkbox"/> Groundwater After Completion <input type="checkbox"/> Groundwater During Drilling	
0	Hand Auger							6" of Concrete
					GP			GRAVEL [FILL]: fine-grained, gray, dry, angular, poorly graded (0/0/0/100)
					SP			SAND: fine-grained, brown, dry, subangular, poorly graded (0/0/100/0)
					GP			GRAVEL: fine-grained, brown, dry, subangular, poorly graded (0/0/0/100)
					SP			SAND: fine-grained, olive-gray, dry, subangular, poorly graded (0/0/100/0)
5		>9,999						
<p>Total Depth = 5.5' bgs, 1200, 02/28/2012</p> <p>Backfill Materials</p> <p>Approximately half of a 47-lb. bag of Neat Cement            Part of one 47-lb. bag of Concrete</p> <p>The descriptive information for classification symbol and name of soil is based on ASTM D2488 Standard Practice for Description and Identification of Soils (Visual-Manual Procedure).</p>								
10								
15								
20								

Boring: SB19  
 Elevation: 13.87'



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# BORING LOG SB20

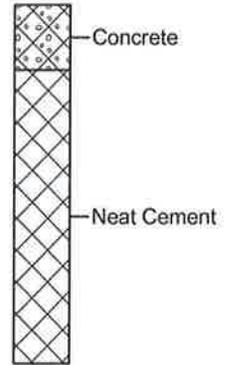
(Page 1 of 1)

Date Drilled: : 2/28/2012  
 Drilling Co.: : Cascade Drilling  
 Drilling Method: : Hand Auger  
 Sampling Method: : Hand Auger  
 Borehole Diameter: : 3.25"  
 Casing Diameter: : NA  
 Latitude: : 37.76880885  
 Longitude: : -122.23918410  
 Total Depth: : 5.5' bgs  
 First GW Depth: : NA

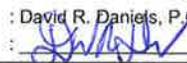
Project No.: : 022506C  
 Site: : Former Exxon 70104, 1725 Park Street, Alameda, CA  
 Logged By: : Rebekah A. Westrup  
 Reviewed By: : David R. Daniels, P.G. 8737  
 Signature: :

Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	USCS	Sample Condition	Water Levels	DESCRIPTION (%clay/silt/sand/gravel)
						<input checked="" type="checkbox"/> No Recovery <input type="checkbox"/> Not Sampled <input type="checkbox"/> Described Sample <input checked="" type="checkbox"/> Preserved Sample	<input type="checkbox"/> Groundwater After Completion <input type="checkbox"/> Groundwater During Drilling	
0	Hand Auger							3" of Asphalt
					GP			GRAVEL [FILL]: fine-grained, gray, dry, angular, poorly graded (0/0/0/100)
					SP			SAND: fine-grained, gray, dry, subangular, poorly graded (0/0/100/0)
5		>9,999			CL			Sandy CLAY: yellow-brown with olive-brown mottling, dry, low plasticity, fine-grained, subangular sand (70/0/30/0)
					SP			SAND: fine-grained, olive-gray, dry, subangular, poorly graded (0/0/100/0)
Total Depth = 5.5' bgs, 1005, 02/28/2012  Backfill Materials  Approximately half of a 47-lb. bag of Neat Cement Part of one 47-lb. bag of Concrete  The descriptive information for classification symbol and name of soil is based on ASTM D2488 Standard Practice for Description and Identification of Soils (Visual-Manual Procedure).								

Boring: SB20  
 Elevation: 13.93'

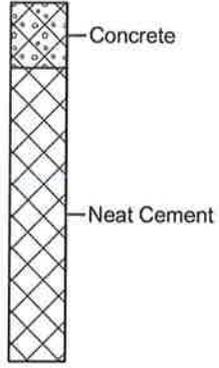


Date Drilled: : 2/28/2012  
 Drilling Co.: : Cascade Drilling  
 Drilling Method: : Hand Auger  
 Sampling Method: : Hand Auger  
 Borehole Diameter: : 3.25"  
 Casing Diameter: : NA  
 Latitude: : 37.76879762  
 Longitude: : -122.23933260  
 Total Depth: : 5.5' bgs  
 First GW Depth: : NA

Project No.: : 022506C  
 Site: : Former Exxon 70104, 1725 Park Street, Alameda, CA  
 Logged By: : Rebekah A. Westrup  
 Reviewed By: : David R. Daniels, P.G. 8737  
 Signature: 

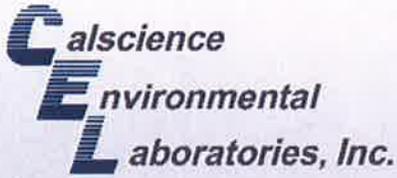
Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	USCS	Sample Condition	Water Levels	DESCRIPTION (%clay/silt/sand/gravel)
						<input checked="" type="checkbox"/> No Recovery <input type="checkbox"/> Not Sampled <input type="checkbox"/> Described Sample <input checked="" type="checkbox"/> Preserved Sample	<input type="checkbox"/> Groundwater After Completion <input type="checkbox"/> Groundwater During Drilling	
0	Hand Auger							3" of Asphalt
					GP			GRAVEL [FILL]: fine-grained, yellow-brown, dry, angular, poorly graded (0/0/0/100)
					SP			SAND: fine-grained, gray, dry, subangular, poorly graded (0/0/100/0) @ 3' bgs: becoming yellow-brown
					SC			Clayey SAND: fine-grained, light brown, dry, subangular (25/0/75/0)
5	0.0				CL			Sandy CLAY: light brown, dry, low plasticity, fine-grained, subangular sand (70/0/30/0)
Total Depth = 5.5' bgs, 1005, 02/28/2012  Backfill Materials  Approximately half of a 47-lb. bag of Neat Cement Part of one 47-lb. bag of Concrete  The descriptive information for classification symbol and name of soil is based on ASTM D2488 Standard Practice for Description and Identification of Soils (Visual-Manual Procedure).								
10								
15								
20								

Boring: SB21  
Elevation: 14.46'



## **APPENDIX E**

### **LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY RECORDS**



# CALSCIENCE

WORK ORDER NUMBER: 12-03-0640

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

### Analytical Report For

**Client:** Cardno ERI

**Client Project Name:** ExxonMobil 70104/022506C

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

*Cecile de Guia*

Approved for release on 03/22/2012 by:  
Cecile deGuia  
Project Manager

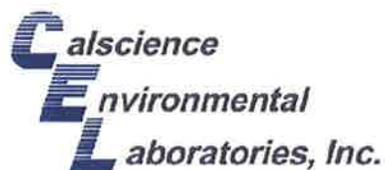
ResultLink ▶

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 70104/022506C  
Work Order Number: 12-03-0640

1	Client Sample Data . . . . .	3
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1.2	EPA 8015B (M) TPH Gasoline (Solid) . . . . .	5
1.3	EPA 8021B BTEX/MTBE (Solid) . . . . .	7
1.4	EPA 8260B Volatile Organics + Oxygenates (Solid) . . . . .	8
2	Quality Control Sample Data . . . . .	10
2.1	MS/MSD and/or Duplicate . . . . .	10
2.2	LCS/LCSD . . . . .	15
3	Glossary of Terms and Qualifiers . . . . .	20
4	Chain of Custody/Sample Receipt Form . . . . .	21



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

Date Received: 03/09/12  
Work Order No: 12-03-0640  
Preparation: EPA 3550B  
Method: EPA 8015B (M)

Project: ExxonMobil 70104/022506C

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-SB15	12-03-0640-1-A	03/08/12 10:05	Solid	GC 45	03/14/12	03/14/12 21:22	120314B03

Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	ND	5.0	1	SG,U	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	99	61-145	

S-7.5-SB15	12-03-0640-2-A	03/08/12 10:35	Solid	GC 45	03/14/12	03/14/12 21:38	120314B03
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Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	ND	5.0	1	SG,U	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	111	61-145	

S-5-SB14	12-03-0640-3-A	03/08/12 10:40	Solid	GC 45	03/14/12	03/14/12 22:09	120314B03
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Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	ND	5.0	1	SG,U	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	98	61-145	

S-7.5-SB14	12-03-0640-4-A	03/08/12 11:30	Solid	GC 45	03/14/12	03/14/12 22:24	120314B03
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Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	ND	5.0	1	SG,U	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	100	61-145	

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



**Analytical Report**



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

Date Received: 03/09/12  
Work Order No: 12-03-0640  
Preparation: EPA 3550B  
Method: EPA 8015B (M)

Project: ExxonMobil 70104/022506C

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	099-12-275-4,414	N/A	Solid	GC 45	03/14/12	03/14/12 18:03	120314B03

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
TPH as Diesel	ND	5.0	1	U	mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	100	61-145			

Return to Contents

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

**Analytical Report**



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

Date Received: 03/09/12  
Work Order No: 12-03-0640  
Preparation: EPA 5030C  
Method: EPA 8015B (M)

Project: ExxonMobil 70104/022506C

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-SB15	12-03-0640-1-A	03/08/12 10:05	Solid	GC 29	03/14/12	03/14/12 13:30	120314B01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	0.50	1	U	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene - FID	80	42-126	

S-7.5-SB15	12-03-0640-2-A	03/08/12 10:35	Solid	GC 29	03/13/12	03/13/12 16:39	120313B01
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	0.50	1	U	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene - FID	77	42-126	

S-5-SB14	12-03-0640-3-A	03/08/12 10:40	Solid	GC 29	03/13/12	03/13/12 17:14	120313B01
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	0.50	1	U	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene - FID	78	42-126	

S-7.5-SB14	12-03-0640-4-A	03/08/12 11:30	Solid	GC 29	03/13/12	03/13/12 17:49	120313B01
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	0.50	1	U	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene - FID	81	42-126	

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

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**Analytical Report**



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

Date Received: 03/09/12  
Work Order No: 12-03-0640  
Preparation: EPA 5030C  
Method: EPA 8015B (M)

Project: ExxonMobil 70104/022506C

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	099-14-571-229	N/A	Solid	GC 29	03/13/12	03/13/12 12:34	120313B01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	0.50	1	U	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene - FID	77	42-126	

Method Blank	099-14-571-230	N/A	Solid	GC 29	03/14/12	03/14/12 05:57	120314B01
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	0.50	1	U	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene - FID	79	42-126	

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



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

Date Received: 03/09/12  
 Work Order No: 12-03-0640  
 Preparation: EPA 5030C  
 Method: EPA 8021B  
 Units: mg/kg

Project: ExxonMobil 70104/022506C

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-SB15	12-03-0640-1-A	03/08/12 10:05	Solid	GC 8	03/10/12	03/10/12 14:06	120310B01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1	U	Ethylbenzene	ND	0.0050	1	U
Toluene	ND	0.0050	1	U	Xylenes (total)	ND	0.010	1	U
<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>	<b>Qual</b>						
1,4-Bromofluorobenzene	91	51-129							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-7.5-SB15	12-03-0640-2-A	03/08/12 10:35	Solid	GC 8	03/10/12	03/10/12 15:53	120310B01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1	U	Ethylbenzene	ND	0.0050	1	U
Toluene	ND	0.0050	1	U	Xylenes (total)	ND	0.010	1	U
<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>	<b>Qual</b>						
1,4-Bromofluorobenzene	90	51-129							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-SB14	12-03-0640-3-A	03/08/12 10:40	Solid	GC 8	03/10/12	03/10/12 16:29	120310B01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1	U	Ethylbenzene	ND	0.0050	1	U
Toluene	ND	0.0050	1	U	Xylenes (total)	ND	0.010	1	U
<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>	<b>Qual</b>						
1,4-Bromofluorobenzene	93	51-129							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-7.5-SB14	12-03-0640-4-A	03/08/12 11:30	Solid	GC 8	03/10/12	03/10/12 17:05	120310B01

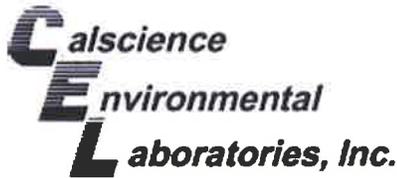
Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1	U	Ethylbenzene	ND	0.0050	1	U
Toluene	ND	0.0050	1	U	Xylenes (total)	ND	0.010	1	U
<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>	<b>Qual</b>						
1,4-Bromofluorobenzene	92	51-129							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-657-873	N/A	Solid	GC 8	03/10/12	03/10/12 11:21	120310B01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1	U	Ethylbenzene	ND	0.0050	1	U
Toluene	ND	0.0050	1	U	Xylenes (total)	ND	0.010	1	U
<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>	<b>Qual</b>						
1,4-Bromofluorobenzene	93	51-129							

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

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Analytical Report



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

Date Received: 03/09/12  
Work Order No: 12-03-0640  
Preparation: EPA 5030C  
Method: EPA 8260B  
Units: mg/kg

Project: ExxonMobil 70104/022506C

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-SB15	12-03-0640-1-A	03/08/12 10:05	Solid	GC/MS UU	03/09/12	03/13/12 01:07	120312L03

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	U	Tert-Amyl-Methyl Ether (TAME)	ND	0.010	1	U
Tert-Butyl Alcohol (TBA)	ND	0.050	1	U	1,2-Dibromoethane	ND	0.0050	1	U
Diisopropyl Ether (DIPE)	ND	0.010	1	U	1,2-Dichloroethane	ND	0.0050	1	U
Ethyl-t-Butyl Ether (ETBE)	ND	0.010	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	60-132			Dibromofluoromethane	105	63-141		
1,2-Dichloroethane-d4	108	62-146			Toluene-d8	98	80-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-7.5-SB15	12-03-0640-2-A	03/08/12 10:35	Solid	GC/MS UU	03/09/12	03/13/12 01:34	120312L03

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	U	Tert-Amyl-Methyl Ether (TAME)	ND	0.010	1	U
Tert-Butyl Alcohol (TBA)	ND	0.050	1	U	1,2-Dibromoethane	ND	0.0050	1	U
Diisopropyl Ether (DIPE)	ND	0.010	1	U	1,2-Dichloroethane	ND	0.0050	1	U
Ethyl-t-Butyl Ether (ETBE)	ND	0.010	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	60-132			Dibromofluoromethane	104	63-141		
1,2-Dichloroethane-d4	107	62-146			Toluene-d8	100	80-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-SB14	12-03-0640-3-A	03/08/12 10:40	Solid	GC/MS UU	03/09/12	03/13/12 02:02	120312L03

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	U	Tert-Amyl-Methyl Ether (TAME)	ND	0.010	1	U
Tert-Butyl Alcohol (TBA)	ND	0.050	1	U	1,2-Dibromoethane	ND	0.0050	1	U
Diisopropyl Ether (DIPE)	ND	0.010	1	U	1,2-Dichloroethane	ND	0.0050	1	U
Ethyl-t-Butyl Ether (ETBE)	ND	0.010	1	U					
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>	
1,4-Bromofluorobenzene	99	60-132			Dibromofluoromethane	108	63-141		
1,2-Dichloroethane-d4	108	62-146			Toluene-d8	99	80-120		

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

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

Date Received: 03/09/12  
Work Order No: 12-03-0640  
Preparation: EPA 5030C  
Method: EPA 8260B  
Units: mg/kg

Project: ExxonMobil 70104/022506C

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-7.5-SB14	12-03-0640-4-A	03/08/12 11:30	Solid	GC/MS UU	03/09/12	03/13/12 02:29	120312L03

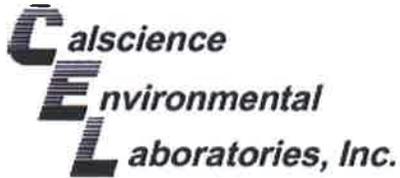
Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	U	Tert-Amyl-Methyl Ether (TAME)	ND	0.010	1	U
Tert-Butyl Alcohol (TBA)	ND	0.050	1	U	1,2-Dibromoethane	ND	0.0050	1	U
Diisopropyl Ether (DIPE)	ND	0.010	1	U	1,2-Dichloroethane	ND	0.0050	1	U
Ethyl-t-Butyl Ether (ETBE)	ND	0.010	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	103	60-132			Dibromofluoromethane	105	63-141		
1,2-Dichloroethane-d4	111	62-146			Toluene-d8	100	80-120		

Method Blank	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
	099-12-882-1,310	N/A	Solid	GC/MS UU	03/12/12	03/13/12 00:12	120312L03

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	U	Tert-Amyl-Methyl Ether (TAME)	ND	0.010	1	U
Tert-Butyl Alcohol (TBA)	ND	0.050	1	U	1,2-Dibromoethane	ND	0.0050	1	U
Diisopropyl Ether (DIPE)	ND	0.010	1	U	1,2-Dichloroethane	ND	0.0050	1	U
Ethyl-t-Butyl Ether (ETBE)	ND	0.010	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	101	60-132			Dibromofluoromethane	104	63-141		
1,2-Dichloroethane-d4	112	62-146			Toluene-d8	98	80-120		

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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: 03/09/12  
Work Order No: 12-03-0640  
Preparation: EPA 3550B  
Method: EPA 8015B (M)

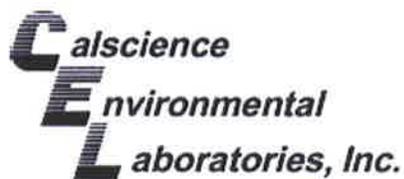
Project ExxonMobil 70104/022506C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-03-0814-46	Solid	GC 45	03/14/12	03/14/12	120314S03

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Diesel	400.0	95	90	64-130	6	0-15	

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RPD - Relative Percent Difference , CL - Control Limit



## Quality Control - Spike/Spike Duplicate



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

Date Received: 03/09/12  
Work Order No: 12-03-0640  
Preparation: EPA 5030C  
Method: EPA 8021B

Project ExxonMobil 70104/022506C

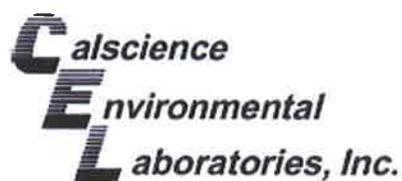
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
S-5-SB15	Solid	GC 8	03/10/12	03/10/12	120310S01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	0.5000	87	88	58-118	1	0-24	
Toluene	0.5000	93	94	61-109	1	0-20	
Ethylbenzene	0.5000	90	92	59-113	2	0-20	
Xylenes (total)	1.500	88	89	55-115	2	0-20	

Return to Contents

RPD - Relative Percent Difference, CL - Control Limit

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



Quality Control - Spike/Spike Duplicate



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

Date Received: 03/09/12  
Work Order No: 12-03-0640  
Preparation: EPA 5030C  
Method: EPA 8015B (M)

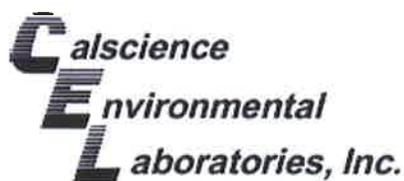
Project ExxonMobil 70104/022506C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-03-0799-1	Solid	GC 29	03/13/12	03/13/12	120313S01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	10.00	98	97	48-114	1	0-23	

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RPD - Relative Percent Difference , CL - Control Limit



Quality Control - Spike/Spike Duplicate



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

Date Received: 03/09/12  
Work Order No: 12-03-0640  
Preparation: EPA 5030C  
Method: EPA 8015B (M)

Project ExxonMobil 70104/022506C

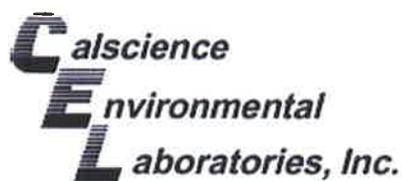
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
S-5-SB15	Solid	GC 29	03/14/12	03/14/12	120314S01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	10.00	99	94	48-114	5	0-23	

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RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - Spike/Spike Duplicate



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

Date Received: 03/09/12  
Work Order No: 12-03-0640  
Preparation: EPA 5030C  
Method: EPA 8260B

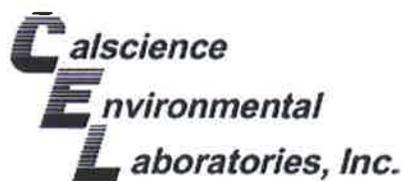
Project ExxonMobil 70104/022506C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-03-0741-2	Solid	GC/MS UU	03/10/12	03/12/12	120312S01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	83	92	61-127	10	0-20	
Toluene	0.05000	83	89	63-123	7	0-20	
Ethylbenzene	0.05000	81	94	57-129	14	0-22	
Methyl-t-Butyl Ether (MTBE)	0.05000	83	88	57-123	5	0-21	
Tert-Butyl Alcohol (TBA)	0.2500	82	97	30-168	17	0-34	
Diisopropyl Ether (DIPE)	0.05000	81	86	57-129	6	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	79	82	55-127	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	79	84	58-124	6	0-20	
Ethanol	0.5000	87	115	17-167	28	0-47	
1,1-Dichloroethene	0.05000	87	94	47-143	8	0-25	
1,2-Dibromoethane	0.05000	76	83	64-124	9	0-20	
1,2-Dichlorobenzene	0.05000	71	80	35-131	12	0-25	
1,2-Dichloroethane	0.05000	80	87	80-120	8	0-20	
Carbon Tetrachloride	0.05000	85	96	51-135	12	0-29	
Chlorobenzene	0.05000	75	83	57-123	11	0-20	
Trichloroethene	0.05000	85	96	44-158	11	0-20	
Vinyl Chloride	0.05000	81	80	49-139	1	0-47	

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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: 12-03-0640  
Preparation: EPA 3550B  
Method: EPA 8015B (M)

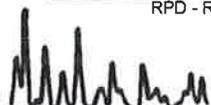
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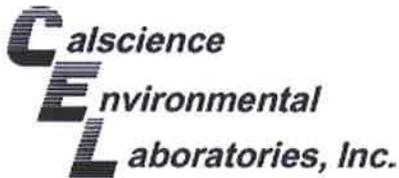
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-275-4,414	Solid	GC 45	03/14/12	03/14/12	120314B03

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Diesel	400.0	87	94	75-123	7	0-12	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



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

Date Received: N/A  
Work Order No: 12-03-0640  
Preparation: EPA 5030C  
Method: EPA 8021B

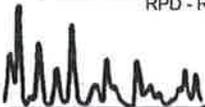
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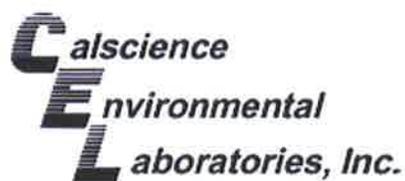
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-657-873	Solid	GC 8	03/10/12	03/10/12	120310B01

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	0.5000	92	93	70-118	1	0-7	
Toluene	0.5000	95	97	71-107	2	0-8	
Ethylbenzene	0.5000	95	95	66-120	0	0-7	
Xylenes (total)	1.500	92	92	66-120	0	0-8	

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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: 12-03-0640  
Preparation: EPA 5030C  
Method: EPA 8015B (M)

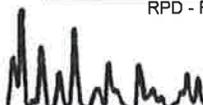
Project: ExxonMobil 70104/022506C

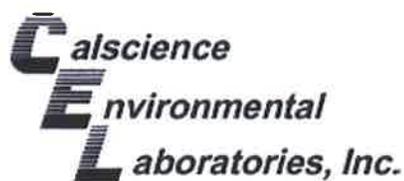
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-571-229	Solid	GC 29	03/13/12	03/13/12	120313B01

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	10.00	105	99	70-124	6	0-18	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



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

Date Received: N/A  
Work Order No: 12-03-0640  
Preparation: EPA 5030C  
Method: EPA 8015B (M)

Project: ExxonMobil 70104/022506C

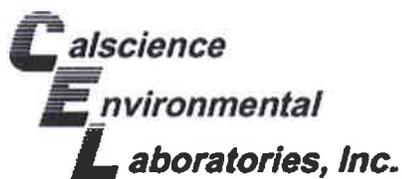
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-571-230	Solid	GC 29	03/14/12	03/14/12	120314B01

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	10.00	92	101	70-124	10	0-18	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



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

Date Received: N/A  
Work Order No: 12-03-0640  
Preparation: EPA 5030C  
Method: EPA 8260B

Project: ExxonMobil 70104/022506C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
<b>099-12-882-1,310</b>	<b>Solid</b>	<b>GC/MS UU</b>	<b>03/12/12</b>	<b>03/12/12</b>	<b>120312L03</b>			
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	93	92	78-120	71-127	1	0-20	
Toluene	0.05000	92	89	77-120	70-127	3	0-20	
Ethylbenzene	0.05000	93	87	76-120	69-127	6	0-20	
Methyl-t-Butyl Ether (MTBE)	0.05000	99	98	77-120	70-127	1	0-20	
Tert-Butyl Alcohol (TBA)	0.2500	82	81	68-122	59-131	1	0-20	
Diisopropyl Ether (DIPE)	0.05000	100	95	78-120	71-127	5	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	91	89	78-120	71-127	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	85	87	75-120	68-128	2	0-20	
Ethanol	0.5000	83	81	56-140	42-154	2	0-20	
1,1-Dichloroethene	0.05000	101	96	74-122	66-130	5	0-20	
1,2-Dibromoethane	0.05000	90	86	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	0.05000	87	75	75-120	68-128	14	0-20	
1,2-Dichloroethane	0.05000	96	94	80-120	73-127	2	0-20	
Carbon Tetrachloride	0.05000	104	103	49-139	34-154	1	0-20	
Chlorobenzene	0.05000	86	80	79-120	72-127	7	0-20	
Trichloroethene	0.05000	97	94	80-120	73-127	3	0-20	
Vinyl Chloride	0.05000	87	79	68-122	59-131	10	0-20	

Total number of LCS compounds : 17

Total number of ME compounds : 0

Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

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RPD - Relative Percent Difference , CL - Control Limit



Work Order Number: 12-03-0640

<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



**Calscience  
Environmental  
Laboratories, Inc.**

7440 Lincoln Way  
Garden Grove, CA 92841

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



**12-03-0640**

Consultant Name: Cardno ERI Account #: NA PO#: Direct Bill Cardno ERI  
 Consultant Address: 601 N. McDowell Boulevard Invoice To: Direct Bill Cardno ERI  
 Consultant City/State/Zip: Petaluma, California, 94954 Report To: Paula Sime  
 ExxonMobil Project Mgr: Jennifer Sedlachek Project Name: 02 2506 C  
 Consultant Project Mgr: Paula Sime ExxonMobil Site #: 70104 Major Project (AFE #):  
 Consultant Telephone Number: 707-766-2000 Fax No.: 707-789-0414 Site Address: 1725 Park Street  
 Sampler Name (Print): Rebekah A Westrup Site City, State, Zip: Alameda, California  
 Sampler Signature: Rebekah A Westrup Oversight Agency: Alameda County Environmental Health Department

Sample ID	Field Point Name	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Preservative											Matrix						Analyze For:				RUSH TAT (Pre-Schedule)	5-day TAT	Standard 10-day TAT	Due Date of Report						
								Methanol	Sodium Bisulfite	HCl	NaOH	H <sub>2</sub> SO <sub>4</sub> Plastic	H <sub>2</sub> SO <sub>4</sub> Glass	HNO <sub>3</sub>	Ice	Other	None	Groundwater	Wastewater	Drinking Water	Sludge	Sol	Ar	Other (specify):	Distilled Water	TPHg 8015B	BTEX 8021B	OXYGENATES 8280F					TPHd 8015B					
S-5-SB15	SB15	3/8/12	1005	1	X																																	
S-7.5-SB15	SB15		1035	1	X																																	
S-5-SB14	SB14		1040	1	X																																	
<del>S-7.5-SB14</del> S-7.5-SB14	SB14	✓	1130	1	X																																	

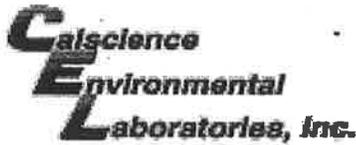
Comments/Special Instructions: **PLEASE E-MAIL ALL PDF FILES TO norcallabs@eri-us.com; ERI-EIMLABS@eri-us.com** 7 CA Oxy= MTBE, ETBE, TAME, TBA, EDB, 1,2-DCA, DIPE.  
 GLOBAL ID # 1060010555 Use silica gel cleanup on all TPHd analyses. Laboratory Comments:  
 Relinquished by: [Signature] Date: 3/8/12 Time: 15:56 Received by: CEC Date: 3/8/12 Time: 15:56 Temperature Upon Receipt:  
 Relinquished by: [Signature] Date: 3/8/12 Time: 1730 Received by: [Signature] Date: 3/9/12 Time: 10:30 Sample Containers Intact? Y N  
 VOCs Free of Headspace? Y N  
 QC Deliverables (please circle one)  
 Level 2 \_\_\_\_\_  
 Level 3 \_\_\_\_\_  
 Level 4 \_\_\_\_\_  
 Site Specific - if yes, please attach pre-schedule w/ TestAmerica Project Manager or attach specific instructions

0640

	<p align="center"><b>&lt; WebShip &gt; &gt; &gt; &gt;</b> 800-322-5555 www.gso.com</p>	
<p><b>Ship From:</b> ALAN KEMP CAL SCIENCE- CONCORD 5063 COMMERCIAL CIRCLE #H CONCORD, CA 94520</p>	<p><b>Tracking #:</b> 518628788 </p>	<p><b>NPS</b></p>
<p><b>Ship To:</b> SAMPLE RECEIVING CEL 7440 LINCOLN WAY GARDEN GROVE, CA 92841</p>	<p align="center"><b>ORC</b> <span style="float: right;"><b>A</b></span> GARDEN GROVE</p>	
<p><b>COD:</b> \$0.00</p>	<p align="center"><b>D92841A</b></p> <p align="center"></p>	
<p><b>Reference:</b> CURTIS &amp; TOMPKINS, ERI, CONOCO PHILLIPS, EARTH CON</p>	<p><b>99297843</b></p>	
<p><b>Signature Type:</b> SIGNATURE REQUIRED</p>	<p align="right">Print Date : 03/08/12 16:24 PM</p>	

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**Package 1 of 1**



WORK ORDER #: 12-03-0040

**SAMPLE RECEIPT FORM**

Cooler 1 of 1

CLIENT: CARDNO ERI

DATE: 03/09/12

**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: PL

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

**CONTAINER TYPE:**

**Solid:**  4ozCGJ  8ozCGJ  16ozCGJ  Sleeve (S)  EnCores®  TerraCores®  \_\_\_\_\_

**Water:**  VOA  VOA<sub>h</sub>  VOAn<sub>2</sub>  125AGB  125AGB<sub>h</sub>  125AGB<sub>p</sub>  1AGB  1AGBn<sub>2</sub>  1AGBs

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

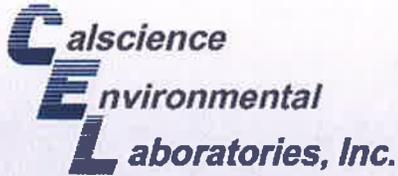
250PB  250PBn  125PB  125PBz<sub>na</sub>  100PJ  100PJna<sub>2</sub>  \_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_

**Air:**  Tedlar®  Summa® **Other:**  \_\_\_\_\_ Trip Blank Lot#: \_\_\_\_\_ Labeled/Checked by: PL

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

Preservative: h: HCL n: HNO<sub>3</sub> na<sub>2</sub>:Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> u: Ultra-pure z<sub>na</sub>: ZnAc<sub>2</sub>+NaOH f: Filtered Scanned by: PT

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# CALSCIENCE

WORK ORDER NUMBER: 12-03-0121

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

### Analytical Report For

**Client:** Cardno ERI

**Client Project Name:** ExxonMobil 70104/022506C

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

*Cecile de Guia*

Approved for release on 03/14/2012 by:  
Cecile deGuia  
Project Manager

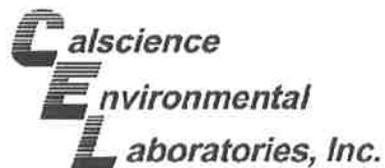
ResultLink ▶

Email your PM ▶



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





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Work Order Number: 12-03-0121

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**Analytical Report**



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

Date Received: 03/02/12  
Work Order No: 12-03-0121  
Preparation: EPA 3550B  
Method: EPA 8015B (M)

Project: ExxonMobil 70104/022506C

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-SB21	12-03-0121-1-A	02/28/12 09:35	Solid	GC 48	03/02/12	03/03/12 04:14	120302B06S

Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	ND	5.0	1	SG,U	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	104	61-145	

S-5-SB20	12-03-0121-2-A	02/28/12 10:05	Solid	GC 48	03/02/12	03/03/12 04:29	120302B06S
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Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	880	5.0	1	SG,HD	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	105	61-145	

S-5-SB16	12-03-0121-3-A	02/28/12 10:26	Solid	GC 48	03/02/12	03/03/12 04:43	120302B06S
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Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	ND	5.0	1	SG,U	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	100	61-145	

S-5-SB17	12-03-0121-4-A	02/28/12 10:50	Solid	GC 48	03/02/12	03/03/12 04:58	120302B06S
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Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	120	5.0	1	SG,HD	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	104	61-145	

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

**Analytical Report**



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

Date Received: 03/02/12  
Work Order No: 12-03-0121  
Preparation: EPA 3550B  
Method: EPA 8015B (M)

Project: ExxonMobil 70104/022506C

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>S-5-SB18</b>	<b>12-03-0121-5-A</b>	<b>02/28/12 11:17</b>	<b>Solid</b>	<b>GC 48</b>	<b>03/02/12</b>	<b>03/03/12 05:13</b>	<b>120302B06S</b>

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
TPH as Diesel	ND	5.0	1	SG,U	mg/kg

<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>
Decachlorobiphenyl	102	61-145	

<b>S-5-SB19</b>	<b>12-03-0121-6-A</b>	<b>02/28/12 12:00</b>	<b>Solid</b>	<b>GC 48</b>	<b>03/02/12</b>	<b>03/03/12 05:28</b>	<b>120302B06S</b>
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
TPH as Diesel	83	5.0	1	SG,HD	mg/kg

<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>
Decachlorobiphenyl	104	61-145	

<b>Method Blank</b>	<b>099-12-275-4,403</b>	<b>N/A</b>	<b>Solid</b>	<b>GC 48</b>	<b>03/02/12</b>	<b>03/03/12 00:03</b>	<b>120302B06S</b>
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
TPH as Diesel	ND	5.0	1	U	mg/kg

<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>
Decachlorobiphenyl	101	61-145	

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

**Analytical Report**



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

Date Received: 03/02/12  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8015B (M)

Project: ExxonMobil 70104/022506C

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-SB21	12-03-0121-1-A	02/28/12 09:35	Solid	GC 29	03/06/12	03/07/12 02:17	120306B01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	0.50	1	U	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene - FID	81	42-126	

S-5-SB20	12-03-0121-2-A	02/28/12 10:05	Solid	GC 57	03/05/12	03/06/12 04:09	120305B02
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	4100	100	200		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene - FID	107	42-126	

S-5-SB16	12-03-0121-3-A	02/28/12 10:26	Solid	GC 57	03/05/12	03/05/12 18:14	120305B01
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	0.50	1	U	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene - FID	92	42-126	

S-5-SB17	12-03-0121-4-A	02/28/12 10:50	Solid	GC 29	03/07/12	03/08/12 09:45	120307B02
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	600	20	40		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene - FID	136	42-126	AZ

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

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**Analytical Report**



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

Date Received: 03/02/12  
 Work Order No: 12-03-0121  
 Preparation: EPA 5030C  
 Method: EPA 8015B (M)

Project: ExxonMobil 70104/022506C

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-SB18	12-03-0121-5-A	02/28/12 11:17	Solid	GC 57	03/05/12	03/05/12 18:45	120305B01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	0.50	1	U	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene - FID	93	42-126	

S-5-SB19	12-03-0121-6-A	02/28/12 12:00	Solid	GC 29	03/07/12	03/07/12 23:57	120307B02
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	720	50	100		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene - FID	95	42-126	

Method Blank	099-14-571-214	N/A	Solid	GC 57	03/05/12	03/05/12 12:29	120305B01
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	0.50	1	U	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene - FID	74	42-126	

Method Blank	099-14-571-216	N/A	Solid	GC 29	03/06/12	03/06/12 14:41	120306B01
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Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	0.50	1	U	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene - FID	117	42-126	

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

**Analytical Report**



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

Date Received: 03/02/12  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8015B (M)

Project: ExxonMobil 70104/022506C

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-14-571-220</b>	<b>N/A</b>	<b>Solid</b>	<b>GC 29</b>	<b>03/07/12</b>	<b>03/07/12 14:40</b>	<b>120307B02</b>

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
TPH as Gasoline	ND	4.0	8	U	mg/kg

<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>
1,4-Bromofluorobenzene - FID	89	42-126	

<b>Method Blank</b>	<b>099-14-571-221</b>	<b>N/A</b>	<b>Solid</b>	<b>GC 57</b>	<b>03/05/12</b>	<b>03/05/12 14:03</b>	<b>120305B02</b>
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
TPH as Gasoline	ND	4.0	8	U	mg/kg

<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>
1,4-Bromofluorobenzene - FID	80	42-126	

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



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

Date Received: 03/02/12  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8021B  
Units: mg/kg

Project: ExxonMobil 70104/022506C

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-SB21	12-03-0121-1-A	02/28/12 09:35	Solid	GC 8	03/10/12	03/10/12 18:52	120310B01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1	U	Ethylbenzene	ND	0.0050	1	U
Toluene	ND	0.0050	1	U	Xylenes (total)	ND	0.010	1	U
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>						
1,4-Bromofluorobenzene	91	51-129							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-SB20	12-03-0121-2-A	02/28/12 10:05	Solid	GC 8	03/12/12	03/12/12 17:47	120312B01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	2.7	0.40	80		Ethylbenzene	26	0.40	80	
Toluene	ND	0.40	80	U	Xylenes (total)	420	0.80	80	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>						
1,4-Bromofluorobenzene	102	51-129							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-SB16	12-03-0121-3-A	02/28/12 10:26	Solid	GC 8	03/10/12	03/10/12 19:28	120310B01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1	U	Ethylbenzene	ND	0.0050	1	U
Toluene	ND	0.0050	1	U	Xylenes (total)	ND	0.010	1	U
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>						
1,4-Bromofluorobenzene	90	51-129							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-SB17	12-03-0121-4-A	02/28/12 10:50	Solid	GC 8	03/13/12	03/13/12 14:37	120313B01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1	U	Ethylbenzene	ND	0.0050	1	U
Toluene	ND	0.0050	1	U	Xylenes (total)	ND	0.010	1	U
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>						
1,4-Bromofluorobenzene	91	51-129							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-SB18	12-03-0121-5-A	02/28/12 11:17	Solid	GC 8	03/10/12	03/10/12 20:04	120310B01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1	U	Ethylbenzene	ND	0.0050	1	U
Toluene	ND	0.0050	1	U	Xylenes (total)	ND	0.010	1	U
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>						
1,4-Bromofluorobenzene	90	51-129							

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



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

Date Received: 03/02/12  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8021B  
Units: mg/kg

Project: ExxonMobil 70104/022506C

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-SB19	12-03-0121-6-A	02/28/12 12:00	Solid	GC 8	03/12/12	03/12/12 17:11	120312B01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.040	8	U	Ethylbenzene	5.4	0.040	8	
Toluene	ND	0.040	8	U	Xylenes (total)	17	0.080	8	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>						
1,4-Bromofluorobenzene	82	51-129							

<b>Method Blank</b>	<b>099-12-657-873</b>	<b>N/A</b>	<b>Solid</b>	<b>GC 8</b>	<b>03/10/12</b>	<b>03/10/12 11:21</b>	<b>120310B01</b>
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1	U	Ethylbenzene	ND	0.0050	1	U
Toluene	ND	0.0050	1	U	Xylenes (total)	ND	0.010	1	U
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>						
1,4-Bromofluorobenzene	93	51-129							

<b>Method Blank</b>	<b>099-12-657-874</b>	<b>N/A</b>	<b>Solid</b>	<b>GC 8</b>	<b>03/12/12</b>	<b>03/12/12 12:54</b>	<b>120312B01</b>
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.040	8	U	Ethylbenzene	ND	0.040	8	U
Toluene	ND	0.040	8	U	Xylenes (total)	ND	0.080	8	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>						
1,4-Bromofluorobenzene	91	51-129							

<b>Method Blank</b>	<b>099-12-657-875</b>	<b>N/A</b>	<b>Solid</b>	<b>GC 8</b>	<b>03/13/12</b>	<b>03/13/12 11:26</b>	<b>120313B01</b>
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1	U	Ethylbenzene	ND	0.0050	1	U
Toluene	ND	0.0050	1	U	Xylenes (total)	ND	0.010	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>						
1,4-Bromofluorobenzene	89	51-129							

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



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

Date Received: 03/02/12  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8260B  
Units: mg/kg

Project: ExxonMobil 70104/022506C

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-SB21	12-03-0121-1-A	02/28/12 09:35	Solid	GC/MS XX	03/02/12	03/03/12 06:47	120302L03

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	U	Tert-Amyl-Methyl Ether (TAME)	ND	0.010	1	U
Tert-Butyl Alcohol (TBA)	ND	0.050	1	U	1,2-Dibromoethane	ND	0.0050	1	U
Diisopropyl Ether (DIPE)	ND	0.010	1	U	1,2-Dichloroethane	ND	0.0050	1	U
Ethyl-t-Butyl Ether (ETBE)	ND	0.010	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	97	60-132			Dibromofluoromethane	100	63-141		
1,2-Dichloroethane-d4	105	62-146			Toluene-d8	98	80-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-SB20	12-03-0121-2-A	02/28/12 10:05	Solid	GC/MS XX	03/02/12	03/03/12 07:15	120302L04

Comment(s): -BH Reporting limits raised due to high level of non-target analytes.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	ND	1.0	200	U	Tert-Amyl-Methyl Ether (TAME)	ND	2.0	200	U
Tert-Butyl Alcohol (TBA)	ND	10	200	U	1,2-Dibromoethane	ND	1.0	200	U
Diisopropyl Ether (DIPE)	ND	2.0	200	U	1,2-Dichloroethane	ND	1.0	200	U
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	200	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	106	60-132			Dibromofluoromethane	88	63-141		
1,2-Dichloroethane-d4	90	62-146			Toluene-d8	103	80-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-SB16	12-03-0121-3-A	02/28/12 10:26	Solid	GC/MS XX	03/02/12	03/03/12 18:58	120303L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	U	Tert-Amyl-Methyl Ether (TAME)	ND	0.010	1	U
Tert-Butyl Alcohol (TBA)	ND	0.050	1	U	1,2-Dibromoethane	ND	0.0050	1	U
Diisopropyl Ether (DIPE)	ND	0.010	1	U	1,2-Dichloroethane	ND	0.0050	1	U
Ethyl-t-Butyl Ether (ETBE)	ND	0.010	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	60-132			Dibromofluoromethane	93	63-141		
1,2-Dichloroethane-d4	94	62-146			Toluene-d8	98	80-120		

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



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

Date Received: 03/02/12  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8260B  
Units: mg/kg

Project: ExxonMobil 70104/022506C

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-SB17	12-03-0121-4-A	02/28/12 10:50	Solid	GC/MS XX	03/02/12	03/03/12 08:10	120302L04

Comment(s): -BH Reporting limits raised due to high level of non-target analytes.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	ND	0.50	100	U	Tert-Amyl-Methyl Ether (TAME)	ND	1.0	100	U
Tert-Butyl Alcohol (TBA)	ND	5.0	100	U	1,2-Dibromoethane	ND	0.50	100	U
Diisopropyl Ether (DIPE)	ND	1.0	100	U	1,2-Dichloroethane	ND	0.50	100	U
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	100	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	109	60-132			Dibromofluoromethane	88	63-141		
1,2-Dichloroethane-d4	92	62-146			Toluene-d8	101	80-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-SB18	12-03-0121-5-A	02/28/12 11:17	Solid	GC/MS XX	03/02/12	03/03/12 19:26	120303L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	U	Tert-Amyl-Methyl Ether (TAME)	ND	0.010	1	U
Tert-Butyl Alcohol (TBA)	ND	0.050	1	U	1,2-Dibromoethane	ND	0.0050	1	U
Diisopropyl Ether (DIPE)	ND	0.010	1	U	1,2-Dichloroethane	ND	0.0050	1	U
Ethyl-t-Butyl Ether (ETBE)	ND	0.010	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	97	60-132			Dibromofluoromethane	94	63-141		
1,2-Dichloroethane-d4	96	62-146			Toluene-d8	97	80-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5-SB19	12-03-0121-6-A	02/28/12 12:00	Solid	GC/MS XX	03/02/12	03/03/12 09:05	120302L04

Comment(s): -BH Reporting limits raised due to high level of non-target analytes.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	ND	0.50	100	U	Tert-Amyl-Methyl Ether (TAME)	ND	1.0	100	U
Tert-Butyl Alcohol (TBA)	ND	5.0	100	U	1,2-Dibromoethane	ND	0.50	100	U
Diisopropyl Ether (DIPE)	ND	1.0	100	U	1,2-Dichloroethane	ND	0.50	100	U
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	100	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	104	60-132			Dibromofluoromethane	86	63-141		
1,2-Dichloroethane-d4	90	62-146			Toluene-d8	102	80-120		

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

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

Date Received: 03/02/12  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8260B  
Units: mg/kg

Project: ExxonMobil 70104/022506C

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-12-882-1,295</b>	<b>N/A</b>	<b>Solid</b>	<b>GC/MS XX</b>	<b>03/02/12</b>	<b>03/03/12 01:42</b>	<b>120302L03</b>

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	U	Tert-Amyl-Methyl Ether (TAME)	ND	0.010	1	U
Tert-Butyl Alcohol (TBA)	ND	0.050	1	U	1,2-Dibromoethane	ND	0.0050	1	U
Diisopropyl Ether (DIPE)	ND	0.010	1	U	1,2-Dichloroethane	ND	0.0050	1	U
Ethyl-t-Butyl Ether (ETBE)	ND	0.010	1	U					
<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>	<b>Qual</b>		<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>	<b>Qual</b>	
1,4-Bromofluorobenzene	98	60-132			Dibromofluoromethane	96	63-141		
1,2-Dichloroethane-d4	98	62-146			Toluene-d8	98	80-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-12-882-1,296</b>	<b>N/A</b>	<b>Solid</b>	<b>GC/MS XX</b>	<b>03/02/12</b>	<b>03/03/12 02:10</b>	<b>120302L04</b>

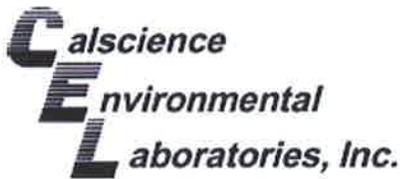
Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	ND	0.50	100	U	Tert-Amyl-Methyl Ether (TAME)	ND	1.0	100	U
Tert-Butyl Alcohol (TBA)	ND	5.0	100	U	1,2-Dibromoethane	ND	0.50	100	U
Diisopropyl Ether (DIPE)	ND	1.0	100	U	1,2-Dichloroethane	ND	0.50	100	U
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	100	U					
<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>	<b>Qual</b>		<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>	<b>Qual</b>	
1,4-Bromofluorobenzene	99	60-132			Dibromofluoromethane	91	63-141		
1,2-Dichloroethane-d4	95	62-146			Toluene-d8	99	80-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-12-882-1,297</b>	<b>N/A</b>	<b>Solid</b>	<b>GC/MS XX</b>	<b>03/03/12</b>	<b>03/03/12 12:30</b>	<b>120303L01</b>

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	U	Tert-Amyl-Methyl Ether (TAME)	ND	0.010	1	U
Tert-Butyl Alcohol (TBA)	ND	0.050	1	U	1,2-Dibromoethane	ND	0.0050	1	U
Diisopropyl Ether (DIPE)	ND	0.010	1	U	1,2-Dichloroethane	ND	0.0050	1	U
Ethyl-t-Butyl Ether (ETBE)	ND	0.010	1	U					
<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>	<b>Qual</b>		<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>	<b>Qual</b>	
1,4-Bromofluorobenzene	98	60-132			Dibromofluoromethane	97	63-141		
1,2-Dichloroethane-d4	99	62-146			Toluene-d8	98	80-120		

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

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Analytical Report



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

Date Received: 03/02/12  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8260B  
Units: mg/kg

Project: ExxonMobil 70104/022506C

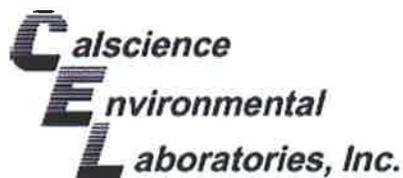
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-882-1,298	N/A	Solid	GC/MS XX	03/03/12	03/03/12 12:58	120303L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	ND	0.50	100	U	Tert-Amyl-Methyl Ether (TAME)	ND	1.0	100	U
Tert-Butyl Alcohol (TBA)	ND	5.0	100	U	1,2-Dibromoethane	ND	0.50	100	U
Diisopropyl Ether (DIPE)	ND	1.0	100	U	1,2-Dichloroethane	ND	0.50	100	U
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	100	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	60-132			Dibromofluoromethane	90	63-141		
1,2-Dichloroethane-d4	93	62-146			Toluene-d8	99	80-120		

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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: 03/02/12  
Work Order No: 12-03-0121  
Preparation: EPA 3550B  
Method: EPA 8015B (M)

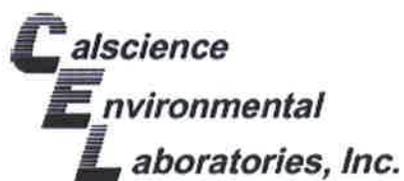
Project ExxonMobil 70104/022506C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-03-0132-1	Solid	GC 48	03/02/12	03/03/12	120302S06

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Diesel	400.0	90	93	64-130	3	0-15	

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RPD - Relative Percent Difference , CL - Control Limit



## Quality Control - Spike/Spike Duplicate



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

Date Received: 03/02/12  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8021B

Project ExxonMobil 70104/022506C

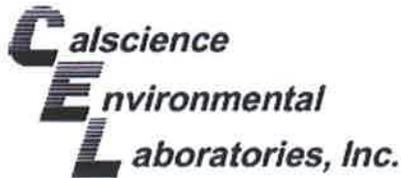
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-03-0640-1	Solid	GC 8	03/10/12	03/10/12	120310S01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	0.5000	87	88	58-118	1	0-24	
Toluene	0.5000	93	94	61-109	1	0-20	
Ethylbenzene	0.5000	90	92	59-113	2	0-20	
Xylenes (total)	1.500	88	89	55-115	2	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit

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



Quality Control - Spike/Spike Duplicate



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

Date Received: 03/02/12  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8021B

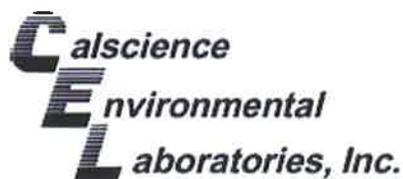
Project ExxonMobil 70104/022506C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
S-5-SB17	Solid	GC 8	03/13/12	03/13/12	120313S01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	0.5000	88	88	58-118	1	0-24	
Toluene	0.5000	94	93	61-109	1	0-20	
Ethylbenzene	0.5000	93	91	59-113	2	0-20	
Xylenes (total)	1.500	90	89	55-115	2	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - Spike/Spike Duplicate



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

Date Received: 03/02/12  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8015B (M)

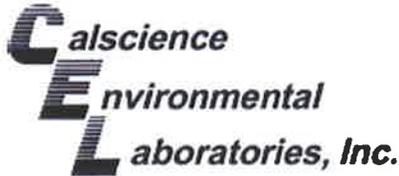
Project ExxonMobil 70104/022506C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-03-0146-1	Solid	GC 57	03/05/12	03/06/12	120305S01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	10.00	181	102	48-114	56	0-23	HX,BA

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - Spike/Spike Duplicate



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

Date Received: 03/02/12  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8015B (M)

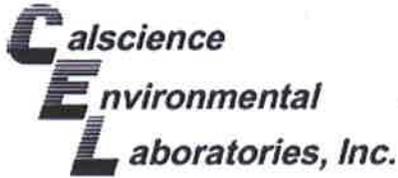
Project ExxonMobil 70104/022506C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-03-0279-4	Solid	GC 29	03/06/12	03/06/12	120306S01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	10.00	83	81	48-114	1	0-23	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - Spike/Spike Duplicate



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

Date Received: 03/02/12  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8260B

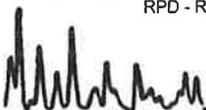
Project ExxonMobil 70104/022506C

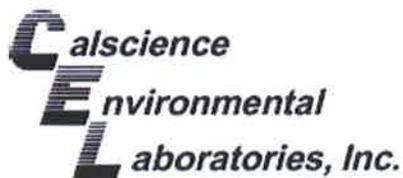
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-03-0132-1	Solid	GC/MS XX	03/02/12	03/03/12	120302S02

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	100	96	61-127	4	0-20	
Toluene	0.05000	97	93	63-123	4	0-20	
Ethylbenzene	0.05000	101	96	57-129	5	0-22	
Methyl-t-Butyl Ether (MTBE)	0.05000	93	90	57-123	3	0-21	
Tert-Butyl Alcohol (TBA)	0.2500	91	91	30-168	1	0-34	
Diisopropyl Ether (DIPE)	0.05000	99	95	57-129	4	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	96	93	55-127	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	96	92	58-124	4	0-20	
Ethanol	0.5000	90	95	17-167	5	0-47	
1,1-Dichloroethene	0.05000	101	98	47-143	3	0-25	
1,2-Dibromoethane	0.05000	95	91	64-124	4	0-20	
1,2-Dichlorobenzene	0.05000	93	89	35-131	4	0-25	
1,2-Dichloroethane	0.05000	94	90	80-120	4	0-20	
Carbon Tetrachloride	0.05000	90	88	51-135	3	0-29	
Chlorobenzene	0.05000	101	97	57-123	4	0-20	
Trichloroethene	0.05000	100	96	44-158	3	0-20	
Vinyl Chloride	0.05000	105	102	49-139	2	0-47	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - Spike/Spike Duplicate



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

Date Received: 03/02/12  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8260B

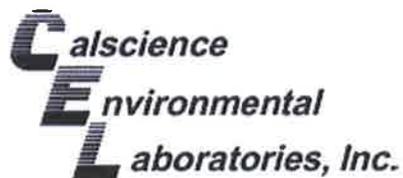
Project ExxonMobil 70104/022506C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-03-0071-1	Solid	GC/MS XX	03/01/12	03/03/12	120303S01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	108	106	61-127	1	0-20	
Toluene	0.05000	93	94	63-123	1	0-20	
Ethylbenzene	0.05000	99	99	57-129	0	0-22	
Methyl-t-Butyl Ether (MTBE)	0.05000	126	125	57-123	1	0-21	HX
Tert-Butyl Alcohol (TBA)	0.2500	101	99	30-168	2	0-34	
Diisopropyl Ether (DIPE)	0.05000	127	124	57-129	2	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	123	123	55-127	0	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	107	108	58-124	1	0-20	
Ethanol	0.5000	109	99	17-167	10	0-47	
1,1-Dichloroethene	0.05000	128	124	47-143	3	0-25	
1,2-Dibromoethane	0.05000	147	143	64-124	3	0-20	HX
1,2-Dichlorobenzene	0.05000	129	125	35-131	3	0-25	
1,2-Dichloroethane	0.05000	111	108	80-120	2	0-20	
Carbon Tetrachloride	0.05000	86	86	51-135	0	0-29	
Chlorobenzene	0.05000	118	116	57-123	1	0-20	
Trichloroethene	0.05000	94	94	44-158	0	0-20	
Vinyl Chloride	0.05000	140	135	49-139	3	0-47	HX

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate



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

Date Received: N/A  
Work Order No: 12-03-0121  
Preparation: EPA 3550B  
Method: EPA 8015B (M)

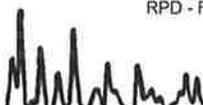
Project: ExxonMobil 70104/022506C

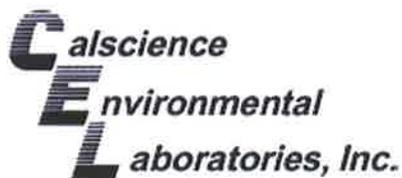
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-275-4,403	Solid	GC 48	03/02/12	03/03/12	120302B06S

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Diesel	400.0	97	93	75-123	5	0-12	

Return to Contents

RPD - Relative Percent Difference, CL - Control Limit





## Quality Control - LCS/LCS Duplicate



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

Date Received: N/A  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8021B

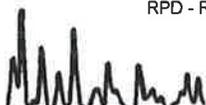
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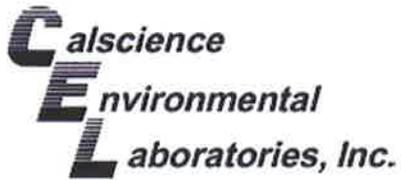
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-657-874	Solid	GC 8	03/12/12	03/12/12	120312B01

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	0.5000	101	97	70-118	5	0-7	
Toluene	0.5000	106	100	71-107	6	0-8	
Ethylbenzene	0.5000	102	98	66-120	3	0-7	
Xylenes (total)	1.500	99	96	66-120	3	0-8	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



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

Date Received: N/A  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8021B

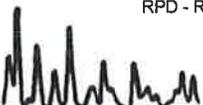
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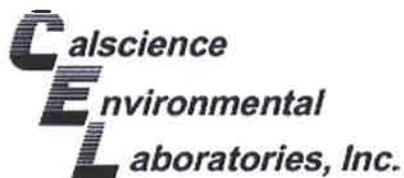
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-657-873	Solid	GC 8	03/10/12	03/10/12	120310B01

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	0.5000	92	93	70-118	1	0-7	
Toluene	0.5000	95	97	71-107	2	0-8	
Ethylbenzene	0.5000	95	95	66-120	0	0-7	
Xylenes (total)	1.500	92	92	66-120	0	0-8	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



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

Date Received: N/A  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8021B

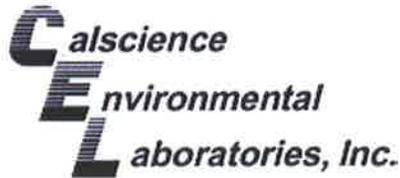
Project: ExxonMobil 70104/022506C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-657-875	Solid	GC 8	03/13/12	03/13/12	120313B01

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	0.5000	96	91	70-118	6	0-7	
Toluene	0.5000	100	95	71-107	5	0-8	
Ethylbenzene	0.5000	97	94	66-120	3	0-7	
Xylenes (total)	1.500	94	91	66-120	4	0-8	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate



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

Date Received: N/A  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8015B (M)

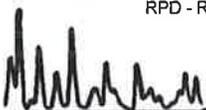
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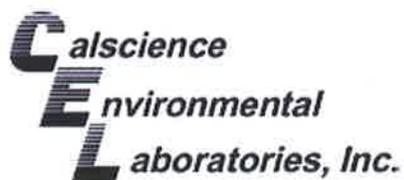
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-571-221	Solid	GC 57	03/05/12	03/05/12	120305B02

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	10.00	104	103	70-124	1	0-18	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



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

Date Received: N/A  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8015B (M)

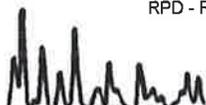
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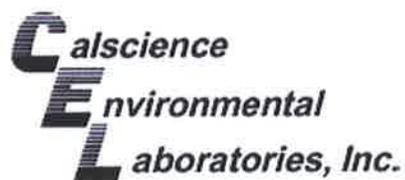
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-571-220	Solid	GC 29	03/07/12	03/07/12	120307B02

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	10.00	96	98	70-124	3	0-18	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



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

Date Received: N/A  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8015B (M)

Project: ExxonMobil 70104/022506C

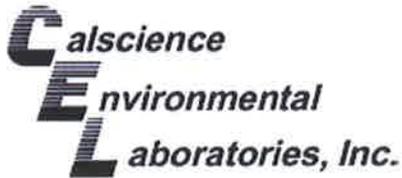
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-571-214	Solid	GC 57	03/05/12	03/05/12	120305B01

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	10.00	104	103	70-124	1	0-18	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



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

Date Received: N/A  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8015B (M)

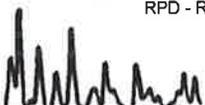
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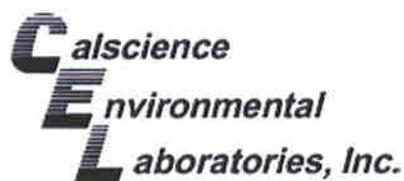
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-571-216	Solid	GC 29	03/06/12	03/06/12	120306B01

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	10.00	105	99	70-124	7	0-18	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



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

Date Received: N/A  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8260B

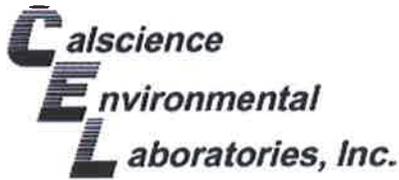
Project: ExxonMobil 70104/022506C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
<b>099-12-882-1,295</b>	<b>Solid</b>	<b>GC/MS XX</b>	<b>03/02/12</b>	<b>03/03/12</b>	<b>120302L03</b>			
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	102	102	78-120	71-127	0	0-20	
Toluene	0.05000	100	100	77-120	70-127	0	0-20	
Ethylbenzene	0.05000	104	103	76-120	69-127	1	0-20	
Methyl-t-Butyl Ether (MTBE)	0.05000	105	106	77-120	70-127	0	0-20	
Tert-Butyl Alcohol (TBA)	0.25000	102	101	68-122	59-131	2	0-20	
Diisopropyl Ether (DIPE)	0.05000	107	106	78-120	71-127	1	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	107	107	78-120	71-127	0	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	105	106	75-120	68-128	1	0-20	
Ethanol	0.50000	103	100	56-140	42-154	3	0-20	
1,1-Dichloroethene	0.05000	103	102	74-122	66-130	1	0-20	
1,2-Dibromoethane	0.05000	107	107	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	0.05000	105	106	75-120	68-128	0	0-20	
1,2-Dichloroethane	0.05000	101	101	80-120	73-127	0	0-20	
Carbon Tetrachloride	0.05000	97	97	49-139	34-154	1	0-20	
Chlorobenzene	0.05000	107	107	79-120	72-127	0	0-20	
Trichloroethene	0.05000	102	102	80-120	73-127	0	0-20	
Vinyl Chloride	0.05000	108	108	68-122	59-131	0	0-20	

Total number of LCS compounds : 17  
Total number of ME compounds : 0  
Total number of ME compounds allowed : 1  
LCS ME CL validation result : Pass

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate



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

Date Received: N/A  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8260B

Project: ExxonMobil 70104/022506C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-882-1,296	Solid	GC/MS XX	03/02/12	03/03/12	120302L04

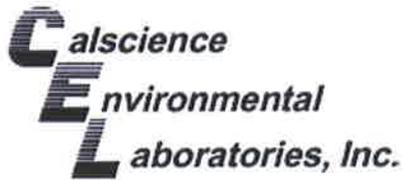
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	102	102	78-120	71-127	0	0-20	
Toluene	0.05000	100	100	77-120	70-127	0	0-20	
Ethylbenzene	0.05000	104	103	76-120	69-127	1	0-20	
Methyl-t-Butyl Ether (MTBE)	0.05000	105	106	77-120	70-127	0	0-20	
Tert-Butyl Alcohol (TBA)	0.2500	102	101	68-122	59-131	2	0-20	
Diisopropyl Ether (DIPE)	0.05000	107	106	78-120	71-127	1	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	107	107	78-120	71-127	0	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	105	106	75-120	68-128	1	0-20	
Ethanol	0.5000	103	100	56-140	42-154	3	0-20	
1,1-Dichloroethene	0.05000	103	102	74-122	66-130	1	0-20	
1,2-Dibromoethane	0.05000	107	107	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	0.05000	105	106	75-120	68-128	0	0-20	
1,2-Dichloroethane	0.05000	101	101	80-120	73-127	0	0-20	
Carbon Tetrachloride	0.05000	97	97	49-139	34-154	1	0-20	
Chlorobenzene	0.05000	107	107	79-120	72-127	0	0-20	
Trichloroethene	0.05000	102	102	80-120	73-127	0	0-20	
Vinyl Chloride	0.05000	108	108	68-122	59-131	0	0-20	

Return to Contents

Total number of LCS compounds : 17  
 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: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8260B

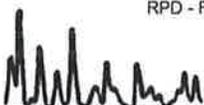
Project: ExxonMobil 70104/022506C

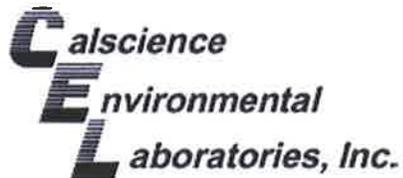
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
<b>099-12-882-1,297</b>	<b>Solid</b>	<b>GC/MS XX</b>	<b>03/03/12</b>	<b>03/03/12</b>	<b>120303L01</b>			
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	105	103	78-120	71-127	2	0-20	
Toluene	0.05000	104	101	77-120	70-127	3	0-20	
Ethylbenzene	0.05000	109	106	76-120	69-127	3	0-20	
Methyl-t-Butyl Ether (MTBE)	0.05000	105	103	77-120	70-127	1	0-20	
Tert-Butyl Alcohol (TBA)	0.25000	103	102	68-122	59-131	1	0-20	
Diisopropyl Ether (DIPE)	0.05000	108	105	78-120	71-127	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	107	104	78-120	71-127	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	106	105	75-120	68-128	1	0-20	
Ethanol	0.50000	107	103	56-140	42-154	4	0-20	
1,1-Dichloroethene	0.05000	106	103	74-122	66-130	3	0-20	
1,2-Dibromoethane	0.05000	109	108	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	0.05000	114	110	75-120	68-128	4	0-20	
1,2-Dichloroethane	0.05000	102	100	80-120	73-127	2	0-20	
Carbon Tetrachloride	0.05000	98	97	49-139	34-154	1	0-20	
Chlorobenzene	0.05000	112	109	79-120	72-127	3	0-20	
Trichloroethene	0.05000	105	102	80-120	73-127	3	0-20	
Vinyl Chloride	0.05000	110	107	68-122	59-131	3	0-20	

Total number of LCS compounds : 17  
 Total number of ME compounds : 0  
 Total number of ME compounds allowed : 1  
 LCS ME CL validation result : Pass

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



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

Date Received: N/A  
Work Order No: 12-03-0121  
Preparation: EPA 5030C  
Method: EPA 8260B

Project: ExxonMobil 70104/022506C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
<b>099-12-882-1,298</b>	<b>Solid</b>	<b>GC/MS XX</b>	<b>03/03/12</b>	<b>03/03/12</b>	<b>120303L02</b>			
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	105	103	78-120	71-127	2	0-20	
Toluene	0.05000	104	101	77-120	70-127	3	0-20	
Ethylbenzene	0.05000	109	106	76-120	69-127	3	0-20	
Methyl-t-Butyl Ether (MTBE)	0.05000	105	103	77-120	70-127	1	0-20	
Tert-Butyl Alcohol (TBA)	0.25000	103	102	68-122	59-131	1	0-20	
Diisopropyl Ether (DIPE)	0.05000	108	105	78-120	71-127	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	107	104	78-120	71-127	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	106	105	75-120	68-128	1	0-20	
Ethanol	0.50000	107	103	56-140	42-154	4	0-20	
1,1-Dichloroethene	0.05000	106	103	74-122	66-130	3	0-20	
1,2-Dibromoethane	0.05000	109	108	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	0.05000	114	110	75-120	68-128	4	0-20	
1,2-Dichloroethane	0.05000	102	100	80-120	73-127	2	0-20	
Carbon Tetrachloride	0.05000	98	97	49-139	34-154	1	0-20	
Chlorobenzene	0.05000	112	109	79-120	72-127	3	0-20	
Trichloroethene	0.05000	105	102	80-120	73-127	3	0-20	
Vinyl Chloride	0.05000	110	107	68-122	59-131	3	0-20	

Total number of LCS compounds : 17

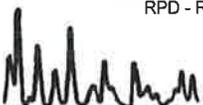
Total number of ME compounds : 0

Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit



Work Order Number: 12-03-0121

<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:** Rebekah Westrup [rebekah.westrup@cardno.com]  
**Sent:** Friday, March 02, 2012 4:41 PM  
**To:** Sandy Tat  
**Subject:** RE: ExxonMobil 70104/022506C (12-03-0121)

Good Golly,

Yes the sampling date is 02/28/12

**Rebekah A. Westrup**

Senior Staff Geologist

**Cardno ERI**

601 North McDowell Blvd., Petaluma, CA 94954

**Phone:** 707 766 2000 **Direct:** 707 766 2000 **Mobile:** 707 338 8555 **Fax:** 707 789 0414

---

**From:** Sandy Tat [<mailto:stat@calscience.com>]  
**Sent:** Friday, March 02, 2012 4:37 PM  
**To:** Rebekah Westrup  
**Subject:** ExxonMobil 70104/022506C (12-03-0121)  
**Importance:** High

Hi Rebekah,

Please verify the sampling date for this work order. Should the sampling date be 02/28/12 instead of 02/28/11? 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](mailto:stat@calscience.com)

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**Looking for Air Testing Services?**  
Calscience has over 20 years of experience in  
Ambient, Indoor, and Soil Vapor Testing.

NEW VOC & AIR TESTING LAB

AIR SOIL WATER MARINE CHEMISTRY



0121

 <b>Ship From:</b> ALAN KEMP CAL SCIENCE- CONCORD 5063 COMMERCIAL CIRCLE #H CONCORD, CA 94520  <b>Ship To:</b> SAMPLE RECEIVING CEL 7440 LINCOLN WAY GARDEN GROVE, CA 92841  <b>COD:</b> \$0.00  <b>Reference:</b> CARDNO ERI, COATES ENV, CONOCO PHILLIPS  <b>Delivery Instructions:</b>  <b>Signature Type:</b> SIGNATURE REQUIRED	<b>WebShip &gt;&gt;&gt;&gt;</b> 800-322-5555 www.gso.com  <b>Tracking #:</b> 518576077  <b>NPS</b>  <b>ORC</b> <b>A</b> GARDEN GROVE
	<b>D92841A</b>  99088950  Print Date : 03/01/12 18:09 PM

Package 1 of 1

Print All

**LABEL INSTRUCTIONS:**

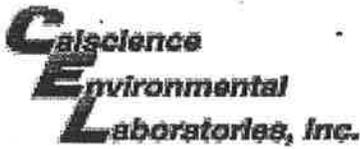
- Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
- STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.
- STEP 2 - Fold this page in half.
- STEP 3 - Securely attach this label to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

**ADDITIONAL OPTIONS:**

**TERMS AND CONDITIONS:**

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

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WORK ORDER #: 12-03-0121

**SAMPLE RECEIPT FORM**

Cooler 1 of 1

CLIENT: Cardno ERI

DATE: 03/02/12

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

Temperature 2.9 °C - 0.3 °C (CF) = 2.6 °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: JP

**CUSTODY SEALS INTACT:**

Cooler  \_\_\_\_\_  No (Not Intact)  Not Present  N/A Initial: JP

Sample  \_\_\_\_\_  No (Not Intact)  Not Present Initial: JP

**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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTAINER TYPE:**

Solid:  4ozCGJ  8ozCGJ  16ozCGJ  Sleeve (B)  EnCores®  TerraCores®  \_\_\_\_\_

Water:  VOA  VOA<sub>h</sub>  VOA<sub>na2</sub>  125AGB  125AGB<sub>h</sub>  125AGB<sub>p</sub>  1AGB  1AGB<sub>na2</sub>  1AGB<sub>s</sub>

500AGB  500AGJ  500AGJ<sub>s</sub>  250AGB  250CGB  250CGB<sub>s</sub>  1PB  1PB<sub>na</sub>  500PB

250PB  250PB<sub>n</sub>  125PB  125PB<sub>znna</sub>  100PJ  100PJ<sub>na2</sub>  \_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_

Air:  Tedlar®  Summa® Other:  \_\_\_\_\_ Trip Blank Lot#: \_\_\_\_\_ Labeled/Checked by: JP

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

Preservative: h: HCL n: HNO<sub>3</sub> na<sub>2</sub>: Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> u: Ultra-pure znna: ZnAc<sub>2</sub>+NaOH f: Filtered Scanned by: JP

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**WORK ORDER #: 12-03-0121**

**SAMPLE ANOMALY FORM**

**SAMPLES - CONTAINERS & LABELS:**

**Comments:**

- Sample(s) NOT RECEIVED but listed on COC
- Sample(s) received but NOT LISTED on COC
- Holding time expired – list sample ID(s) and test
- Insufficient quantities for analysis – list test
- Improper container(s) used – list test
- Improper preservative used – list test
- No preservative noted on COC or label – list test & notify lab
- Sample labels illegible – note test/container type
- Sample label(s) do not match COC – Note in comments
  - Sample ID
  - Date and/or Time Collected
  - Project Information
  - # of Container(s)
  - Analysis
- Sample container(s) compromised – Note in comments
  - 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: \_\_\_\_\_

*(-1) through (-6) Collection  
date per label is 2/28/12*

**HEADSPACE – Containers with Bubble > 6mm or 1/4 inch:**

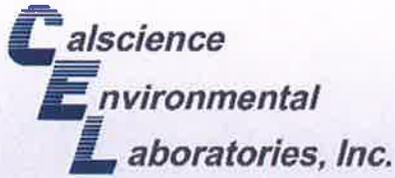
Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Cont. received	Analysis

Comments: \_\_\_\_\_

\*Transferred at Client's request.

Initial / Date: *BL* 03 / 02 / 12

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# CALSCIENCE

**WORK ORDER NUMBER: 12-03-0120**

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

### Analytical Report For

**Client:** Cardno ERI

**Client Project Name:** ExxonMobil 70104/022506C

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

*Cecile de Guia*

Approved for release on 03/14/2012 by:  
Cecile deGuia  
Project Manager

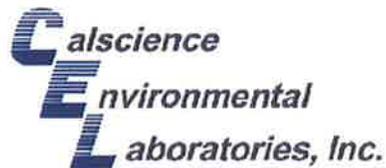
ResultLink ▶

Email your PM ▶



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





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Work Order Number: 12-03-0120

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	1.4 EPA 8260B Volatile Organics + Oxygenates (Solid) . . . . .	6
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Cardno ERI  
601 North McDowell Blvd.  
Petaluma, CA 94954-2312

Date Received: 03/02/12  
Work Order No: 12-03-0120  
Preparation: EPA 3550B  
Method: EPA 8015B (M)

Project: ExxonMobil 70104/022506C

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SP-1-(A-D)	12-03-0120-5-A	02/28/12 12:30	Solid	GC 48	03/02/12	03/03/12 03:44	120302B06S

Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	ND	5.0	1	SG,U	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	96	61-145	

<b>Method Blank</b>	<b>099-12-275-4,403</b>	<b>N/A</b>	<b>Solid</b>	<b>GC 48</b>	<b>03/02/12</b>	<b>03/03/12 00:03</b>	<b>120302B06S</b>
---------------------	-------------------------	------------	--------------	--------------	-----------------	---------------------------	-------------------

Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	ND	5.0	1	U	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	101	61-145	

Return to Contents

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

**Analytical Report**



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

Date Received: 03/02/12  
Work Order No: 12-03-0120  
Preparation: EPA 5030C  
Method: EPA 8015B (M)

Project: ExxonMobil 70104/022506C

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SP-1-(A-D)	12-03-0120-5-A	02/28/12 12:30	Solid	GC 57	03/05/12	03/05/12 19:48	120305B01

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
TPH as Gasoline	11	0.50	1		mg/kg

<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>
1,4-Bromofluorobenzene - FID	111	42-126	

<b>Method Blank</b>	<b>099-14-571-214</b>	<b>N/A</b>	<b>Solid</b>	<b>GC 57</b>	<b>03/05/12</b>	<b>03/05/12 12:29</b>	<b>120305B01</b>
---------------------	-----------------------	------------	--------------	--------------	-----------------	---------------------------	------------------

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
TPH as Gasoline	ND	0.50	1	U	mg/kg

<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>
1,4-Bromofluorobenzene - FID	74	42-126	

Return to Contents

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



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

Date Received: 03/02/12  
Work Order No: 12-03-0120  
Preparation: EPA 5030C  
Method: EPA 8021B  
Units: mg/kg

Project: ExxonMobil 70104/022506C

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SP-1-(A-D)	12-03-0120-5-A	02/28/12 12:30	Solid	GC 8	03/10/12	03/10/12 17:41	120310B01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1	U	Ethylbenzene	0.036	0.0050	1	
Toluene	ND	0.0050	1	U	Xylenes (total)	0.14	0.010	1	
Surrogates:	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>					
1,4-Bromofluorobenzene	95	51-129							

Method Blank	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-657-873	N/A	Solid	GC 8	03/10/12	03/10/12 11:21	120310B01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1	U	Ethylbenzene	ND	0.0050	1	U
Toluene	ND	0.0050	1	U	Xylenes (total)	ND	0.010	1	U
Surrogates:	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>					
1,4-Bromofluorobenzene	93	51-129							

Return to Contents

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



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

Date Received: 03/02/12  
Work Order No: 12-03-0120  
Preparation: EPA 5030C  
Method: EPA 8260B  
Units: mg/kg

Project: ExxonMobil 70104/022506C

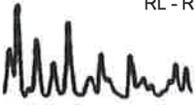
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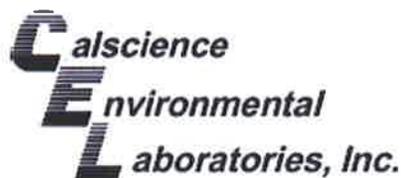
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SP-1-(A-D)	12-03-0120-5-A	02/28/12 12:30	Solid	GC/MS XX	03/02/12	03/06/12 20:20	120306L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	U	4-Methyl-2-Pentanone	ND	0.050	1	U
Tert-Butyl Alcohol (TBA)	ND	0.050	1	U	Acetone	ND	0.12	1	U
Diisopropyl Ether (DIPE)	ND	0.010	1	U	Bromobenzene	ND	0.0050	1	U
Ethyl-t-Butyl Ether (ETBE)	ND	0.010	1	U	Bromochloromethane	ND	0.0050	1	U
Tert-Amyl-Methyl Ether (TAME)	ND	0.010	1	U	Bromoform	ND	0.0050	1	U
1,1,1,2-Tetrachloroethane	ND	0.0050	1	U	Bromomethane	ND	0.025	1	U
1,1,1-Trichloroethane	ND	0.0050	1	U	Carbon Disulfide	ND	0.050	1	U
1,1,2,2-Tetrachloroethane	ND	0.0050	1	U	Carbon Tetrachloride	ND	0.0050	1	U
1,1,2-Trichloroethane	ND	0.0050	1	U	Chlorobenzene	ND	0.0050	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.050	1	U	Dibromochloromethane	ND	0.0050	1	U
1,1-Dichloroethane	ND	0.0050	1	U	Chloroethane	ND	0.0050	1	U
1,1-Dichloroethene	ND	0.0050	1	U	Chloroform	ND	0.0050	1	U
1,1-Dichloropropene	ND	0.0050	1	U	Chloromethane	ND	0.025	1	U
1,2,3-Trichlorobenzene	ND	0.010	1	U	Dibromomethane	ND	0.0050	1	U
1,2,3-Trichloropropane	ND	0.0050	1	U	Bromodichloromethane	ND	0.0050	1	U
1,2,4-Trichlorobenzene	ND	0.0050	1	U	Dichlorodifluoromethane	ND	0.0050	1	U
1,2,4-Trimethylbenzene	0.74	0.50	100		Hexachloro-1,3-Butadiene	ND	0.10	1	U
1,3,5-Trimethylbenzene	0.066	0.0050	1		Isopropylbenzene	ND	0.0050	1	U
c-1,2-Dichloroethene	ND	0.0050	1	U	2-Butanone	ND	0.050	1	U
1,2-Dibromo-3-Chloropropane	ND	0.010	1	U	Methylene Chloride	ND	0.050	1	U
1,2-Dibromoethane	ND	0.0050	1	U	2-Hexanone	ND	0.050	1	U
1,2-Dichlorobenzene	ND	0.0050	1	U	Naphthalene	ND	0.050	1	U
1,2-Dichloroethane	ND	0.0050	1	U	n-Butylbenzene	0.022	0.0050	1	
1,2-Dichloropropane	ND	0.0050	1	U	n-Propylbenzene	ND	0.0050	1	U
t-1,2-Dichloroethene	ND	0.0050	1	U	p-Isopropyltoluene	0.0067	0.0050	1	
c-1,3-Dichloropropene	ND	0.0050	1	U	sec-Butylbenzene	ND	0.0050	1	U
1,3-Dichlorobenzene	ND	0.0050	1	U	Styrene	ND	0.0050	1	U
1,3-Dichloropropane	ND	0.0050	1	U	tert-Butylbenzene	ND	0.0050	1	U
t-1,3-Dichloropropene	ND	0.0050	1	U	Tetrachloroethene	ND	0.0050	1	U
1,4-Dichlorobenzene	ND	0.0050	1	U	Trichloroethene	ND	0.0050	1	U
2,2-Dichloropropane	ND	0.0050	1	U	Trichlorofluoromethane	ND	0.050	1	U
2-Chlorotoluene	ND	0.0050	1	U	Vinyl Chloride	ND	0.0050	1	U
4-Chlorotoluene	ND	0.0050	1	U					
<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>	<b>Qual</b>		<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>	<b>Qual</b>	
1,4-Bromofluorobenzene	106	60-132			Dibromofluoromethane	93	63-141		
1,2-Dichloroethane-d4	97	62-146			Toluene-d8	101	80-120		

Return to Contents

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





Analytical Report



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

Date Received: 03/02/12  
Work Order No: 12-03-0120  
Preparation: EPA 5030C  
Method: EPA 8260B  
Units: mg/kg

Project: ExxonMobil 70104/022506C

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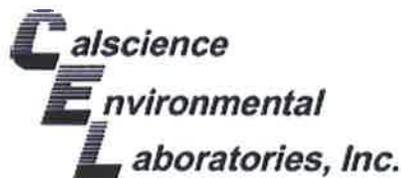
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-882-1,301	N/A	Solid	GC/MS XX	03/06/12	03/06/12 11:56	120306L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	U	4-Methyl-2-Pentanone	ND	0.050	1	U
Tert-Butyl Alcohol (TBA)	ND	0.050	1	U	Acetone	ND	0.12	1	U
Diisopropyl Ether (DIPE)	ND	0.010	1	U	Bromobenzene	ND	0.0050	1	U
Ethyl-t-Butyl Ether (ETBE)	ND	0.010	1	U	Bromochloromethane	ND	0.0050	1	U
Tert-Amyl-Methyl Ether (TAME)	ND	0.010	1	U	Bromoform	ND	0.0050	1	U
1,1,1,2-Tetrachloroethane	ND	0.0050	1	U	Bromomethane	ND	0.025	1	U
1,1,1-Trichloroethane	ND	0.0050	1	U	Carbon Disulfide	ND	0.050	1	U
1,1,2,2-Tetrachloroethane	ND	0.0050	1	U	Carbon Tetrachloride	ND	0.0050	1	U
1,1,2-Trichloroethane	ND	0.0050	1	U	Chlorobenzene	ND	0.0050	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.050	1	U	Dibromochloromethane	ND	0.0050	1	U
1,1-Dichloroethane	ND	0.0050	1	U	Chloroethane	ND	0.0050	1	U
1,1-Dichloroethene	ND	0.0050	1	U	Chloroform	ND	0.0050	1	U
1,1-Dichloropropene	ND	0.0050	1	U	Chloromethane	ND	0.025	1	U
1,2,3-Trichlorobenzene	ND	0.010	1	U	Dibromomethane	ND	0.0050	1	U
1,2,3-Trichloropropane	ND	0.0050	1	U	Bromodichloromethane	ND	0.0050	1	U
1,2,4-Trichlorobenzene	ND	0.0050	1	U	Dichlorodifluoromethane	ND	0.0050	1	U
1,2,4-Trimethylbenzene	ND	0.0050	1	U	Hexachloro-1,3-Butadiene	ND	0.10	1	U
1,3,5-Trimethylbenzene	ND	0.0050	1	U	Isopropylbenzene	ND	0.0050	1	U
c-1,2-Dichloroethene	ND	0.0050	1	U	2-Butanone	ND	0.050	1	U
1,2-Dibromo-3-Chloropropane	ND	0.010	1	U	Methylene Chloride	ND	0.050	1	U
1,2-Dibromoethane	ND	0.0050	1	U	2-Hexanone	ND	0.050	1	U
1,2-Dichlorobenzene	ND	0.0050	1	U	Naphthalene	ND	0.050	1	U
1,2-Dichloroethane	ND	0.0050	1	U	n-Butylbenzene	ND	0.0050	1	U
1,2-Dichloropropane	ND	0.0050	1	U	n-Propylbenzene	ND	0.0050	1	U
t-1,2-Dichloroethene	ND	0.0050	1	U	p-Isopropyltoluene	ND	0.0050	1	U
c-1,3-Dichloropropene	ND	0.0050	1	U	sec-Butylbenzene	ND	0.0050	1	U
1,3-Dichlorobenzene	ND	0.0050	1	U	Styrene	ND	0.0050	1	U
1,3-Dichloropropane	ND	0.0050	1	U	tert-Butylbenzene	ND	0.0050	1	U
t-1,3-Dichloropropene	ND	0.0050	1	U	Tetrachloroethene	ND	0.0050	1	U
1,4-Dichlorobenzene	ND	0.0050	1	U	Trichloroethene	ND	0.0050	1	U
2,2-Dichloropropane	ND	0.0050	1	U	Trichlorofluoromethane	ND	0.050	1	U
2-Chlorotoluene	ND	0.0050	1	U	Vinyl Chloride	ND	0.0050	1	U
4-Chlorotoluene	ND	0.0050	1	U					
<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>	<b>Qual</b>		<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>	<b>Qual</b>	
1,4-Bromofluorobenzene	100	60-132			Dibromofluoromethane	95	63-141		
1,2-Dichloroethane-d4	98	62-146			Toluene-d8	98	80-120		

Return to Contents

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





Analytical Report



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

Date Received: 03/02/12  
Work Order No: 12-03-0120  
Preparation: EPA 5030C  
Method: EPA 8260B  
Units: mg/kg

Project: ExxonMobil 70104/022506C

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-882-1,302	N/A	Solid	GC/MS XX	03/06/12	03/06/12 12:24	120306L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	ND	0.50	100	U	4-Methyl-2-Pentanone	ND	5.0	100	U
Tert-Butyl Alcohol (TBA)	ND	5.0	100	U	Acetone	ND	12	100	U
Diisopropyl Ether (DIPE)	ND	1.0	100	U	Bromobenzene	ND	0.50	100	U
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	100	U	Bromochloromethane	ND	0.50	100	U
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	100	U	Bromoform	ND	0.50	100	U
1,1,1,2-Tetrachloroethane	ND	0.50	100	U	Bromomethane	ND	2.5	100	U
1,1,1-Trichloroethane	ND	0.50	100	U	Carbon Disulfide	ND	5.0	100	U
1,1,2,2-Tetrachloroethane	ND	0.50	100	U	Carbon Tetrachloride	ND	0.50	100	U
1,1,2-Trichloroethane	ND	0.50	100	U	Chlorobenzene	ND	0.50	100	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	5.0	100	U	Dibromochloromethane	ND	0.50	100	U
1,1-Dichloroethane	ND	0.50	100	U	Chloroethane	ND	0.50	100	U
1,1-Dichloroethene	ND	0.50	100	U	Chloroform	ND	0.50	100	U
1,1-Dichloropropene	ND	0.50	100	U	Chloromethane	ND	2.5	100	U
1,2,3-Trichlorobenzene	ND	1.0	100	U	Dibromomethane	ND	0.50	100	U
1,2,3-Trichloropropane	ND	0.50	100	U	Bromodichloromethane	ND	0.50	100	U
1,2,4-Trichlorobenzene	ND	0.50	100	U	Dichlorodifluoromethane	ND	0.50	100	U
1,2,4-Trimethylbenzene	ND	0.50	100	U	Hexachloro-1,3-Butadiene	ND	10	100	U
1,3,5-Trimethylbenzene	ND	0.50	100	U	Isopropylbenzene	ND	0.50	100	U
c-1,2-Dichloroethene	ND	0.50	100	U	2-Butanone	ND	5.0	100	U
1,2-Dibromo-3-Chloropropane	ND	1.0	100	U	Methylene Chloride	ND	5.0	100	U
1,2-Dibromoethane	ND	0.50	100	U	2-Hexanone	ND	5.0	100	U
1,2-Dichlorobenzene	ND	0.50	100	U	Naphthalene	ND	5.0	100	U
1,2-Dichloroethane	ND	0.50	100	U	n-Butylbenzene	ND	0.50	100	U
1,2-Dichloropropane	ND	0.50	100	U	n-Propylbenzene	ND	0.50	100	U
t-1,2-Dichloroethene	ND	0.50	100	U	p-Isopropyltoluene	ND	0.50	100	U
c-1,3-Dichloropropene	ND	0.50	100	U	sec-Butylbenzene	ND	0.50	100	U
1,3-Dichlorobenzene	ND	0.50	100	U	Styrene	ND	0.50	100	U
1,3-Dichloropropane	ND	0.50	100	U	tert-Butylbenzene	ND	0.50	100	U
t-1,3-Dichloropropene	ND	0.50	100	U	Tetrachloroethene	ND	0.50	100	U
1,4-Dichlorobenzene	ND	0.50	100	U	Trichloroethene	ND	0.50	100	U
2,2-Dichloropropane	ND	0.50	100	U	Trichlorofluoromethane	ND	5.0	100	U
2-Chlorotoluene	ND	0.50	100	U	Vinyl Chloride	ND	0.50	100	U
4-Chlorotoluene	ND	0.50	100	U					
<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>	<b>Qual</b>		<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>	<b>Qual</b>	
1,4-Bromofluorobenzene	100	60-132			Dibromofluoromethane	89	63-141		
1,2-Dichloroethane-d4	93	62-146			Toluene-d8	99	80-120		

Return to Contents

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



**Analytical Report**



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

Date Received: 03/02/12  
Work Order No: 12-03-0120  
Preparation: EPA 3050B  
Method: EPA 6010B

Project: ExxonMobil 70104/022506C

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SP-1-(A-D)	12-03-0120-5-A	02/28/12 12:30	Solid	ICP 5300	03/05/12	03/06/12 17:00	120305L02

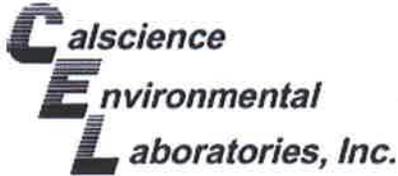
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
Lead	5.12	0.500	1		mg/kg

<b>Method Blank</b>	<b>097-01-002-15,700</b>	<b>N/A</b>	<b>Solid</b>	<b>ICP 5300</b>	<b>03/05/12</b>	<b>03/06/12 13:00</b>	<b>120305L02</b>
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
Lead	ND	0.500	1	U	mg/kg

Return to Contents

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: 03/02/12  
Work Order No: 12-03-0120  
Preparation: EPA 3050B  
Method: EPA 6010B

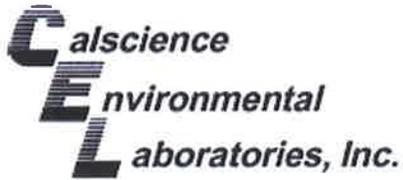
Project ExxonMobil 70104/022506C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-03-0204-4	Solid	ICP 5300	03/05/12	03/06/12	120305S02

Parameter	SPIKE_ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	25.00	103	102	75-125	1	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - PDS / PDSD



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

Date Received 03/02/12  
Work Order No: 12-03-0120  
Preparation: EPA 3050B  
Method: EPA 6010B

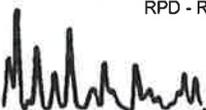
Project: ExxonMobil 70104/022506C

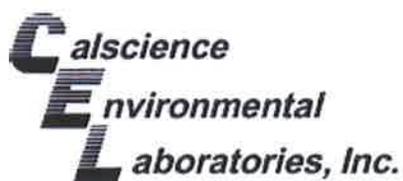
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS / PDSD Batch Number
12-03-0204-4	Solid	ICP 5300	03/05/12	03/06/12	120305S02

Parameter	SPIKE ADDED	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	25.00	100	99	75-125	1	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - Spike/Spike Duplicate



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

Date Received: 03/02/12  
Work Order No: 12-03-0120  
Preparation: EPA 3550B  
Method: EPA 8015B (M)

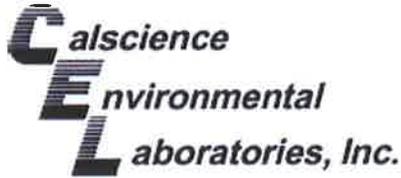
Project ExxonMobil 70104/022506C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-03-0132-1	Solid	GC 48	03/02/12	03/03/12	120302S06

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD_CL	Qualifiers
TPH as Diesel	400.0	90	93	64-130	3	0-15	

Return to Contents ↑

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - Spike/Spike Duplicate



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

Date Received: 03/02/12  
Work Order No: 12-03-0120  
Preparation: EPA 5030C  
Method: EPA 8021B

Project ExxonMobil 70104/022506C

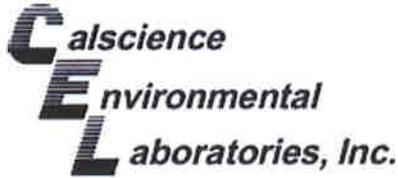
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-03-0640-1	Solid	GC 8	03/10/12	03/10/12	120310S01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	0.5000	87	88	58-118	1	0-24	
Toluene	0.5000	93	94	61-109	1	0-20	
Ethylbenzene	0.5000	90	92	59-113	2	0-20	
Xylenes (total)	1.500	88	89	55-115	2	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - Spike/Spike Duplicate



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

Date Received: 03/02/12  
Work Order No: 12-03-0120  
Preparation: EPA 5030C  
Method: EPA 8015B (M)

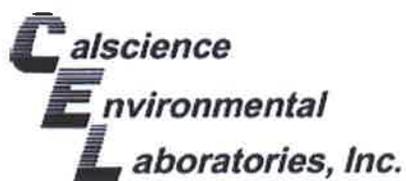
Project ExxonMobil 70104/022506C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-03-0146-1	Solid	GC 57	03/05/12	03/06/12	120305S01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	10.00	181	102	48-114	56	0-23	HX,BA

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit



## Quality Control - Spike/Spike Duplicate



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

Date Received: 03/02/12  
Work Order No: 12-03-0120  
Preparation: EPA 5030C  
Method: EPA 8260B

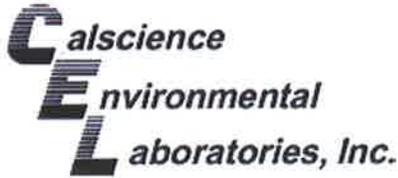
Project ExxonMobil 70104/022506C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-03-0258-5	Solid	GC/MS XX	03/05/12	03/06/12	120306S01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	94	104	61-127	9	0-20	
Toluene	0.05000	93	103	63-123	10	0-20	
Ethylbenzene	0.05000	96	105	57-129	9	0-22	
Methyl-t-Butyl Ether (MTBE)	0.05000	90	102	57-123	12	0-21	
Tert-Butyl Alcohol (TBA)	0.2500	88	101	30-168	13	0-34	
Diisopropyl Ether (DIPE)	0.05000	95	105	57-129	11	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	92	104	55-127	12	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	89	101	58-124	13	0-20	
Ethanol	0.5000	96	111	17-167	15	0-47	
1,1-Dichloroethene	0.05000	98	108	47-143	10	0-25	
1,2-Dibromoethane	0.05000	90	102	64-124	12	0-20	
1,2-Dichlorobenzene	0.05000	94	104	35-131	10	0-25	
1,2-Dichloroethane	0.05000	89	98	80-120	10	0-20	
Carbon Tetrachloride	0.05000	84	95	51-135	13	0-29	
Chlorobenzene	0.05000	97	107	57-123	10	0-20	
Trichloroethene	0.05000	94	103	44-158	10	0-20	
Vinyl Chloride	0.05000	100	111	49-139	10	0-47	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate



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

Date Received: N/A  
Work Order No: 12-03-0120  
Preparation: EPA 3050B  
Method: EPA 6010B

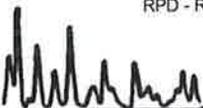
Project: ExxonMobil 70104/022506C

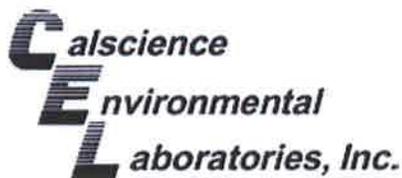
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-01-002-15,700	Solid	ICP 5300	03/05/12	03/06/12	120305L02

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	25.00	108	110	80-120	2	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



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

Date Received: N/A  
Work Order No: 12-03-0120  
Preparation: EPA 3550B  
Method: EPA 8015B (M)

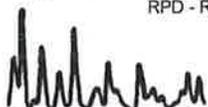
Project: ExxonMobil 70104/022506C

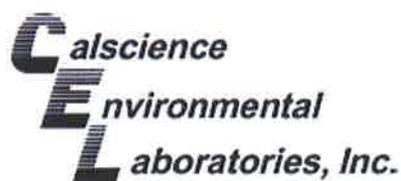
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-275-4,403	Solid	GC 48	03/02/12	03/03/12	120302B06S

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Diesel	400.0	97	93	75-123	5	0-12	

Return to Contents ↑

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



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

Date Received: N/A  
Work Order No: 12-03-0120  
Preparation: EPA 5030C  
Method: EPA 8021B

Project: ExxonMobil 70104/022506C

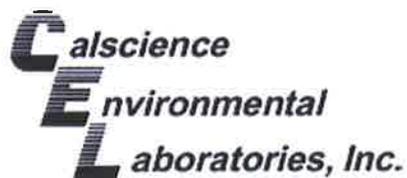
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-657-873	Solid	GC 8	03/10/12	03/10/12	120310B01

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	0.5000	92	93	70-118	1	0-7	
Toluene	0.5000	95	97	71-107	2	0-8	
Ethylbenzene	0.5000	95	95	66-120	0	0-7	
Xylenes (total)	1.500	92	92	66-120	0	0-8	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit

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



Quality Control - LCS/LCS Duplicate



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

Date Received: N/A  
Work Order No: 12-03-0120  
Preparation: EPA 5030C  
Method: EPA 8015B (M)

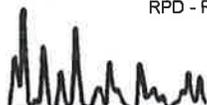
Project: ExxonMobil 70104/022506C

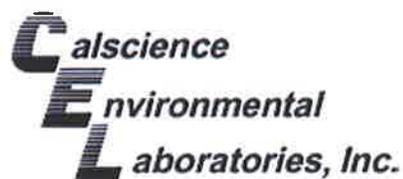
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-571-214	Solid	GC 57	03/05/12	03/05/12	120305B01

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	10.00	104	103	70-124	1	0-18	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



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

Date Received: N/A  
Work Order No: 12-03-0120  
Preparation: EPA 5030C  
Method: EPA 8260B

Project: ExxonMobil 70104/022506C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
<b>099-12-882-1,301</b>	<b>Solid</b>	<b>GC/MS XX</b>	<b>03/06/12</b>	<b>03/06/12</b>	<b>120306L01</b>			
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	101	103	78-120	71-127	2	0-20	
Toluene	0.05000	99	101	77-120	70-127	3	0-20	
Ethylbenzene	0.05000	100	103	76-120	69-127	2	0-20	
Methyl-t-Butyl Ether (MTBE)	0.05000	102	104	77-120	70-127	2	0-20	
Tert-Butyl Alcohol (TBA)	0.2500	95	98	68-122	59-131	3	0-20	
Diisopropyl Ether (DIPE)	0.05000	106	107	78-120	71-127	2	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	105	107	78-120	71-127	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	101	104	75-120	68-128	3	0-20	
Ethanol	0.5000	98	102	56-140	42-154	4	0-20	
1,1-Dichloroethene	0.05000	103	106	74-122	66-130	2	0-20	
1,2-Dibromoethane	0.05000	99	101	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	0.05000	103	105	75-120	68-128	2	0-20	
1,2-Dichloroethane	0.05000	97	99	80-120	73-127	2	0-20	
Carbon Tetrachloride	0.05000	91	94	49-139	34-154	3	0-20	
Chlorobenzene	0.05000	103	106	79-120	72-127	3	0-20	
Trichloroethene	0.05000	99	101	80-120	73-127	2	0-20	
Vinyl Chloride	0.05000	106	105	68-122	59-131	1	0-20	

Total number of LCS compounds : 17

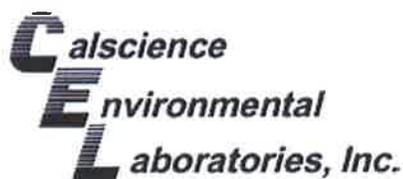
Total number of ME compounds : 0

Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit



## Quality Control - LCS/LCS Duplicate



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

Date Received: N/A  
Work Order No: 12-03-0120  
Preparation: EPA 5030C  
Method: EPA 8260B

Project: ExxonMobil 70104/022506C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
<b>099-12-882-1,302</b>	<b>Solid</b>	<b>GC/MS XX</b>	<b>03/06/12</b>	<b>03/06/12</b>	<b>120306L02</b>			
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	101	103	78-120	71-127	2	0-20	
Toluene	0.05000	99	101	77-120	70-127	3	0-20	
Ethylbenzene	0.05000	100	103	76-120	69-127	2	0-20	
Methyl-t-Butyl Ether (MTBE)	0.05000	102	104	77-120	70-127	2	0-20	
Tert-Butyl Alcohol (TBA)	0.25000	95	98	68-122	59-131	3	0-20	
Diisopropyl Ether (DIPE)	0.05000	106	107	78-120	71-127	2	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	105	107	78-120	71-127	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	101	104	75-120	68-128	3	0-20	
Ethanol	0.50000	98	102	56-140	42-154	4	0-20	
1,1-Dichloroethene	0.05000	103	106	74-122	66-130	2	0-20	
1,2-Dibromoethane	0.05000	99	101	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	0.05000	103	105	75-120	68-128	2	0-20	
1,2-Dichloroethane	0.05000	97	99	80-120	73-127	2	0-20	
Carbon Tetrachloride	0.05000	91	94	49-139	34-154	3	0-20	
Chlorobenzene	0.05000	103	106	79-120	72-127	3	0-20	
Trichloroethene	0.05000	99	101	80-120	73-127	2	0-20	
Vinyl Chloride	0.05000	106	105	68-122	59-131	1	0-20	

Total number of LCS compounds : 17

Total number of ME compounds : 0

Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

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RPD - Relative Percent Difference , CL - Control Limit

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

Work Order Number: 12-03-0120

<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

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## Sandy Tat

---

**From:** Rebekah Westrup [rebekah.westrup@cardno.com]  
**Sent:** Friday, March 02, 2012 4:42 PM  
**To:** Sandy Tat  
**Subject:** RE: ExxonMobil 70104/022506C (12-03-0120)

Yes. It should be 2/28/12. I need to stop trying to multi-task.

### ***Rebekah A. Westrup***

Senior Staff Geologist

**Cardno ERI**

601 North McDowell Blvd., Petaluma, CA 94954

**Phone:** 707 766 2000 **Direct:** 707 766 2000 **Mobile:** 707 338 8555 **Fax:** 707 789 0414

---

**From:** Sandy Tat [<mailto:stat@calscience.com>]  
**Sent:** Friday, March 02, 2012 4:40 PM  
**To:** Rebekah Westrup  
**Subject:** ExxonMobil 70104/022506C (12-03-0120)  
**Importance:** High

Hi Rebekah,

Please verify the sampling date for this work order. Should the sampling date be 02/28/12 instead of 12/28/12? 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](mailto:stat@calscience.com)

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**AIR    SOIL    WATER    MARINE CHEMISTRY**

#### PRIVACY NOTICE:

This email (and/or the documents attached to it) is intended only for the use of the individual or entity to which it is addressed and



0120



< WebShip > > > > >  
800-322-5555 www.gso.com

Ship From:  
ALAN KEMP  
CAL SCIENCE- CONCORD  
5063 COMMERCIAL CIRCLE #H  
CONCORD, CA 94520

Tracking #: 518576077



NPS

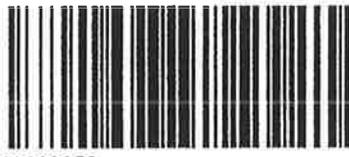
Ship To:  
SAMPLE RECEIVING  
CEL  
7440 LINCOLN WAY  
GARDEN GROVE, CA 92841

ORC  
GARDEN GROVE

A

COD:  
\$0.00

D92841A



99088950

Reference:  
CARDNO ERI, COATES ENV, CONOCO PHILLIPS

Delivery Instructions:

Signature Type:  
SIGNATURE REQUIRED

Print Date : 03/01/12 16:09 PM

Package 1 of 1

Print All

**LABEL INSTRUCTIONS:**

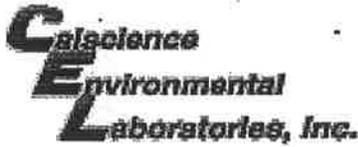
- Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
- STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.
- STEP 2 - Fold this page in half.
- STEP 3 - Securely attach this label to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

**ADDITIONAL OPTIONS:**

**TERMS AND CONDITIONS:**

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

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WORK ORDER #: 12-03-0120

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Carcino FRI

DATE: 03/02/12

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

Temperature 2.9 °C - 0.3 °C (CF) = 2.6 °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: JR

**CUSTODY SEALS INTACT:**

Cooler  \_\_\_\_\_  No (Not Intact)  Not Present  N/A Initial: JR

Sample  \_\_\_\_\_  No (Not Intact)  Not Present Initial: JR

**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 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTAINER TYPE:**

Solid:  4ozCGJ  8ozCGJ  16ozCGJ  Sleeve ( 17 )  EnCores®  TerraCores®  \_\_\_\_\_

Water:  VOA  VOAh  VOAna<sub>2</sub>  125AGB  125AGBh  125AGBp  1AGB  1AGBna<sub>2</sub>  1AGBs

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

250PB  250PBn  125PB  125PBzanna  100PJ  100PJna<sub>2</sub>  \_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_

Air:  Tedlar®  Summa® Other:  \_\_\_\_\_ Trip Blank Lot#: \_\_\_\_\_ Labeled/Checked by: JR

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

Preservative: h: HCL n: HNO<sub>3</sub> na<sub>2</sub>: Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> u: Ultra-pure zanna: ZnAc<sub>2</sub>+NaOH f: Filtered Scanned by: JR

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## 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:**

\_\_\_\_\_  
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(1-4) COLLECTION DATE PER  
 LABEL IS 12/28/12

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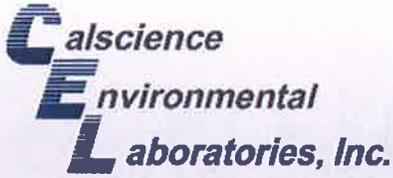
**HEADSPACE – Containers with Bubble > 6mm or ¼ inch:**

Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Cont. received	Analysis

**Comments:** \_\_\_\_\_  
 \_\_\_\_\_

\*Transferred at Client's request.

Initial / Date: pc 03/12/12



# CALSCIENCE

**WORK ORDER NUMBER: 12-03-0639**

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

### Analytical Report For

**Client:** Cardno ERI

**Client Project Name:** ExxonMobil 70104/022506C

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

*Cecile de Guia*

Approved for release on 03/22/2012 by:  
Cecile deGuia  
Project Manager

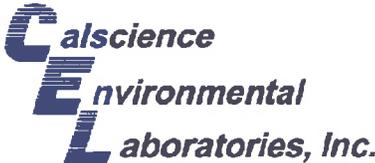
ResultLink ▶

Email your PM ▶



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





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Work Order Number: 12-03-0639

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

Date Received: 03/09/12  
Work Order No: 12-03-0639  
Preparation: EPA 3510C  
Method: EPA 8015B (M)

Project: ExxonMobil 70104/022506C

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>W-8-SB15</b>	<b>12-03-0639-1-G</b>	<b>03/08/12 11:00</b>	<b>Aqueous</b>	<b>GC 48</b>	<b>03/15/12</b>	<b>03/15/12 19:12</b>	<b>120315B05S</b>

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
TPH as Diesel	ND	61	1.22	SG,U	ug/L

<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>
Decachlorobiphenyl	95	68-140	

<b>W-8-SB14</b>	<b>12-03-0639-2-G</b>	<b>03/08/12 11:40</b>	<b>Aqueous</b>	<b>GC 48</b>	<b>03/15/12</b>	<b>03/15/12 19:27</b>	<b>120315B05S</b>
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
TPH as Diesel	510	61	1.22	SG,HD	ug/L

<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>
Decachlorobiphenyl	100	68-140	

<b>Method Blank</b>	<b>099-12-330-2,174</b>	<b>N/A</b>	<b>Aqueous</b>	<b>GC 48</b>	<b>03/15/12</b>	<b>03/15/12 18:28</b>	<b>120315B05S</b>
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
TPH as Diesel	ND	50	1	U	ug/L

<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>
Decachlorobiphenyl	98	68-140	

Return to Contents

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

**Analytical Report**



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

Date Received: 03/09/12  
Work Order No: 12-03-0639  
Preparation: EPA 5030C  
Method: EPA 8015B (M)

Project: ExxonMobil 70104/022506C

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>W-8-SB15</b>	<b>12-03-0639-1-E</b>	<b>03/08/12 11:00</b>	<b>Aqueous</b>	<b>GC 25</b>	<b>03/10/12</b>	<b>03/10/12 23:05</b>	<b>120310B01</b>

<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	77	38-134			

<b>W-8-SB14</b>	<b>12-03-0639-2-E</b>	<b>03/08/12 11:40</b>	<b>Aqueous</b>	<b>GC 25</b>	<b>03/10/12</b>	<b>03/10/12 23:38</b>	<b>120310B01</b>
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
TPH as Gasoline	1500	50	1	HD	ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	131	38-134			

<b>Method Blank</b>	<b>099-12-436-7,219</b>	<b>N/A</b>	<b>Aqueous</b>	<b>GC 25</b>	<b>03/10/12</b>	<b>03/10/12 10:08</b>	<b>120310B01</b>
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<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			

Return to Contents

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



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

Date Received: 03/09/12  
Work Order No: 12-03-0639  
Preparation: EPA 5030C  
Method: EPA 8021B  
Units: ug/L

Project: ExxonMobil 70104/022506C

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>W-8-SB15</b>	<b>12-03-0639-1-E</b>	<b>03/08/12 11:00</b>	<b>Aqueous</b>	<b>GC 8</b>	<b>03/13/12</b>	<b>03/15/12 06:29</b>	<b>120314B01</b>

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
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>						
1,4-Bromofluorobenzene	84	70-130							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>W-8-SB14</b>	<b>12-03-0639-2-D</b>	<b>03/08/12 11:40</b>	<b>Aqueous</b>	<b>GC 8</b>	<b>03/13/12</b>	<b>03/15/12 07:05</b>	<b>120314B01</b>

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1	U	Ethylbenzene	3.0	0.50	1	
Toluene	ND	0.50	1	U	Xylenes (total)	2.2	1.0	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>						
1,4-Bromofluorobenzene	90	70-130							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-12-667-1,407</b>	<b>N/A</b>	<b>Aqueous</b>	<b>GC 8</b>	<b>03/13/12</b>	<b>03/14/12 22:44</b>	<b>120314B01</b>

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
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>						
1,4-Bromofluorobenzene	93	70-130							

Return to Contents

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



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

Date Received: 03/09/12  
Work Order No: 12-03-0639  
Preparation: EPA 5030C  
Method: EPA 8260B  
Units: ug/L

Project: ExxonMobil 70104/022506C

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>W-8-SB15</b>	<b>12-03-0639-1-A</b>	<b>03/08/12 11:00</b>	<b>Aqueous</b>	<b>GC/MS BB</b>	<b>03/14/12</b>	<b>03/15/12 02:41</b>	<b>120314L02</b>

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	3.4	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	U
Tert-Butyl Alcohol (TBA)	6.8	5.0	1		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	99	68-120			Dibromofluoromethane	98	80-127		
1,2-Dichloroethane-d4	99	80-128			Toluene-d8	102	80-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>W-8-SB14</b>	<b>12-03-0639-2-A</b>	<b>03/08/12 11:40</b>	<b>Aqueous</b>	<b>GC/MS BB</b>	<b>03/14/12</b>	<b>03/15/12 03:10</b>	<b>120314L02</b>

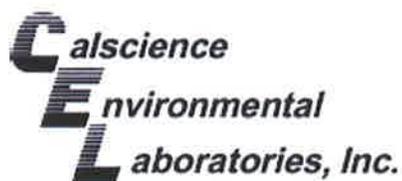
Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	U	Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	U
Tert-Butyl Alcohol (TBA)	5.8	5.0	1		1,2-Dibromoethane	ND	0.50	1	U
Diisopropyl Ether (DIPE)	ND	0.50	1	U	1,2-Dichloroethane	ND	0.50	1	U
Ethyl-t-Butyl Ether (ETBE)	ND	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	104	68-120			Dibromofluoromethane	97	80-127		
1,2-Dichloroethane-d4	103	80-128			Toluene-d8	103	80-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-12-884-817</b>	<b>N/A</b>	<b>Aqueous</b>	<b>GC/MS BB</b>	<b>03/14/12</b>	<b>03/15/12 02:12</b>	<b>120314L02</b>

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	97	68-120			Dibromofluoromethane	99	80-127		
1,2-Dichloroethane-d4	100	80-128			Toluene-d8	100	80-120		

Return to Contents

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: 03/09/12  
Work Order No: 12-03-0639  
Preparation: EPA 5030C  
Method: EPA 8015B (M)

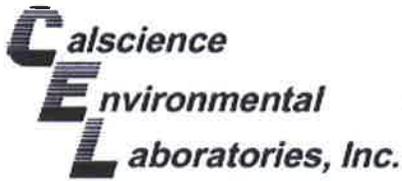
Project ExxonMobil 70104/022506C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-03-0613-1	Aqueous	GC 25	03/10/12	03/10/12	120310S01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	2000	79	93	68-122	16	0-18	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - Spike/Spike Duplicate



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

Date Received: 03/09/12  
Work Order No: 12-03-0639  
Preparation: EPA 5030C  
Method: EPA 8021B

Project ExxonMobil 70104/022506C

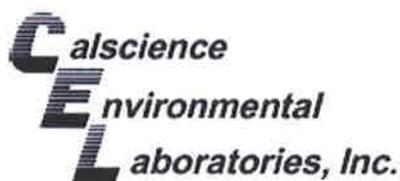
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-03-0460-1	Aqueous	GC 8	03/13/12	03/15/12	120314S01

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	100.0	86	94	57-129	8	0-23	
Toluene	100.0	91	99	50-134	9	0-26	
Ethylbenzene	100.0	86	95	58-130	9	0-26	
Xylenes (total)	300.0	83	92	58-130	10	0-28	

Return to Contents

RPD - Relative Percent Difference, CL - Control Limit





## Quality Control - Spike/Spike Duplicate



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

Date Received: 03/09/12  
Work Order No: 12-03-0639  
Preparation: EPA 5030C  
Method: EPA 8260B

Project ExxonMobil 70104/022506C

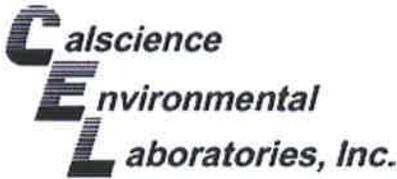
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
W-8-SB15	Aqueous	GC/MS BB	03/14/12	03/15/12	120314S02

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	10.00	117	110	76-124	7	0-20	
Toluene	10.00	107	98	80-120	8	0-20	
Ethylbenzene	10.00	106	98	78-126	8	0-20	
Methyl-t-Butyl Ether (MTBE)	10.00	121	103	67-121	12	0-49	
Tert-Butyl Alcohol (TBA)	50.00	155	126	36-162	18	0-30	
Diisopropyl Ether (DIPE)	10.00	103	94	60-138	9	0-45	
Ethyl-t-Butyl Ether (ETBE)	10.00	109	97	69-123	11	0-30	
Tert-Amyl-Methyl Ether (TAME)	10.00	114	102	65-120	11	0-20	
Ethanol	100.0	101	99	30-180	2	0-72	
1,2-Dibromoethane	10.00	105	96	80-120	9	0-20	
1,2-Dichloroethane	10.00	114	105	80-120	9	0-20	

Return to Contents

RPD - Relative Percent Difference, CL - Control Limit

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



Quality Control - LCS/LCS Duplicate



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

Date Received: N/A  
Work Order No: 12-03-0639  
Preparation: EPA 3510C  
Method: EPA 8015B (M)

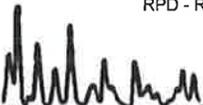
Project: ExxonMobil 70104/022506C

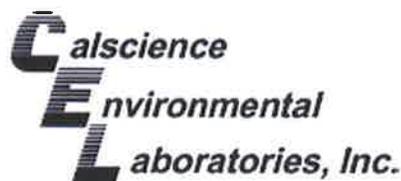
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-330-2,174	Aqueous	GC 48	03/15/12	03/15/12	120315B05S

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Diesel	2000	90	88	75-117	2	0-13	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



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

Date Received: N/A  
Work Order No: 12-03-0639  
Preparation: EPA 5030C  
Method: EPA 8015B (M)

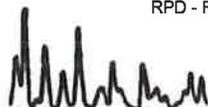
Project: ExxonMobil 70104/022506C

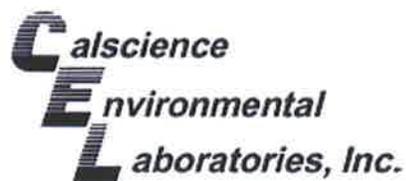
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-436-7,219	Aqueous	GC 25	03/10/12	03/10/12	120310B01

<u>Parameter</u>	<u>SPIKE ADDED</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
TPH as Gasoline	2000	99	101	78-120	1	0-10	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



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

Date Received: N/A  
Work Order No: 12-03-0639  
Preparation: EPA 5030C  
Method: EPA 8021B

Project: ExxonMobil 70104/022506C

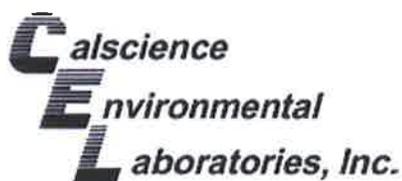
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-667-1,407	Aqueous	GC 8	03/13/12	03/15/12	120314B01

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	100.0	92	94	70-118	2	0-9	
Toluene	100.0	98	100	66-114	2	0-9	
Ethylbenzene	100.0	93	96	72-114	2	0-9	
Xylenes (total)	300.0	90	93	74-116	3	0-9	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Cardno ERI	Date Received:	N/A
601 North McDowell Blvd.	Work Order No:	12-03-0639
Petaluma, CA 94954-2312	Preparation:	EPA 5030C
	Method:	EPA 8260B

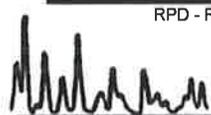
Project: ExxonMobil 70104/022506C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
<b>099-12-884-817</b>	<b>Aqueous</b>	<b>GC/MS BB</b>	<b>03/14/12</b>	<b>03/15/12</b>	<b>120314L02</b>			
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	10.00	100	94	80-120	73-127	6	0-20	
Toluene	10.00	110	102	80-120	73-127	7	0-20	
Ethylbenzene	10.00	108	101	80-120	73-127	7	0-20	
Methyl-t-Butyl Ether (MTBE)	10.00	107	101	69-123	60-132	5	0-20	
Tert-Butyl Alcohol (TBA)	50.00	102	97	63-123	53-133	5	0-20	
Diisopropyl Ether (DIPE)	10.00	99	94	59-137	46-150	5	0-37	
Ethyl-t-Butyl Ether (ETBE)	10.00	105	100	69-123	60-132	6	0-20	
Tert-Amyl-Methyl Ether (TAME)	10.00	108	93	70-120	62-128	15	0-20	
Ethanol	100.0	98	94	28-160	6-182	4	0-57	
1,2-Dibromoethane	10.00	104	97	79-121	72-128	7	0-20	
1,2-Dichloroethane	10.00	106	100	80-120	73-127	6	0-20	

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

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit



Work Order Number: 12-03-0639

<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



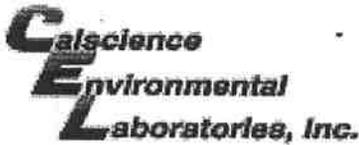


0639

 <small>Global Source Operations</small>	<p align="center"><b>&lt; WebShip &gt; &gt; &gt; &gt;</b></p> <p align="center">800-322-5555 <a href="http://www.gso.com">www.gso.com</a></p>	
<p><b>Ship From:</b>          ALAN KEMP          CAL SCIENCE- CONCORD          5063 COMMERCIAL CIRCLE #H          CONCORD, CA 94520</p>	<p>Tracking #: 518628788  </p>	<p><b>NPS</b></p>
<p><b>Ship To:</b>          SAMPLE RECEIVING          CEL          7440 LINCOLN WAY          GARDEN GROVE, CA 92841</p>	<p><b>ORC</b> <b>A</b>          GARDEN GROVE</p>	
<p><b>COD:</b>          \$0.00</p>	<p><b>D92841A</b></p>	
<p><b>Reference:</b>          CURTIS &amp; TOMPKINS, ERI, CONOCO PHILLIPS,          EARTH CON</p>		
<p><b>Delivery Instructions:</b></p>	<p>99297843</p>	
<p><b>Signature Type:</b>          SIGNATURE REQUIRED</p>	<p>Print Date : 03/08/12 16:24 PM</p>	

Package 1 of 1

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WORK ORDER #: 12-03-0659

**SAMPLE RECEIPT FORM**

Cooler 1 of 1

CLIENT: CARDNO EPT

DATE: 03/09/12

**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: 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTAINER TYPE:**

**Solid:**  4ozCGJ  8ozCGJ  16ozCGJ  Sleeve (\_\_\_\_)  EnCores®  TerraCores®  \_\_\_\_\_

**Water:**  VOA  VOA<sup>6</sup>h  VOAna<sub>2</sub>  125AGB  125AGBh  125AGBp  1AGB  1AGBna<sub>2</sub>  1AGBs

500AGB  500AGJ<sup>2</sup>  500AGJs  250AGB  250CGB  250CGBs  1PB  1PBna  500PB

250PB  250PBn  125PB  125PBz<sub>na</sub>  100PJ  100PJna<sub>2</sub>  \_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_

**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:** WJK

**Preservative:** h: HCL n: HNO<sub>3</sub> na<sub>2</sub>: Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> u: Ultra-pure z<sub>na</sub>: ZnAc<sub>2</sub>+NaOH f: Filtered **Scanned by:** WJK

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**APPENDIX F**

**SURVEY REPORT**

POINT	LATITUDE	LONGITUDE	NORTHING	EASTING	ELEV GROUND
SB 14	37.76907384	-122.23901960	2107169.2	6059041.6	13.42
SB 15	37.76914934	-122.23919160	2107197.6	6058992.4	13.17
SB 16	37.76889874	-122.23910380	2107105.9	6059016.0	13.37
SB 17	37.76896139	-122.23917760	2107129.1	6058995.2	13.61
SB 18	37.76896541	-122.23933580	2107131.4	6058949.5	14.19
SB 19	37.76890124	-122.23923360	2107107.5	6058978.5	13.87
SB 20	37.76880885	-122.23918410	2107073.6	6058992.2	13.93
SB 21	37.76879762	-122.23933260	2107070.3	6058949.2	14.46



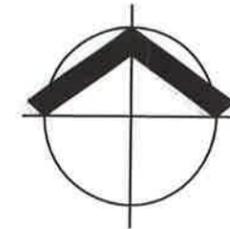
BASIS OF COORDINATES AND ELEVATIONS:

COORDINATES ARE CALIFORNIA STATE PLANE ZONE 3 COORDINATES

COORDINATE DATUM IS NAD 83(CORS).

DATUM ELLIPSOID IS GRS80.

COORDINATES WERE ESTABLISH BY CONVENTIONAL SURVEY USING PREVIOUS GEOTRACKER SURVEY VALUES. NO ATTEMPT WAS MADE TO DETERMINE ACCURACY OR PRECISION OF PREVIOUS WORK. THE CURRENT SURVEY WAS ADJUSTED TO FIT WITH PREVIOUS DATA.



SCALE: 1"=30'



PROJECT NO. 5119878006

DATE: 04/09/12

BY: DIW

SHEET NO. 1 OF 1

**MONITORING WELL SURVEY**  
**Former Exxon Mobil Station No. 7-0104**

ERI

1275 Park Street, Alameda, Alameda County, California



SACRAMENTO  
 701 UNIVERSITY AVENUE, SUITE 200, SACRAMENTO, CA 95825  
 TEL: (916) 682-3100 FAX: (916) 923-6251  
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