

**ExxonMobil
Environmental Services Company**

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Jennifer C. Sedlachek
Project Manager

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9:25 am, Nov 01, 2011

Alameda County
Environmental Health

ExxonMobil

October 28, 2011

Mr. Jerry Wickham
Alameda County Health Services Agency
Environmental Health Services – Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

RE: Former Exxon RAS #74121/10605 Foothill Boulevard, Oakland, California.

Dear Mr. Wickham:

Attached for your review and comment is a letter report entitled *Soil Vapor Assessment*, dated October 28, 2011, for the above-referenced site. The report was prepared by Cardno ERI of Petaluma, California, and details site conditions.

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 *Soil Vapor Assessment*, dated October 28, 2011

cc: w/ attachment
Mr. John Jay, MacArthur Boulevard Associates

w/o attachment
Ms. Paula Sime, Cardno ERI



Shaping the Future

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October 28, 2011
Cardno ERI 2780C.R02

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

SUBJECT **Soil Vapor Assessment**
Former Exxon Service Station 74121
10605 Foothill Boulevard
Oakland, California
Alameda County No. RO0002635

Ms. Sedlachek:

At the request of ExxonMobil Environmental Services (EMES), on behalf of Exxon Mobil Corporation, Cardno ERI prepared this report detailing soil vapor assessment at the subject site. The purpose of the work was to compare current soil vapor concentrations to concentrations reported during the previous soil vapor sampling events and to collect samples from wells that were previously saturated with perched groundwater. The work consisted of purging and sampling soil vapor sampling wells VW2, VW5, VW6, and VW10 at the subject site. Wells VW1, VW3, VW4, VW9, VW11, and VW12 contained water and were not sampled. The work was proposed in Cardno ERI's August 12, 2011 *Addendum to Soil Vapor Sampling Report*, dated August 12, 2011 (Cardno ERI, 2011), which was approved by the Alameda County Health Services Agency, Environmental Health Services – Environmental Protection Department (the County), in correspondence dated August 24, 2011 (Appendix A).

October 28, 2011
Cardno ERI 2780C.R02 Former Exxon Service Station 74121, Oakland, California

SITE DESCRIPTION

Former Exxon Service Station 74121 is located at 10605 Foothill Boulevard in Oakland, California (Plate 1). The surrounding area consists of commercial and residential properties.

The subject site is a former Exxon service station. Currently the site is an undeveloped, landscaped area on the south corner of the intersection of Foothill Boulevard and 106th Avenue. The site is bordered by residential properties and a shopping center. The USTs were removed from the site prior to 1998. In February 2010, ETIC engineering, Inc. (ETIC) oversaw the excavation and removal of approximately 1,750 tons of soil from the site (ETIC, 2010a). Select site features are shown on Plate 2.

Additional site details are provided in ETIC's *Post-Remedial Excavation Report*, dated June 30, 2010 (ETIC, 2010a) and ETIC's December 10, 2010 *Vapor Sampling Report*, dated December 10, 2010 (ETIC, 2010b).

GEOLOGY AND HYDROGEOLOGY

The site lies at an elevation of 85 feet above msl, and the local topography slopes to the west toward San Francisco Bay (Plate 1). The site is approximately 1,000 feet west of the active Hayward Fault Zone near the base of the Diablo Range. Bedrock near the site consists of the Jurassic Cretaceous Franciscan Formation (Braymer, 2000). The nearest body of surface water is San Leandro Creek located approximately 1 mile south of the site (Plate 1).

The site is primarily underlain by clay and silt to approximately 17 feet bgs. A layer of silty sand extends from approximately 17 to 21 feet bgs. A coarse-grained water-bearing zone of sand and gravel extends from approximately 21 feet to 26 feet bgs, the maximum depth explored.

PREVIOUS WORK

Cumulative groundwater monitoring and sampling data is included on Table 1. Well construction details are included on Table 2. Cumulative soil analytical results are included on Tables 3A and 3B. Soil vapor sampling data is included on Table 4.

Fueling System Activities

Details of the UST and dispenser removal are unknown and not specified in available site records. In December 1998, AEI Consultants (AEI) performed a geophysical survey at the site to locate remaining USTs; USTs were

October 28, 2011
Cardno ERI 2780C.R02 Former Exxon Service Station 74121, Oakland, California

not discovered (AEI, 2004). Correspondence from the County indicated that the UST system was removed from the site prior to December 1998 (ETIC, 2010a).

Site Assessment Activities

Assessment activities have been conducted at the site since 2004 including the drilling of soil borings SB1 through SB20 and V1 through V10 (AEI, 2004; ETIC, 2005; ETIC, 2006), the installation of groundwater monitoring wells MW1 through MW3 and MW5 (ETIC, 2007), and the installation soil vapor sampling wells VW1 through VW12 (ETIC, 2007; ETIC 2009).

Remediation Activities

Excavation

In February 2010, ETIC oversaw the excavation and removal of 1,751 tons of soil from the area of the former USTs (ETIC, 2010a). The area was excavated to approximately 20 feet bgs, and confirmation soil samples were collected. Based on the results of the confirmation soil samples, ETIC concluded that the majority of the petroleum hydrocarbons in soil had been removed from the site.

Groundwater Monitoring Activities

Groundwater monitoring was implemented at the site in 2007. Measurable NAPL has not been observed during the monitoring program (Table 1). Maximum concentrations of dissolved-phase TPHg (2,120 µg/L) and benzene (22 µg/L) were reported in samples collected from well MW2 in July and December 2007, respectively (Table 1). Samples collected during the most recent sampling event (March 2010) contained maximum concentrations of 520 µg/L TPHg in well MW2. Benzene was not reported in samples collected during the March 2010 sampling event.

Soil Vapor Monitoring Activities

In May 2006, ETIC collected soil vapor samples from direct-push soil borings V1, V3, V6, V7, V9, and V10 (ETIC, 2006). Maximum TPHg (17,000,000 micrograms per cubic meter [µg/m³]) and benzene (1,900 µg/m³) concentrations were reported from boring V10, located near the former USTs. The location of boring V10 was subsequently removed during the 2010 excavation (ETIC, 2010a).

October 28, 2011
Cardno ERI 2780C.R02 Former Exxon Service Station 74121, Oakland, California

In April 2007, ETIC installed soil vapor monitoring wells VW1 through VW5 (ETIC, 2007). In April 2007, vapor samples were collected from wells VW1 and VW5. Wells VW2, VW3, and VW4 contained water and were not sampled. TPHg was not reported in the samples collected in 2007. Benzene was reported in the sample collected from well VW5 at a concentration of 4.4 $\mu\text{g}/\text{m}^3$.

Soil vapor sampling wells VW6 through VW12 were installed by ETIC in 2009 (ETIC, 2009).

The soil vapor wells at the site have been sampled periodically since their installation with the exception of wells VW3 and VW4 (near the site boundary) which have always contained water. Wells VW7 and VW8 were destroyed as part of the remedial excavation in 2010 (ETIC, 2010a).

Since the February 2010 remedial excavation, samples have been collected from select wells. Maximum post-excavation concentrations of TPHg and benzene were reported in well VW11 located in the vicinity of the former dispensers at concentrations of 420,000 $\mu\text{g}/\text{m}^3$ and 45 $\mu\text{g}/\text{m}^3$, respectively.

SOIL VAPOR ASSESSMENT

In August 2011, Cardno ERI recommended sampling all of the remaining vapor wells at the site during the anticipated period of minimum groundwater elevation (Cardno ERI, 2011). The County approved of the recommended resampling in a letter dated August 24, 2011 (Appendix A).

Purging and Sampling Soil Vapor Sampling Wells

Prior to purging and sampling, a purging and sampling manifold was connected to each well, and the tubing and fittings downstream from the wellhead valves were vacuum tested at approximately 27 to 28 inches of mercury (in Hg). The sampling manifold and tubing held the applied vacuum for five minutes at each soil vapor sampling well, indicating there were not leaks in the above-grade apparatus.

Prior to purging and sampling, a leak test was performed on the sampling apparatus, the annular well seal, and the Summa™ canister and associated valves and fittings. To assess the potential for leaks a plastic shroud was placed over the well and Summa™ canister and helium was introduced into the shroud to produce a constant concentration of helium (approximately 20%); the helium concentration was continuously monitored using a meter. The wellhead valve then opened and the vacuum applied to the well. Real-time leak detection is performed in the field by diverting extracted soil gas from the well into a Tedlar bag via a lung-box, and analyzing the helium concentration within the Tedlar bag with a helium meter. The concentration of helium in the sample divided by the concentration of helium in the shroud provides a measure of the proportion of the

October 28, 2011
Cardno ERI 2780C.R02 Former Exxon Service Station 74121, Oakland, California

sample attributable to leakage. Leaked air comprising less than 5% of the sample is insignificant. Helium screening is also performed using laboratory analysis of the contents of the Summa™ canister collected under the shroud.

On October 11, 2011, Cardno ERI purged and collected soil vapor samples from wells VW2, VW5, VW6, and VW10. Perched groundwater was present in wells VW1, VW3, VW4, VW9, VW11, and VW12, which prevented collection of soil vapor samples. Duplicate samples were collected from well VW2.

Cardno ERI collected soil vapor samples using a manifold consisting of airtight valves, a flow regulator, pressure gauges, and a vacuum pump capable of producing a vacuum of approximately 29 in Hg. The manifold also includes a port that connects sample collection vessels (Summa™ canisters). One vapor sample was collected from each of the wells over a period of approximately five minutes. Sampling was completed when the Summa™ canister reading reached 5 in Hg. Soil vapor samples were collected over a period of approximately three and a half hours.

Soil vapor analytical results are presented in Table 4. Select soil vapor analytical results are illustrated on Plate 2. A summary of sampling times, Summa™ canister vacuum readings, and average flow rate data during sample collection is presented in Appendix B.

Laboratory Analytical Methods – Soil Vapor Samples

Cardno ERI collected and submitted soil vapor samples for laboratory analysis to H&P Mobile Geochemistry, Inc. (H&P), of Carlsbad, California, a California state-certified laboratory, under COC protocol. The samples were analyzed for:

- TPHg (reported as TPHv) using EPA Method TO-15.
- Full-scan VOCs, including BTEX, fuel oxygenates, lead scavengers, naphthalene, and additional VOCs using EPA Method TO-15.
- Oxygen and carbon dioxide using American Society for Testing and Materials (ASTM) Method 1945-96.
- Helium using ASTM D1945M.
- Methane using Method EPA 8015M.
- Vacuum measured using a vacuum gauge.

The laboratory analytical report and COC record are provided in Appendix C.

RESULTS OF INVESTIGATION

The concentration of TPHg (110,000 $\mu\text{g}/\text{m}^3$) reported in the sample collected from well VW5, located in the vicinity of the former USTs exceeded the commercial/industrial ESL established by the California Regional Water Quality Control Board, San Francisco Bay Region (CRWQCB-SFB, 2008). The reporting limit for EDB exceeded the residential ESL in each of the samples collected; however, EDB was not detected above the reporting limit in the samples collected during this sampling event. Concentrations of other reported analytes did not exceed commercial/industrial ESLs.

DISCUSSION

Wells VW1, VW3, VW4, VW9, VW11, and VW12 contained perched groundwater and were not sampled. Wells VW3 and VW4 have contained perched groundwater during each of the five sampling attempts from 2007 to the present. Samples collected from well VW1 have not had reportable concentrations of fuel hydrocarbons exceeding residential ESLs during previous sampling events. Samples collected from wells VW9 and VW10 have not had reportable concentrations of fuel hydrocarbons exceeding residential ESLs since the February 2010 remedial excavation. Samples collected from well VW11 exceeded the commercial ESL for TPHg during the January 2011 sampling event. Samples collected from well VW12 exceeded the residential ESL for TPHg during the March 2009 sampling event.

CONCLUSIONS

TPHg exceeds select ESLs in the central portion of the site near the former fueling installations. Many of the soil vapor wells at the site are frequently saturated with perched groundwater. The current well network is not adequate to provide lateral delineation of soil vapor towards the residential properties southwest of the site.

RECOMMENDATIONS

Cardno ERI recommends installing and sampling replacement wells for wells VW3, VW4, and VW12 located along the western site boundary adjacent to the residential properties.

PROPOSED WORK

To evaluate vapor-phase concentrations of fuel hydrocarbons and related constituents in soil vapor underlying the adjacent property southwest of the site and the potential vapor intrusion pathway, Cardno ERI proposes to

October 28, 2011

Cardno ERI 2780C.R02 Former Exxon Service Station 74121, Oakland, California

install three soil vapor sampling wells (VW3R, VW4R, and VW12R) near the existing wells VW3, VW4, and VW12 (Plate 2). Groundwater monitoring data indicate that groundwater beneath the site is encountered at approximately 16 feet bgs (Table 1). Previous vapor sampling at the site indicates that perched groundwater is commonly encountered at approximately 5 to 6 feet bgs.

The borings will be advanced using hand augers to approximately 4 feet bgs and left open temporarily to assess the presence of perched groundwater. If perched water is encountered, a shallower boring will be advanced to allow for the completion of a functional well.

Cardno ERI will conduct the assessment in accordance with protocol presented in the following guidance documentation:

- *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air* (Interim Final), published by the Department of Toxic Substances Control of the California Environmental Protection Agency (December 15, 2004, revised February 7, 2005) (DTSC, 2005).
- *Advisory – Active Soil Gas Investigations*, jointly issued by the Department of Toxic Substances Control of the California Environmental Protection Agency and the California Regional Water Quality Control Board, Los Angeles Region (CRWQCB-LA, 2003).
- *Collecting and Interpreting Soil Gas-Samples from the Vadose Zone, A Practical Strategy for Assessing the Subsurface Vapor-to-Indoor Air Migration Pathway of Petroleum Hydrocarbon Sites*, American Petroleum Institute Publication Number 4741 (November 2005) (API, 2005).
- *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, published by the Regional Board (revised May 2008) (CRWQCB-SFB, 2008).

Perched groundwater levels of less than 6 feet bgs at the site will require the placement of the well screens at shallower depths than specified in some of these guidance documents. Cardno ERI intends to place the well screens between approximately 1.5 feet and 4 feet bgs.

Cardno ERI will conduct the field work in accordance with the attached field protocol (Appendix D) and with a site-specific health and safety plan.

Soil Vapor Sampling Well Installation

Soil borings VW3R, VW4R, and VW12R will be hand augered to total depth. Soil samples will be collected at approximately 1-foot intervals from each well location from surface to total depth. Select soil samples will be preserved for laboratory analysis. The wells will be screened between approximately 1.5 and 4 feet bgs depending on the presence of perched groundwater.

Soil Vapor Sampling

Each well will be sampled in accordance with the attached field protocol in Appendix D.

Laboratory Analyses

Select soil and soil vapor samples will be submitted for analysis to a California state-certified analytical laboratory, under COC protocol. Soil samples will be analyzed for TPHd and TPHg by EPA Method 8015B and VOCs including BTEX, fuel oxygenates (MTBE, TBA, TAME, ETBE, and DIPE), and lead scavengers (1,2-DCA and EDB) by EPA Method 8260B.

Soil vapor samples will be analyzed for full-scan VOCs, including BTEX, fuel oxygenates, lead scavengers (including 1,2-DCA), naphthalene, and the leak detection compound using EPA Method TO-15; TPHg using EPA Method TO-3 or TO-15; and oxygen, carbon dioxide, and methane using American Society of Testing and Materials (ASTM) Method 1946.

Waste Management Plan

The soil and decontamination water generated during SVS well installation activities will be temporarily stored on site in DOT-approved, 55-gallon drums pending characterization and disposal. Copies of the waste manifests for the disposal of soil and water will be included in the report.

RISK EVALUATION AND REPORT PREPARATION

Cardno ERI will perform a Tier 1 assessment of risk posed by soil vapor conditions by comparing the laboratory analytical results to CHSLs (CalEPA, 2005) and ESLs (CRWQCB-SFB, 2008). The purpose of the risk assessment is to evaluate the potential risk to off-site residents posed by vapor-phase constituents of concern in soil vapor underlying the adjacent property.

Cardno ERI will prepare a report summarizing the soil vapor assessment. This report will include the results of the field investigation; field protocols; cumulative analytical results for soil, groundwater, and soil vapor samples; a summary of site conditions, including geology, hydrogeology, and constituent distribution; and if applicable, recommendations for further assessment.

October 28, 2011
 Cardno ERI 2780C.R02 Former Exxon Service Station 74121, Oakland, 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. Paula Sime, Cardno ERI, 601 North McDowell Boulevard, Petaluma, California, 94954. The agency contact is Mr. Jerry Wickham, Alameda County Health Care Services Agency, Environmental Health Services, 1131 Harbor Bay Parkway, Suite 250, Alameda, California, 94502-6577.

LIMITATIONS

For any documents cited that were not generated by 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.

For any questions concerning the content of this report, please contact Ms. Paula Sime, Cardno ERI's project manager for this site, at paula.sime@cardno.com or at (707) 766-2000.

Sincerely,



Paula Sime
 Senior Project Manager
 for Cardno ERI
 707 766 2000
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October 28, 2011
Cardno ERI 2780C.R02 Former Exxon Service Station 74121, Oakland, California

cc: Mr. Jerry Wickham, Alameda County Health Care Services Agency, Environmental Health Services –
Environmental Protection, 1131 Harbor Bay Parkway, Suite 250, Alameda, California 94502

Mr. John Jay, MacArthur Boulevard Associates, 10700 MacArthur Boulevard, Suite 200, Oakland,
California 94605

Enclosures:

References

Acronym List

Plate 1	Site Vicinity Map
Plate 2	Generalized Site Plan and Select Soil Vapor Analytical Results
Table 1	Cumulative Groundwater Monitoring and Sampling Data
Table 2	Well Construction Details
Table 3A	Cumulative Soil Analytical Results
Table 3B	Additional Cumulative Soil Analytical Results
Table 4	Soil Vapor Analytical Results
Appendix A	Correspondence
Appendix B	Field Data Forms
Appendix C	Laboratory Analytical Report and Chain-of-Custody Record
Appendix D	Field Protocol

October 28, 2011
Cardno ERI 2780C.R02 Former Exxon Service Station 74121, Oakland, California

REFERENCES

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October 28, 2011
Cardno ERI 2780C.R02 Former Exxon Service Station 74121, Oakland, California

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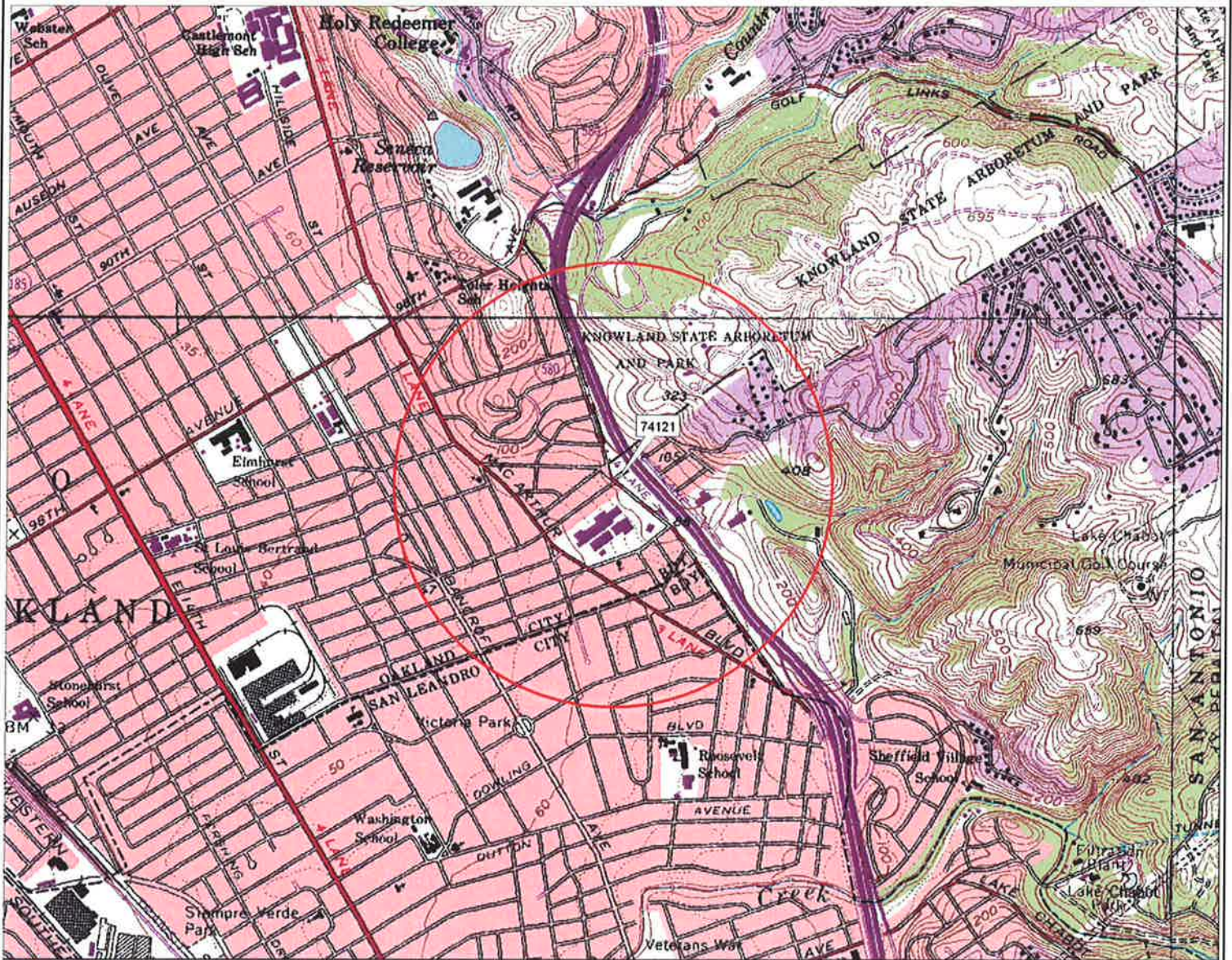
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October 28, 2011
 Cardno ERI 2780C.R02 Former Exxon Service Station 74121, Oakland, California

ACRONYM LIST

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



DeLORME

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www.delorme.com

FN 2780 TOPO

EXPLANATION



1/2-mile radius circle



APPROXIMATE SCALE



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



SITE VICINITY MAP

FORMER EXXON SERVICE STATION 74121
10605 Foothill Boulevard
Oakland, California

PROJECT NO.

2780

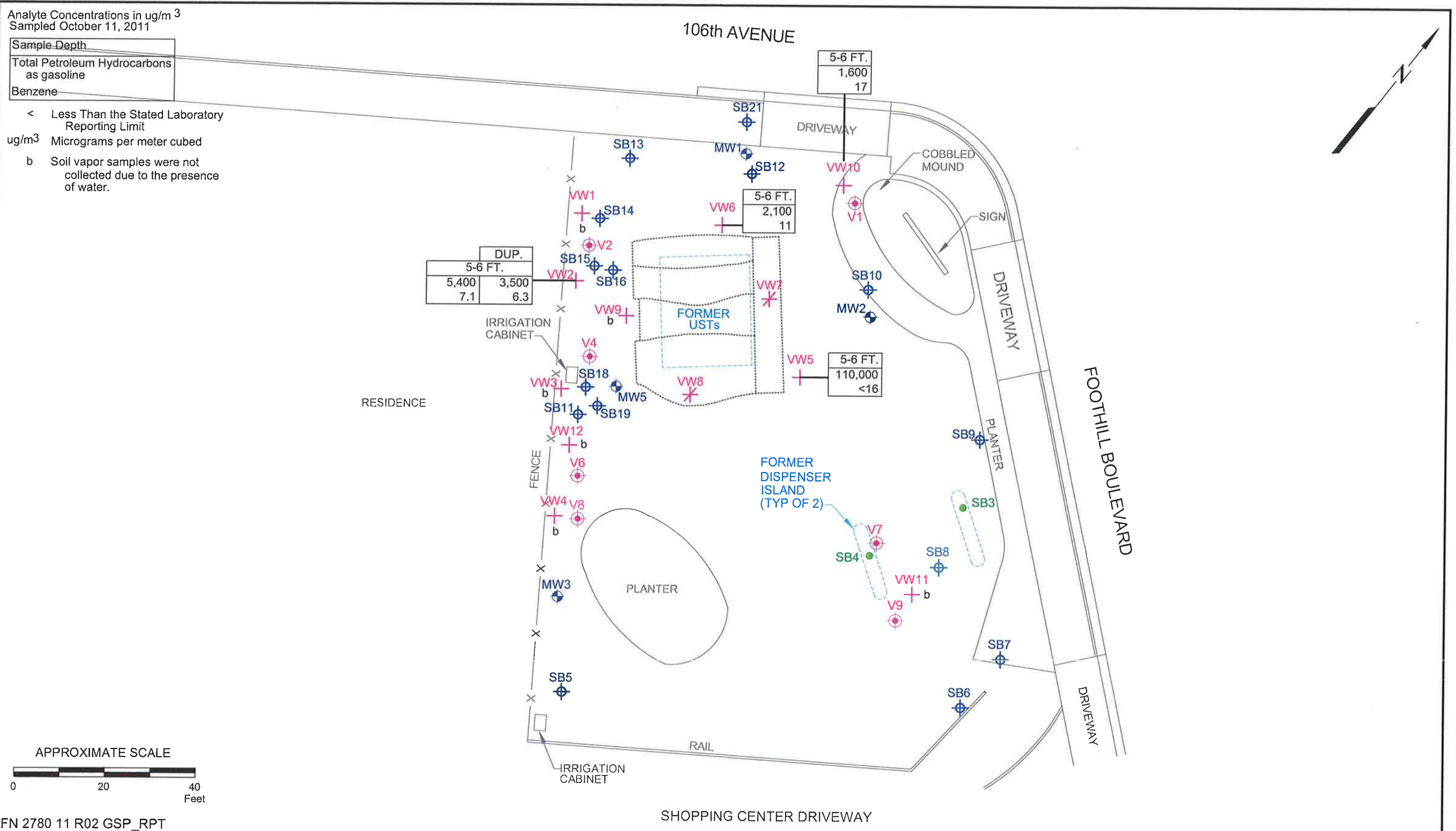
PLATE

1

Analyte Concentrations in ug/m³
 Sampled October 11, 2011

Sample Depth
Total Petroleum Hydrocarbons as gasoline
Benzene

- < Less Than the Stated Laboratory Reporting Limit
- ug/m³ Micrograms per meter cubed
- b Soil vapor samples were not collected due to the presence of water.



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GENERALIZED SITE PLAN AND SELECT SOIL VAPOR ANALYTICAL RESULTS

FORMER EXXON SERVICE STATION 74121
 10605 Foothill Boulevard
 Oakland, California

EXPLANATION

- MW5 Groundwater Monitoring Well
- VW12 Soil Vapor Sampling Well
- SB21 Direct -Push Boring
- SB4 Soil Boring
- V9 Direct-Push Soil Boring
- VW8 Destroyed Soil Vapor Sampling Well

PROJECT NO.
2780

PLATE
2

TABLE 1
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 74121
 10605 Foothill Boulevard
 Oakland, California
 (Page 1 of 2)

Well ID	Sampling Date	TOC Elev. (feet)	DTW (feet)	GW Elev. (feet)	NAPL (feet)	TPHd (µg/L)	TPHg (µg/L)	MTBE (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	EDB (µg/L)
MW1	03/08/07	82.47	15.10	67.37	No	119	440	1.91	<1.00	1.21	<1.00	<3.00	<10.0	<0.500	<0.500	<0.500	0.560	<0.500
MW1	06/08/07	82.47	16.47	66.00	No	<47.6	127	0.880	<0.50	<0.50	<0.50	<0.50	<10.0a,b	<0.500	<0.500	<0.500	<0.500	<0.500
MW1	09/06/07	82.47	17.47	65.00	No	<47.2	78.0	0.590	<0.50	<0.50	<0.50	<0.50	<10.0a,b	<0.500	<0.500	<0.500	<0.500	<0.500
MW1	12/03/07	82.47	18.10	64.37	No	<47	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10.0a,b	<0.500	<0.500	<0.500	<0.500	<0.500
MW1	03/19/08	82.47	16.20	66.27	No	61e	51.3	3.08	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW1	06/11/08	82.47	17.24	65.23	No	<47	<50	0.99	<0.50	<0.50	<0.50	<0.50	<10.0	<0.500	<0.500	<0.500	0.930	<0.500
MW1	09/16/08	82.47	18.37	64.10	No	<47	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW1	12/01/08	82.47	18.85	63.62	No	<47	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW1	03/12/09	82.47	16.92	65.55	No	<50	68	0.80	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW1	08/12/09	82.47	18.50	63.97	No	<50	<50	0.45f	<0.50	<0.50	<0.50	<1.0	<10	<0.50	<0.50	<0.50	<0.50	<0.50
MW1	03/16/10	82.47	16.77	65.70	No	<50	<50	0.72	<0.50	<0.50	<0.50	<1.0	<10	<0.50	<0.50	<0.50	0.130f	<0.50
MW2	03/08/07	84.40	16.97	67.43	No	550	1,620	<0.500	1.33	3.52	2.41	<3.00	<10.0	<0.500	<0.500	<0.500	<0.500	<0.500
MW2	06/08/07	84.40	18.34	66.06	No	395	2,120	<0.500	21.8	2.45	0.66	<0.50	10.0c	<0.500	<0.500	<0.500	<0.500	<0.500
MW2	09/06/07	84.40	19.33	65.07	No	208	470	<0.500	4.66	0.70	<0.50	1.25	<10.0a,c	<0.500	<0.500	<0.500	<0.500	<0.500
MW2	12/03/07	84.40	19.97	64.43	No	120e	560	<0.50	22d	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	03/19/08	84.40	18.07	66.33	No	200e	630	<0.500	5.33	<0.50	<0.50	<0.50	<10.0	<0.500	<0.500	<0.500	<0.500	<0.500
MW2	06/11/08	84.40	19.13	65.27	No	110e	430	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.500
MW2	09/16/08	84.40	20.25	64.15	No	63e	230	<0.50	8.1d	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	12/01/08	84.40	20.75	63.65	No	58e	250	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	03/12/09	84.40	18.85	65.55	No	<50	940	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	08/12/09	84.40	20.43	63.97	No	<50	500	<0.50	<0.50	<0.50	0.56	<1.0	<10	<0.50	<0.50	<0.50	<0.50	<0.50
MW2	03/16/10	84.40	18.68	65.72	No	<50	520	<0.50	<0.50	1.3	1.3	<1.0	<10	<0.50	<0.50	<0.50	<0.50	<0.50
MW3	03/08/07	83.25	15.49	67.76	No	52.9	<100	<0.500	<1.00	<1.00	<1.00	<3.00	<10.0	<0.500	<0.500	<0.500	<0.500	<0.500
MW3	06/08/07	83.25	17.02	66.23	No	<47.6	<50.0	<0.500	<0.50	<0.50	<0.50	<0.50	<10.0a,b	<0.500	<0.500	<0.500	<0.500	<0.500
MW3	09/06/07	83.25	18.07	65.18	No	<47.2	<50.0	<0.500	<0.50	<0.50	<0.50	<0.50	<10.0a,b	<0.500	<0.500	<0.500	<0.500	<0.500
MW3	12/03/07	83.25	18.69	64.56	No	<47	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10.0a,b	<0.500	<0.500	<0.500	<0.500	<0.500
MW3	03/19/08	83.25	16.79	66.46	No	<47	<50.0	<0.500	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW3	06/11/08	83.25	17.82	65.43	No	<47	<50	<0.500	<0.50	<0.50	<0.50	<0.50	<10.0	<0.500	<0.500	<0.500	<0.500	<0.500
MW3	09/16/08	83.25	18.99	64.26	No	<47	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW3	12/01/08	83.25	19.46	63.79	No	<47	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW3	03/12/09	83.25	17.53	65.72	No	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW3	08/12/09	83.25	19.11	64.14	No	<50	<50	<0.50	<0.50	<0.50	<0.50	<1.0	<10	<0.50	<0.50	<0.50	<0.50	<0.50
MW3	03/16/10	83.25	17.4	65.85	No	<50	<50	<0.50	<0.50	<0.50	<0.50	<1.0	<10	<0.50	<0.50	<0.50	<0.50	<0.50
MW5	03/08/07	82.65	14.31	68.34	No	59.2	187	<0.500	<1.00	<1.00	<1.00	<3.00	<10.0	<0.500	<0.500	<0.500	<0.500	<0.500
MW5	06/08/07	82.65	16.64	66.01	No	90.3	780	<0.500	4.38	0.72	<0.50	<0.50	<10.0a,b	<0.500	<0.500	<0.500	<0.500	<0.500
MW5	09/06/07	82.65	17.62	65.03	No	121	<50.0	<0.500	<0.50	<0.50	<0.50	<0.50	<10.0a,b	<0.500	<0.500	<0.500	<0.500	<0.500
MW5	12/03/07	82.65	18.27	64.38	No	65e	100	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW5	03/19/08	82.65	16.37	66.28	No	110e	237	<0.500	0.69	<0.50	<0.50	<0.50	<10.0	<0.500	<0.500	<0.500	<0.500	<0.500
MW5	06/11/08	82.65	17.40	65.25	No	77e	83	<0.50	<0.50	<0.50	<0.50	0.87	<10.0	<0.500	<0.500	<0.500	<0.500	<0.500
MW5	09/16/08	82.65	18.54	64.11	No	<47	120	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW5	12/01/08	82.65	19.00	63.65	No	<47	140	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW5	03/12/09	82.65	17.09	65.56	No	<50	410	<0.50	0.21f	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW5	08/12/09	82.65	18.71	63.94	No	<50	110	<0.50	0.55g	<0.50	<0.50	<1.0	<10	<0.50	<0.50	<0.50	<0.50	0.19f
MW5	03/26/10	82.65	16.96	65.69	No	<50	210	<0.50	<0.50	0.46f	0.42f	<1.0	<10	<0.50	<0.50	<0.50	<0.50	<0.50

TABLE 1
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 74121
 10605 Foothill Boulevard
 Oakland, California
 (Page 2 of 2)

Notes:	=	
TOC	=	Top of well casing elevation.
DTW	=	Depth to water.
GW Elev.	=	Groundwater elevation. Groundwater elevations adjusted for NAPL, when present, using an average specific gravity of 0.75 for gasoline.
NAPL	=	Non-aqueous phase liquid.
TPHd	=	Total petroleum hydrocarbons as diesel analyzed using EPA Method 8015B.
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015B.
MTBE	=	Methyl tertiary butyl ether analyzed using EPA Method 8260B.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8260B; prior to February 2009, analyzed using EPA Method 8020/8021B.
ETBE	=	Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
TAME	=	Tertiary amyl methyl ether analyzed using EPA Method 8260B.
TBA	=	Tertiary butyl alcohol analyzed using EPA Method 8260B.
EDB	=	1,2-dibromoethane analyzed using EPA Method 8260B.
1,2-DCA	=	1,2-dichloroethane 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.
ND	=	Not detected at or above the laboratory reporting limit.
---	=	Not measured/Not sampled/Not analyzed.
<	=	Less than stated laboratory reporting limit.
a	=	Calibration verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
b	=	Laboratory control sample and/or laboratory control sample duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.
c	=	Initial analysis within holding time. Reanalysis for the required dilution or confirmation was past holding time.
d	=	The relative percent difference between the primary and confirmatory analysis exceeded 40%. Per EPA Method 8000B, the higher value was reported.
e	=	The chromatographic pattern does not match the specified standard.
f	=	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
g	=	Analyte presence was not confirmed by second column or gas chromatograph/mass spectrometer analysis.

TABLE 2
WELL CONSTRUCTION DETAILS
Former Exxon Service Station 74121
10605 Foothill Boulevard
Oakland, California
(Page 1 of 1)

Well ID	Well Installation Date	Elevation TOC (feet)	Casing Material	Total Depth (feet)	Well Depth (feet)	Borehole Diameter (inches)	Casing Diameter (inches)	Screened Interval (feet)	Slot Size (inches)	Filter Pack Interval (feet)	Filter Pack Material
MW1	a 01/23/07	82.47	PVC	26.5	25	8	2	10 - 25	0.010	8 - 25	#2/12 Sand
MW2	a 01/23/07	84.40	PVC	26.5	25	8	2	10 - 25	0.010	8 - 25	#2/12 Sand
MW3	a 01/24/07	83.25	PVC	26.5	25	8	2	10 - 25	0.010	8 - 25	#2/12 Sand
MW5	a 01/23/07	82.65	PVC	26.5	25	8	2	10 - 25	0.010	8 - 25	#2/12 Sand
VW1	a 01/22/07	---	Stainless Steel	6	6	6	0.25	5.25 - 5.75	0.0057	5 - 6	#2/12 Sand
VW2	a 01/22/07	---	Stainless Steel	6	6	6	0.25	5.25 - 5.75	0.0057	5 - 6	#2/12 Sand
VW3	a 01/22/07	---	Stainless Steel	6	6	6	0.25	5.25 - 5.75	0.0057	5 - 6	#2/12 Sand
VW4	a 01/22/07	---	Stainless Steel	6	6	6	0.25	5.25 - 5.75	0.0057	5 - 6	#2/12 Sand
VW5	a 01/22/07	---	Stainless Steel	6	6	6	0.25	5.25 - 5.75	0.0057	5 - 6	#2/12 Sand
VW6	b 03/23/09	---	Stainless Steel	6	6	6	0.25	5.25 - 5.75	0.0057	5 - 6	#2/12 Sand
VW7	c 03/23/09	---	Stainless Steel	6	6	6	0.25	5.25 - 5.75	0.0057	5 - 6	#2/12 Sand
VW8	c 03/23/09	---	Stainless Steel	6	6	6	0.25	5.25 - 5.75	0.0057	5 - 6	#2/12 Sand
VW9	b 03/23/09	---	Stainless Steel	6	6	6	0.25	5.25 - 5.75	0.0057	5 - 6	#2/12 Sand
VW10	b 03/23/09	---	Stainless Steel	6	6	6	0.25	5.25 - 5.75	0.0057	5 - 6	#2/12 Sand
VW11	b 03/23/09	---	Stainless Steel	6	6	6	0.25	5.25 - 5.75	0.0057	5 - 6	#2/12 Sand
VW12	b 03/23/09	---	Stainless Steel	6	6	6	0.25	5.25 - 5.75	0.0057	5 - 6	#2/12 Sand

Notes:

- TOC = Top of well casing elevation. Elevation based on City of San Jose datum.
- PVC = Polyvinyl chloride.
- = Information unavailable.
- a = Well surveyed on 12 March 2007 by Morrow Surveying.
- b = Well surveyed on 4 May 2009 by Morrow Surveying.
- c = Well destroyed during remedial excavation.

TABLE 3A
CUMULATIVE SOIL ANALYTICAL RESULTS
Former Exxon Service Station 74121
10605 Foothill Boulevard
Oakland, California
(Page 1 of 6)

Sampling ID	Sampling Date	Depth (feet bgs)	TPHd (mg/kg)	TPHg (mg/kg)	MTBE (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	Total X (mg/kg)
SB1	03/19/04	11	590	1,000	<2.5	0.55	11	0.92	2.6
SB2	03/19/04	18	37	65	<0.5	<0.05	0.39	0.40	0.13
SB3	03/19/04	5	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB4	03/19/04	5	2.1	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB5	05/26/05	5-5.5	<10.1	<4.98	<0.002	<0.001	<0.005	<0.005	<0.005
SB5	05/26/05	17.5-18	<9.92	<4.97	<0.002	<0.001	<0.005	<0.005	<0.005
SB5	05/26/05	24.5-25	10.6	<4.99	<0.002	<0.001	<0.005	<0.005	<0.005
SB6	05/26/05	5-5.5	10.2	<5.03	<0.002	<0.001	<0.005	<0.005	<0.005
SB6	05/26/05	19.5-20	<10.1	<5.03	<0.002	<0.001	<0.005	<0.005	<0.005
SB6	05/26/05	21.5-22	<10	<4.96	<0.002	<0.001	<0.005	<0.005	<0.005
SB6	05/26/05	24.5-25	<10	<4.98	<0.002	<0.001	<0.005	<0.005	<0.005
SB7	05/26/05	5-5.5	<10.2	<5.02	<0.002	<0.001	<0.005	<0.005	<0.005
SB7	05/26/05	18-18.5	<10	<5	<0.002	<0.001	<0.005	<0.005	<0.005
SB7	05/26/05	22.5-23	<10	<4.96	<0.002	<0.001	<0.005	<0.005	<0.005
SB7	05/26/05	24.5-25	<10.2	<5.02	<0.002	<0.001	<0.005	<0.005	<0.005
SB8	05/26/05	5-5.5	<9.92	<4.97	<0.002	<0.001	<0.005	<0.005	<0.005
SB8	05/26/05	17.5-18	<9.92	<4.96	<0.002	0.0010b	<0.005	<0.005	<0.005
SB8	05/26/05	21.5-22	<10	11.2	<0.002	0.0307	<0.005	0.0120	0.0205
SB8	05/26/05	24.5-25	<10	10.2	<0.002	0.0414	0.0153	0.0184	0.0197
SB9	05/27/05	5-5.5	<9.80	<5.02	<0.002	<0.001	<0.005	<0.005	<0.005
SB9	05/27/05	18-18.5	<10	<5	<0.002	<0.001	<0.005	<0.005	<0.005
SB9	05/27/05	19.5-20	<10	<4.96	<0.002	<0.001	<0.005	<0.005	<0.005
SB9	05/27/05	24.5-25	<9.88	279	<0.002	1.58	1.10	0.400	1.72
SB10	05/27/05	5-5.5	<9.92	<5.01	<0.002	<0.001	<0.005	<0.005	<0.005
SB10	05/27/05	17.5-18	<10	<5.03	<0.002	<0.001	<0.005	<0.005	<0.005
SB10	05/27/05	24.5-25	<10	<5.01	<0.002	<0.001	<0.005	<0.005	<0.005
SB11	05/27/05	5-5.5	<10.2	<4.99	<0.002	<0.001	<0.005	<0.005	<0.005
SB11	05/27/05	18.5-19	<10	<4.95	<0.002	<0.001	<0.005	<0.005	<0.005
SB11	05/27/05	24.5-25	<10	<4.98	<0.002	0.0082	<0.005	<0.005	0.0053

TABLE 3A
CUMULATIVE SOIL ANALYTICAL RESULTS
Former Exxon Service Station 74121
10605 Foothill Boulevard
Oakland, California
(Page 2 of 6)

Sampling ID	Sampling Date	Depth (feet bgs)	TPHd (mg/kg)	TPHg (mg/kg)	MTBE (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	Total X (mg/kg)
SB12	05/27/05	5-5.5	<10	<4.97	<0.002	<0.001	<0.005	<0.005	<0.005
SB12	05/27/05	16.5-17	<9.88	<5.05	<0.002	<0.001	<0.0051	<0.0051	<0.0051
SB12	05/27/05	25.5-26	<9.96	<4.98	<0.002	<0.001	<0.005	<0.005	<0.005
SB13	05/27/05	5-5.5	<9.92	<5.02	<0.002	<0.001	<0.005	<0.005	<0.005
SB13	05/27/05	18.5-19	<9.92	<5.05	<0.002	<0.001	<0.0051	<0.0051	<0.0051
SB13	05/27/05	24.5-25	<9.92	<4.95	<0.002	0.0011	<0.005	<0.005	<0.005
SB14	05/02/06	5-5.5	3.2	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
SB14	05/02/06	10-10.5	6.5	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
SB14	05/02/06	15-15.5	2.1	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
SB14	05/02/06	20-20.5	2.8	1.300	<0.005	<0.001	<0.001	<0.001	0.0088
SB14	05/02/06	24.5-25	2.2	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
SB15	05/02/06	5-5.5	3.1	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
SB15	05/02/06	15-15.5	8.7	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
SB15	05/02/06	20-20.5	2.5	0.160	<0.005	<0.001	<0.001	0.0016	<0.001
SB15	05/02/06	24.5-25	1.3	0.270	<0.005	<0.001	<0.001	0.0069	<0.001
SB16	05/02/06	5-5.5	14	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
SB16	05/02/06	10-10.5	5.2	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
SB16	05/02/06	15-15.5	4.2	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
SB16	05/02/06	20-20.5	9.3	14	<0.005	0.120	0.052	0.043	0.060
SB16	05/02/06	24.5-25	<1.0	<0.1	<0.005	<0.001	<0.001	0.0018	<0.001
SB17	05/02/06	5.5-6	18	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
SB17	05/02/06	10-10.5	260	38	<0.12	<0.01	0.030	0.310	<0.01
SB17	05/02/06	15-15.5	3.5	0.700	<0.005	0.018	0.0028	0.017	0.0040
SB17	05/02/06	19.5-20	18	320	<1.2	3.2	2.0	8.8	31
SB17	05/02/06	24.5-25	1.1	<0.1	<0.005	<0.001	<0.001	<0.001	0.0011
SB18	05/03/06	5-5.5	<1.0	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
SB18	05/03/06	10-10.5	<1.0	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
SB18	05/03/06	15-15.5	<1.0	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
SB18	05/03/06	19.5-20	14	29	<0.005	<0.10	<0.10	<0.10	<0.10
SB18	05/03/06	24.5-25	<1.0	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
SB19	05/02/06	5-5.5	1.4	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001

**TABLE 3A
CUMULATIVE SOIL ANALYTICAL RESULTS**

Former Exxon Service Station 74121

10605 Foothill Boulevard

Oakland, California

(Page 3 of 6)

Sampling ID	Sampling Date	Depth (feet bgs)	TPHd (mg/kg)	TPHg (mg/kg)	MTBE (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	Total X (mg/kg)
SB19	05/02/06	10-10.5	4.8	0.230	<0.005	<0.001	<0.001	<0.001	0.0015
SB19	05/02/06	15-15.5	1.2	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
SB19	05/02/06	20-20.5	5.8	19	<0.005	<0.10	<0.10	<0.10	0.15
SB19	05/02/06	24.5-25	1.7	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
SB20	05/02/06	5.5-6	14	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
SB20	05/02/06	10-10.5	98	76	<0.051	0.58	0.60	0.80	0.72
SB20	05/02/06	15-15.5	270	1,300	<0.12	26	39	24	12
SB20	05/02/06	19.5-20	250	2,700	<2.5	20	18	66	280
SB20	05/02/06	23.5-24	7.0	0.610	<0.005	0.013	0.0047	0.023	0.0082
SB21	05/02/06	8-8.5	1.4	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
SB21	05/02/06	13-13.5	<1.0	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
SB21	05/02/06	18-18.5	1.7	<0.1	0.0088	<0.001	<0.001	<0.001	<0.001
SB21	05/02/06	19.5-20	2.4	<1	0.012	<0.001	<0.001	<0.001	0.014
SB21	05/02/06	23-23.5	<1.0	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
SB21	05/02/06	24.5-25	<1.0	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
V3	05/03/06	9.5-10	<1.0	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
V4	05/03/06	5-5.5	<1.0	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
V4	05/03/06	7.5-8	<1.0	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
V5	05/03/06	5-5.5	<1.0	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
V5	05/03/06	7.5-8	<1.0	0.240	<0.005	<0.001	<0.001	<0.001	<0.001
V8	05/03/06	5-5.5	<1.0	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
V8	05/03/06	7.5-8	1.0	<0.1	<0.005	<0.001	<0.001	<0.001	<0.001
MW1	01/23/07	6-6.5	<3.95	<0.0992	<0.00200	<0.000992/<0.00200a	<0.000992/<0.00200a	<0.000992/<0.00200a	<0.00298/<0.00500a
MW1	01/23/07	8-8.5	<3.91	<0.0994	<0.00200	<0.000994/<0.00200a	<0.000994/<0.00200a	<0.000994/<0.00200a	<0.00298/<0.00500a
MW1	01/23/07	10-10.5	<3.88	<0.100	<0.00200	<0.00100/<0.00200a	<0.00100/<0.00200a	<0.00100/<0.00200a	<0.00300/<0.00500a
MW1	01/23/07	11.5-12	<3.91	<0.0994	<0.00200	<0.000994/<0.00200a	<0.000994/<0.00200a	<0.000994/<0.00200a	<0.00298/<0.00500a
MW1	01/23/07	12-12.5	<3.93	<0.0996	<0.00200	<0.000996/<0.00200a	<0.000996/0.00211a	<0.000996/<0.00200a	<0.00299/<0.00500a
MW1	01/23/07	14-14.5	<3.89	<0.101	<0.00200	<0.00101/<0.00200a	<0.00101/<0.00200a	<0.00101/<0.00200a	<0.00302/<0.00500a
MW1	01/23/07	15.5-16	<3.96	<0.100	<0.00200	<0.00100/<0.00200a	<0.00100/<0.00200a	<0.00100/<0.00200a	<0.00300/<0.00500a
MW1	01/23/07	16-16.5	<3.92	<0.0990	<0.00200	<0.000990/<0.00200a	0.00121/<0.00200a	<0.000990/<0.00200a	<0.00297/<0.00500a
MW1	01/23/07	17.5-18	<3.97	0.720	<0.00200,c	0.00857/<0.00200a	0.00493/0.00221a	0.00126/<0.00200a	0.00459/<0.00500a
MW1	01/23/07	18-18.5	<3.88	<0.100	<0.00200	<0.00100/<0.00200a	0.00128/<0.00200a	<0.00100/<0.00200a	<0.00301/<0.00500a

**TABLE 3A
CUMULATIVE SOIL ANALYTICAL RESULTS**

Former Exxon Service Station 74121
10605 Foothill Boulevard
Oakland, California
(Page 4 of 6)

Sampling ID	Sampling Date	Depth (feet bgs)	TPHd (mg/kg)	TPHg (mg/kg)	MTBE (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	Total X (mg/kg)
MW1	01/23/07	19.5-20	<3.92	0.454	<0.00200	<0.00101/<0.00200a	<0.00101/<0.00200a	<0.00101/<0.00200a	0.00413/<0.00500a
MW1	01/23/07	20-20.5	<3.85	1.38	<0.00200	0.00128/<0.00200a	0.00387/0.00403a	0.0022/0.00202a	0.0120/0.00546a
MW1	01/23/07	22-22.5	<3.91	3.92	<0.00200	0.00539/<0.00200a	0.00651/<0.00200a	0.00471/<0.00200a	0.0336/<0.00500a
MW2	01/23/07	6-6.5	<4.00	<0.100	<0.00200	<0.00100/<0.00200a	<0.00100/<0.00200a	<0.00100/<0.00200a	<0.00301/<0.00500a
MW2	01/23/07	8-8.5	<3.87	<0.101	<0.00200	0.00104/<0.00200a	0.00112/<0.00200a	<0.00101/<0.00200a	<0.00302/<0.00500a
MW2	01/23/07	10-10.5	<3.93	<0.101	<0.00200	<0.00101/<0.00200a	0.00110/<0.00200a	<0.00101/<0.00200a	<0.00302/<0.00500a
MW2	01/23/07	12-12.5	<3.84	<0.101	<0.00200	<0.00101/<0.00200a	<0.00101/<0.00200a	<0.00101/<0.00200a	<0.00303/<0.00500a
MW2	01/23/07	14-14.5	<3.94	<0.0990	<0.00200	<0.000990/<0.00200a	<0.000990/<0.00200a	<0.000990/<0.00200a	<0.00297/<0.00500a
MW2	01/23/07	15.5-16	<3.86	<0.0994	<0.00200	<0.000994/<0.00200a	<0.000994/<0.00200a	<0.000994/<0.00200a	<0.00298/<0.00500a
MW2	01/23/07	16-16.5	<3.97	<0.101	<0.00200	0.00133/<0.00200a	<0.00101/<0.00200a	<0.00101/<0.00200a	<0.00303/<0.00500a
MW2	01/23/07	18-18.5	<3.91	0.508	<0.00200	0.00492/<0.00200a	<0.000992/<0.00200a	<0.000992/<0.00200a	<0.00298/<0.00500a
MW2	01/23/07	19.5-20	<3.74	<0.0992	<0.00200	<0.000992/<0.00200a	<0.000992/<0.00200a	<0.000992/<0.00200a	<0.00298/<0.00500a
MW2	01/23/07	20-20.5	<3.83	0.672	<0.00200	0.00633/<0.00200a	<0.00101/<0.00200a	0.00128/<0.00200a	<0.00303/<0.00500a
MW2	01/23/07	21.5-22	<3.86	2.85	<0.00200	0.00369/<0.00200a	<0.00100/<0.00200a	0.00235/<0.00200a	0.0105/<0.00500a
MW2	01/23/07	22-22.5	<3.81	3.32	<0.00200	0.00643/<0.00200a	<0.000996/<0.00200a	0.00299/<0.00200a	0.0138/<0.00500a
MW2	01/23/07	23.5-24	<3.76	0.591	<0.00200	0.00185/<0.00200a	<0.00101/<0.00200a	<0.00101/<0.00200a	<0.00302/<0.00500a
MW2	01/23/07	24-24.5	<3.73	18.7	<0.00200	0.00136/<0.00200a	0.00678/<0.00200a	0.01410/<0.00200a	0.0891/<0.00500a
MW2	01/23/07	26-26.5	10.6	964	<0.00200	4.40/<0.00200a	2.12/0.00944a	2.29/<0.00200a	3.79/0.256a
MW3	01/24/07	6-6.5	<3.82	<0.101	<0.00200	<0.00101/<0.00200a	<0.00101/<0.00200a	<0.00101/<0.00200a	<0.00302/<0.00500a
MW3	01/24/07	8-8.5	<3.79	<0.0992	<0.00200	<0.000992/<0.00200a	<0.000992/<0.00200a	<0.000992/<0.00200a	<0.00298/<0.00500a
MW3	01/24/07	10-10.5	<3.70	0.141	<0.00200	0.00231/<0.00200a	0.00114/<0.00200a	<0.00101/<0.00200a	<0.00302/<0.00500a
MW3	01/24/07	12-12.5	<3.99	<0.101	<0.00200	0.00102/<0.00200a	<0.00101/<0.00200a	<0.00101/<0.00200a	<0.00302/<0.00500a
MW3	01/24/07	14-14.5	<3.80	0.363	<0.00200	0.00484/<0.00200a	0.00206/<0.00200a	<0.00101/<0.00200a	<0.00301/<0.00500a
MW3	01/24/07	16-16.5	<3.95	<0.101	<0.00200	<0.00101/<0.00200a	<0.00101/<0.00200a	<0.00101/<0.00200a	<0.00303/<0.00500a
MW3	01/24/07	18-18.5	<3.71	0.794	<0.00200	0.00917/<0.00200a	0.00404/<0.00200a	0.00151/<0.00200a	<0.00301/<0.00500a
MW3	01/24/07	20-20.5	<3.96	<0.101	<0.00200	<0.00101/<0.00200a	<0.00101/<0.00200a	<0.00101/<0.00200a	<0.00303/<0.00500a
MW3	01/24/07	22-22.5	<3.71	<0.0990	<0.00200	0.00174/<0.00200a	<0.000990/<0.00200a	<0.000990/<0.00200a	<0.00297/<0.00500a
MW3	01/24/07	24-24.5	<3.76	<0.0996	<0.00200	<0.000996/<0.00200a	<0.000996/<0.00200a	<0.000996/<0.00200a	<0.00299/<0.00500a
MW3	01/24/07	26-26.5	<3.89	<0.0992	<0.00200	<0.000992/<0.00200a	<0.000992/<0.00200a	<0.000992/<0.00200a	<0.00298/<0.00500a
MW5	01/23/07	6-6.5	<3.79	<0.100	<0.00200	<0.00100/<0.00200a	<0.00100/<0.00200a	<0.00100/<0.00200a	<0.00301/<0.00500a
MW5	01/23/07	8-8.5	<3.76	<0.100	<0.00200	<0.00100/<0.00200a	<0.00100/<0.00200a	<0.00100/<0.00200a	<0.00301/<0.00500a
MW5	01/23/07	10-10.5	<3.94	0.274	<0.00200	0.00265/<0.00200a	<0.000996/<0.00200a	<0.000996/<0.00200a	<0.00299/<0.00500a
MW5	01/23/07	12-12.5	<3.82	<0.0998	<0.00200	<0.000998/<0.00200a	<0.000998/<0.00200a	<0.000998/<0.00200a	<0.00299/<0.00500a
MW5	01/23/07	14-14.5	<3.92	<0.100	<0.00200	<0.00100/<0.00200a	<0.00100/<0.00200a	<0.00100/<0.00200a	<0.00301/<0.00500a
MW5	01/23/07	16-16.5	<3.98	<0.100	<0.00200	<0.00100/<0.00200a	<0.00100/<0.00200a	<0.00100/<0.00200a	<0.00301/<0.00500a
MW5	01/23/07	18-18.5	<3.90	0.385	<0.00200	0.00189/<0.00200a	<0.000994/0.00229a	<0.000994/0.00217a	<0.00298/0.00878a

TABLE 3A
CUMULATIVE SOIL ANALYTICAL RESULTS
Former Exxon Service Station 74121
10605 Foothill Boulevard
Oakland, California
(Page 5 of 6)

Sampling ID	Sampling Date	Depth (feet bgs)	TPHd (mg/kg)	TPHg (mg/kg)	MTBE (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	Total X (mg/kg)
MW5	01/23/07	19.5-20	<3.83	2.01	<0.00200	0.0102/<0.00200a	0.00149/<0.00200a	0.00211/<0.00200a	0.0125/0.00562a
MW5	01/23/07	20-20.5	<3.98	2.66	<0.00200	0.0138/<0.00200a	<0.000994/<0.00200a	0.00279/<0.00200a	0.0104/<0.00500a
MW5	01/23/07	22-22.5	<3.80	0.603	<0.00200	0.00111/<0.00200a	<0.00100/<0.00200a	<0.00100/<0.00200a	<0.00301/<0.00500a
MW5	01/23/07	24-24.5	<3.81	0.138	<0.00200	0.00666/0.00517a	<0.000996/<0.00200a	<0.000996/<0.00200a	<0.00299/<0.00500a
MW5	01/23/07	26-26.5	<3.74	<0.0992	<0.00200	0.00288/<0.00200a	<0.000992/<0.00200a	<0.000992/<0.00200a	<0.00298/<0.00500a
VW1	01/22/07	5.5-6	<3.96	<0.101	<0.00200	<0.00101/<0.00200a	<0.00101/<0.00200a	<0.00101/<0.00200a	<0.00303/<0.00500a
VW2	01/22/07	5.5-6	<3.91	<0.0990	<0.00200	<0.000990/<0.00200a	<0.000990	<0.000990/<0.00200a	<0.00297/<0.00500a
VW3	01/22/07	5.5-6	<3.87	<0.101	<0.00200	<0.00101/<0.00200a	<0.00101	<0.00101/<0.00200a	<0.00302/<0.00500a
VW4	01/22/07	5.5-6	8.73	<0.101	<0.00200	<0.00101/<0.00200a	<0.00101	<0.00101/<0.00200a	<0.00303/<0.00500a
VW5	01/22/07	5.5-6	<3.86	<0.0990	<0.00200	<0.000990/<0.00200a	<0.000990	<0.000990/<0.00200a	<0.00297/<0.00500a
VW6	03/23/09	5.5-6	<5.0	<0.50	<0.0050	<0.0050a	<0.0050a	0.00032a,d	0.0015a,d
VW7	03/23/09	5.5-6	<5.0	<0.50	<0.0050	<0.0050a	<0.0050a	<0.0050a	<0.0050a
VW8	03/23/09	5.5-6	<5.0	<0.50	<0.0050	<0.0050a	<0.0050a	0.00018a,d	<0.0050a
VW9	03/23/09	5.5-6	<5.0	<0.50	<0.0050	<0.0050a	<0.0050a	<0.0050a	<0.0050a
VW10	03/23/09	5.5-6	<5.0	<0.50	<0.0050	<0.0050a	<0.0050a	<0.0050a	<0.0050a
VW11	03/23/09	5.5-6	<5.0	<0.50	<0.0050	<0.0050a	0.00051a,d	0.00071a,d	0.0032a,d
VW12	03/23/09	5.5-6	<5.0	<0.50	<0.0050	<0.0050a	<0.0050a	<0.0050a	0.00033a,d
PB1	01/26/10	19.5-20	<5.0	<0.50	<0.0050	<0.0050a	<0.0050a	<0.0050a	<0.0050a
PB2	01/26/10	19.5-20	<5.0	6.6	<0.50	0.029a	<0.50a	0.34a,d	<0.50a
PB3	01/26/10	19.5-20	<5.0	4.9	<0.0050	0.0059a	<0.0050a	0.0098a	0.0070a
PB4	01/26/10	19.5-20	<5.0	<0.50	<0.0050	0.00079a,d	<0.0050a	0.00045a,d	<0.0050a

TABLE 3A
CUMULATIVE SOIL ANALYTICAL RESULTS
Former Exxon Service Station 74121
10605 Foothill Boulevard
Oakland, California
(Page 6 of 6)

Sampling ID	Sampling Date	Depth (feet bgs)	TPHd (mg/kg)	TPHg (mg/kg)	MTBE (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	Total X (mg/kg)
S1-E	02/16/10	15	<5.0e	<0.50e	<0.0050	<0.0050a	0.0015a,d	<0.0050a	<0.010a
S1-W	02/16/10	15	<5.0e	<0.50e	<0.0050	0.0012a,d	0.0018a,d	<0.0050a	<0.010a
S2-E	02/17/10	15	<5.0e	<0.50e	<0.0050	<0.0050a	<0.0050a	<0.0050a	<0.010a
S2-W	02/17/10	15	<5.0e	<0.50e	<0.0050	<0.0050a	<0.0050a	<0.0050a	<0.010a
S3-E	02/18/10	15	200e	590e	<0.50	0.034a	0.069a	0.13a	<0.010a
S3-W	02/18/10	15	<5.0e	<0.50e	<0.0050	<0.0050a	<0.0050a	<0.0050a	<0.010a
S4-E	02/19/10	15	27e	1,300e	<1.0	<0.040a	1.4a	15a	49a
S4-W	02/19/10	15	<5.0e	1.5e	<0.0050	<0.0050a	0.0030a,d	0.0050a	0.012a
S5-NE	02/26/10	15	<5.0e	<0.50e	<0.0050	<0.0050a	<0.0050a	<0.0050a	<0.0050a
S5-SE	02/26/10	15	<5.0e	<0.50e	<0.0050	<0.0050a	<0.0050a	0.00022a,d	<0.0050a

- Notes:
- TPHd = Total petroleum hydrocarbons as diesel analyzed using EPA Method 8021B, unless otherwise noted.
 - TPHg = Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8021B, unless otherwise noted.
 - MTBE = Methyl tertiary butyl ether analyzed using EPA Method 8015B; prior to April 2005, analyzed using EPA Method 8260B.
 - BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8021B, unless otherwise noted.
 - DIPE = Di-isopropyl ether analyzed using EPA Method 8260B.
 - ETBE = Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
 - TAME = Tertiary amyl methyl ether analyzed using EPA Method 8260B.
 - TBA = Tertiary butyl alcohol analyzed using EPA Method 8260B.
 - 1,2-DCA = 1,2-dichloroethane analyzed using EPA Method 8260B.
 - EDB = 1,2-dibromoethane analyzed using EPA Method 8260B.
 - mg/kg = Milligrams per kilogram.
 - = Not measured/Not sampled/Not analyzed.
 - < = Less than the stated laboratory reporting limit.
 - ND = Not detected at or above the method reporting limit.
 - a = Analyte analyzed by EPA Method by 8260B.
 - b = Estimated value below reporting limit.
 - c = Secondary ion abundances were outside method requirements. Identification based on analytical judgement.
 - d = Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
 - e = Analyte analyzed by EPA Method 8015B (M).

TABLE 3B
ADDITIONAL CUMULATIVE SOIL ANALYTICAL RESULTS
Former Exxon Service Station 74121
10605 Foothill Boulevard
Oakland, California
(Page 1 of 6)

Sampling ID	Sampling Date	Depth (feet bgs)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	1,2-DCA (mg/kg)	TAME (mg/kg)	EDB (mg/kg)
SB1	03/19/04	11	---	---	---	---	---	---
SB2	03/19/04	18	---	---	---	---	---	---
SB3	03/19/04	5	---	---	---	---	---	---
SB4	03/19/04	5	---	---	---	---	---	---
SB5	05/26/05	5-5.5	---	---	---	---	---	---
SB5	05/26/05	17.5-18	---	---	---	---	---	---
SB5	05/26/05	24.5-25	---	---	---	---	---	---
SB6	05/26/05	5-5.5	---	---	---	---	---	---
SB6	05/26/05	19.5-20	---	---	---	---	---	---
SB6	05/26/05	21.5-22	---	---	---	---	---	---
SB6	05/26/05	24.5-25	---	---	---	---	---	---
SB7	05/26/05	5-5.5	---	---	---	---	---	---
SB7	05/26/05	18-18.5	---	---	---	---	---	---
SB7	05/26/05	22.5-23	---	---	---	---	---	---
SB7	05/26/05	24.5-25	---	---	---	---	---	---
SB8	05/26/05	5-5.5	---	---	---	---	---	---
SB8	05/26/05	17.5-18	---	---	---	---	---	---
SB8	05/26/05	21.5-22	---	---	---	---	---	---
SB8	05/26/05	24.5-25	---	---	---	---	---	---
SB9	05/27/05	5-5.5	---	---	---	---	---	---
SB9	05/27/05	18-18.5	---	---	---	---	---	---
SB9	05/27/05	19.5-20	---	---	---	---	---	---
SB9	05/27/05	24.5-25	---	---	---	---	---	---
SB10	05/27/05	5-5.5	---	---	---	---	---	---
SB10	05/27/05	17.5-18	---	---	---	---	---	---
SB10	05/27/05	24.5-25	---	---	---	---	---	---
SB11	05/27/05	5-5.5	---	---	---	---	---	---
SB11	05/27/05	18.5-19	---	---	---	---	---	---
SB11	05/27/05	24.5-25	---	---	---	---	---	---

TABLE 3B
ADDITIONAL CUMULATIVE SOIL ANALYTICAL RESULTS
Former Exxon Service Station 74121
10605 Foothill Boulevard
Oakland, California
(Page 2 of 6)

Sampling ID	Sampling Date	Depth (feet bgs)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	1,2-DCA (mg/kg)	TAME (mg/kg)	EDB (mg/kg)
SB12	05/27/05	5-5.5	---	---	---	---	---	---
SB12	05/27/05	16.5-17	---	---	---	---	---	---
SB12	05/27/05	25.5-26	---	---	---	---	---	---
SB13	05/27/05	5-5.5	---	---	---	---	---	---
SB13	05/27/05	18.5-19	---	---	---	---	---	---
SB13	05/27/05	24.5-25	---	---	---	---	---	---
SB14	05/02/06	5-5.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB14	05/02/06	10-10.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB14	05/02/06	15-15.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB14	05/02/06	20-20.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB14	05/02/06	24.5-25	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB15	05/02/06	5-5.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB15	05/02/06	15-15.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB15	05/02/06	20-20.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB15	05/02/06	24.5-25	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB16	05/02/06	5-5.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB16	05/02/06	10-10.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB16	05/02/06	15-15.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB16	05/02/06	20-20.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB16	05/02/06	24.5-25	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB17	05/02/06	5.5-6	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB17	05/02/06	10-10.5	<25	<0.12	<0.12	<0.12	<0.12	<0.12
SB17	05/02/06	15-15.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB17	05/02/06	19.5-20	<250	<1.2	<1.2	<1.2	<1.2	<1.2
SB17	05/02/06	24.5-25	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB18	05/03/06	5-5.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB18	05/03/06	10-10.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB18	05/03/06	15-15.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB18	05/03/06	19.5-20	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB18	05/03/06	24.5-25	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB19	05/02/06	5-5.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB19	05/02/06	10-10.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB19	05/02/06	15-15.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

TABLE 3B
ADDITIONAL CUMULATIVE SOIL ANALYTICAL RESULTS
Former Exxon Service Station 74121
10605 Foothill Boulevard
Oakland, California
(Page 3 of 6)

Sampling ID	Sampling Date	Depth (feet bgs)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	1,2-DCA (mg/kg)	TAME (mg/kg)	EDB (mg/kg)
SB19	05/02/06	20-20.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB19	05/02/06	24.5-25	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB20	05/02/06	5.5-6	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB20	05/02/06	10-10.5	<0.200	<0.051	<0.051	<0.051	<0.051	<0.051
SB20	05/02/06	15-15.5	<25	<0.12	<0.12	<0.12	<0.12	<0.12
SB20	05/02/06	19.5-20	<500	<2.5	<2.5	<2.5	<2.5	<2.5
SB20	05/02/06	23.5-24	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB21	05/02/06	8-8.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB21	05/02/06	13-13.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB21	05/02/06	18-18.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB21	05/02/06	19.5-20	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB21	05/02/06	23-23.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB21	05/02/06	24.5-25	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
V3	05/03/06	9.5-10	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
V4	05/03/06	5-5.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
V4	05/03/06	7.5-8	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
V5	05/03/06	5-5.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
V5	05/03/06	7.5-8	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
V8	05/03/06	5-5.5	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
V8	05/03/06	7.5-8	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
VW1	01/22/07	5.5-6	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
VW2	01/22/07	5.5-6	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
VW3	01/22/07	5.5-6	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
VW4	01/22/07	5.5-6	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
VW5	01/22/07	5.5-6	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
VW6	03/23/09	5.5-6	<0.050	<0.010	<0.010	<0.0050	<0.010	<0.0050
VW7	03/23/09	5.5-6	<0.050	<0.010	<0.010	<0.0050	<0.010	<0.0050

TABLE 3B
ADDITIONAL CUMULATIVE SOIL ANALYTICAL RESULTS
Former Exxon Service Station 74121
10605 Foothill Boulevard
Oakland, California
(Page 4 of 6)

Sampling ID	Sampling Date	Depth (feet bgs)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	1,2-DCA (mg/kg)	TAME (mg/kg)	EDB (mg/kg)
VW8	03/23/09	5.5-6	<0.050	<0.010	<0.010	<0.0050	<0.010	<0.0050
VW9	03/23/09	5.5-6	<0.050	<0.010	<0.010	<0.0050	<0.010	<0.0050
VW10	03/23/09	5.5-6	<0.050	<0.010	<0.010	<0.0050	<0.010	<0.0050
VW11	03/23/09	5.5-6	<0.050	<0.010	<0.010	<0.0050	<0.010	<0.0050
VW12	03/23/09	5.5-6	<0.050	<0.010	<0.010	<0.0050	<0.010	<0.0050
MW1	01/23/07	6-6.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	8-8.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	10-10.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	11.5-12	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	12-12.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	14-14.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	15.5-16	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	16-16.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	17.5-18	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	18-18.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	19.5-20	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	20-20.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW1	01/23/07	22-22.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	6-6.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	8-8.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	10-10.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	12-12.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	14-14.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	15.5-16	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	16-16.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	18-18.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	19.5-20	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	20-20.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	21.5-22	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	22-22.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	23.5-24	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	24-24.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW2	01/23/07	26-26.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200

TABLE 3B
ADDITIONAL CUMULATIVE SOIL ANALYTICAL RESULTS

Former Exxon Service Station 74121

10605 Foothill Boulevard

Oakland, California

(Page 5 of 6)

Sampling ID	Sampling Date	Depth (feet bgs)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	1,2-DCA (mg/kg)	TAME (mg/kg)	EDB (mg/kg)
MW3	01/24/07	6-6.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW3	01/24/07	8-8.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW3	01/24/07	10-10.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW3	01/24/07	12-12.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW3	01/24/07	14-14.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW3	01/24/07	16-16.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW3	01/24/07	18-18.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW3	01/24/07	20-20.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW3	01/24/07	22-22.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW3	01/24/07	24-24.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW3	01/24/07	26-26.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	6-6.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	8-8.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	10-10.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	12-12.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	14-14.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	16-16.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	18-18.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	19.5-20	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	20-20.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	22-22.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	24-24.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW5	01/23/07	26-26.5	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
PB1	01/26/10	19.5-20	<0.050	<0.010	<0.010	<0.0050	<0.010	<0.0050
PB2	01/26/10	19.5-20	<5.0	<1.0	<1.0	<0.50	<1.0	<0.50
PB3	01/26/10	19.5-20	<0.050	<0.010	<0.010	<0.0050	<0.010	<0.0050
PB4	01/26/10	19.5-20	<0.050	<0.010	<0.010	<0.0050	<0.010	<0.0050
S1-E	2/16/2010	15	<0.050	<0.010	<0.010	<0.0050	<0.010	<0.0050
S1-W	2/16/2010	15	<0.050	<0.010	<0.010	<0.0050	<0.010	<0.0050
S2-E	2/17/2010	15	<0.050	<0.010	<0.010	<0.0050	<0.010	<0.0050
S2-W	2/17/2010	15	<0.050	<0.010	<0.010	<0.0050	<0.010	<0.0050

**TABLE 3B
ADDITIONAL CUMULATIVE SOIL ANALYTICAL RESULTS**

Former Exxon Service Station 74121
10605 Foothill Boulevard
Oakland, California
(Page 6 of 6)

Sampling ID	Sampling Date	Depth (feet bgs)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	1,2-DCA (mg/kg)	TAME (mg/kg)	EDB (mg/kg)
S3-E	2/18/2010	15	<5.0	<1.0	<1.0	<0.50	<1.0	<0.50
S3-W	2/18/2010	15	<0.050	<0.010	<0.010	<0.0050	<0.010	<0.0050
S4-E	2/19/2010	15	<10	<2.0	<2.0	<1.0	<2.0	<1.0
S4-W	2/19/2010	15	<0.050	<0.010	<0.010	<0.0050	<0.010	<0.0050
S5-NE	02/26/10	15	<0.050	<0.010	<0.010	<0.0050	<0.010	<0.0050
S5-SE	02/26/10	15	<0.050	<0.010	<0.010	<0.0050	<0.010	<0.0050

Notes:

TPHd	=	Total petroleum hydrocarbons as diesel analyzed using EPA Method 8021B, unless otherwise noted.
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8021B, unless otherwise noted.
MTBE	=	Methyl tertiary butyl ether analyzed using EPA Method 8015B; prior to April 2005, analyzed using EPA Method 8260B.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8021B, unless otherwise noted.
DIPE	=	Di-isopropyl ether analyzed using EPA Method 8260B.
ETBE	=	Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
TAME	=	Tertiary amyl methyl ether analyzed using EPA Method 8260B.
TBA	=	Tertiary butyl alcohol analyzed using EPA Method 8260B.
1,2-DCA	=	1,2-dichloroethane analyzed using EPA Method 8260B.
EDB	=	1,2-dibromoethane analyzed using EPA Method 8260B.
mg/kg	=	Milligrams per kilogram.
---	=	Not measured/Not sampled/Not analyzed.
<	=	Less than the stated laboratory reporting limit.
ND	=	Not detected at or above the method reporting limit.
a	=	Analyte analyzed by EPA Method by 8260B.
b	=	Estimated value below reporting limit.
c	=	Secondary ion abundances were outside method requirements. Identification based on analytical judgement.
d	=	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value i
e	=	Analyte analyzed by EPA Method 8015B (M).

TABLE 4
SOIL VAPOR SAMPLE ANALYTICAL RESULTS
Former Exxon Service Station 74121
10605 Foothill Boulevard
Oakland, California
(Page 1 of 2)

Sampling ID	Sampling Date	Depth (feet bgs)	O ₂ +Ar (%)	Methane (%)	CO ₂ (%)	B (µg/m ³)	T (µg/m ³)	E (µg/m ³)	o-X (µg/m ³)	m,p-X (µg/m ³)	Total X (µg/m ³)	TPHg (µg/m ³)	MTBE (µg/m ³)	TBA (µg/m ³)	DIPE (µg/m ³)	ETBE (µg/m ³)	1,2-DCA (µg/m ³)	TAME (µg/m ³)	EDB (µg/m ³)	Additional VOCs (µg/m ³)	1,1-DFA (µg/m ³)	Helium (µg/m ³)	O ₂ (µg/m ³)	Vacuum (in Hg)	
California Regional Water Quality Control Board Environmental Screening Levels (May 2008)																									
Residential Land Use (Table E-1a)			—	—	—	84	63,000	980	21,000	21,000	21,000	10,000	9,400	—	—	—	94	—	4.1	—	—	—	—	—	—
Commercial/Industrial Land Use (Table E-1a)			—	—	—	280	180,000	3,300	58,000	58,000	58,000	29,000	31,000	—	—	—	310	—	14	—	—	—	—	—	—
V1	05/01/06	5.5	9.4	—	—	200	<100	<100	<100	<100	—	790,000	<100	—	—	—	—	—	—	—	—	<10,000	—	—	—
V2	05/01/06	—	Soil vapor samples could not be extracted at depths between 4 and 10 feet bgs from this boring.																						
V3	05/01/06	5.5	19	—	—	120	160	140	<100	<100	—	110,000	<100	—	—	—	—	—	—	—	—	<10,000	—	—	—
V3	05/01/06	10	Soil vapor samples could not be extracted at depths between 4 and 10 feet bgs from this boring.																						
V4	05/01/06	—	Soil vapor samples could not be extracted at depths between 4 and 10 feet bgs from this boring.																						
V5	05/01/06	—	Soil vapor samples could not be extracted at depths between 4 and 10 feet bgs from this boring.																						
V6	05/01/06	7.0	9.1	—	—	170	<100	540	<100	410	—	880,000	<100	—	—	—	—	—	—	—	—	<10,000	—	—	—
V7	05/01/06	7.5	21	—	—	84	140	<100	<100	110	—	2,200	<100	—	—	—	—	—	—	—	—	<10,000	—	—	—
V7 dup	05/01/06	7.5	20	—	—	<80	110	<100	<100	<100	—	2,400	<100	—	—	—	—	—	—	—	—	<10,000	—	—	—
V8	05/01/06	—	Soil vapor samples could not be extracted at depths between 4 and 10 feet bgs from this boring.																						
V9	05/01/06	7.5	19	—	—	<80	<100	<100	<100	<100	—	380,000	<100	—	—	—	—	—	—	—	—	<10,000	—	—	—
V10	05/01/06	8.0	11	—	—	1,100	130	340	<100	180	—	6,600,000	<100	—	—	—	—	—	—	—	—	<10,000	—	—	—
V10	05/01/06	10.0	9.0	—	—	1,900	<100	<100	<100	<100	—	17,000,000	<100	—	—	—	—	—	—	—	—	<10,000	—	—	—
VW1	04/27/07 a	5-6	11.1	—	—	<2.4	12	<3.2	4.8	10	—	<20,000	<11	<9.0	<12	<12	<3.0	<19	<5.7	—	<8.1	—	—	—	
VW1	04/23/09 b	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
VW1	10/12/10	5-6	17.5	<0.785	5.24	<2.5	3.6	<3.4	—	—	<14	<11,000	<11	<9.5	<13	<13	<3.2	<13	<6.0	—	—	—	—	—	
VW1	10/11/11 b	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
VW2	04/27/07 b	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
VW2	04/23/09	5-6	8.05	<0.770	6.55	<6.1	<7.3	<8.4	—	—	<33	210,000	<28	<23	<32	<32	<7.8	<32	<15	—	<21	—	—	—	
VW2 dup	04/23/09	5-6	7.88	<0.780	6.05	<6.2	<7.3	<8.5	—	—	<34	220,000	<28	<24	<33	<33	<7.9	<33	<15	—	29	—	—	—	
VW2	10/12/10	5-6	8.13	<0.820	6.90	<5.2	<6.2	<7.1	—	—	<28	190,000	<24	<20	<27	<27	<6.6	<27	<13	—	—	—	—	—	
VW2	01/19/11	5-6	2.59	<0.710	7.80	<2.3	<2.7	<3.1	—	—	<12	<9,900	<10	<8.6	<12	<12	<2.9	<12	<5.5	—	—	—	—	—	
VW2	10/11/11	5-6	—	0.044	4.5	7.1	10	18	<4.4	<8.8	<13.2	5,400	<3.7	6.7	<4.2	<4.2	<4.1	<4.2	<7.8	6.9d	<1.0	13	-7.9		
VW2 dup	10/11/11	5-6	—	0.043	4.4	6.3	10	14	<4.4	<8.8	<13.2	3,500	<3.7	6.5	<4.2	<4.2	<4.1	<4.2	<7.8	5.5d	—	<1.0	12	-4.6	
VW3	04/27/07 b	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
VW3	04/23/09 b	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
VW3	10/12/10 b	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
VW3	01/19/11 b	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
VW3	10/11/11 b	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
VW4	04/27/07 b	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
VW4	04/23/09 b	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
VW4	10/12/10 b	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
VW4	01/19/11 b	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
VW4	10/11/11 b	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
VW5	04/27/07 a	5-6	3.49	—	—	4.4	11	4.4	4.8	12	—	<23,000	<12	<9.9	<14	<14	<3.3	<21	<6.3	—	<8.9	—	—	—	
VW5	04/23/09	5-6	2.57	<0.710	9.84	<2.3	<2.7	<3.1	—	—	<12	9,800	<10	<8.6	<12	<12	<2.9	<12	<5.5	—	<7.7	—	—	—	
VW5	10/12/10	5-6	2.05	<0.790	13.2	5.1	6.8	<3.4	—	—	<14	22,000	<11	<9.6	<13	<13	<3.2	<13	<8.1	—	—	—	—	—	
VW5 dup	10/12/10	5-6	2.16	<0.840	12.5	<2.7	7.9	4.1	—	—	<15	36,000	<12	76	<14	<14	<3.4	<14	<6.5	—	—	—	—	—	
VW5	10/11/11	5-6	—	0.056	4.4	<16	<19	31	<22	<44	<66	110,000	<18	39	<21	<21	<21	<21	<39	ND	—	<1.0	16	-5.2	

TABLE 4
 SOIL VAPOR SAMPLE ANALYTICAL RESULTS
 Former Exxon Service Station 74121
 10605 Foothill Boulevard
 Oakland, California
 (Page 2 of 2)

Sampling ID	Sampling Date	Depth (feet bgs)	O ₂ + Ar (%)	Methane (%)	CO ₂ (%)	B (µg/m ³)	T (µg/m ³)	E (µg/m ³)	o-X (µg/m ³)	m,p-X (µg/m ³)	Total X (µg/m ³)	TPHg (µg/m ³)	MTBE (µg/m ³)	TBA (µg/m ³)	DIPE (µg/m ³)	ETBE (µg/m ³)	1,2-DCA (µg/m ³)	TAME (µg/m ³)	EDB (µg/m ³)	Additional VOCs (µg/m ³)	1,1-DFA (µg/m ³)	Helium (µg/m ³)	O ₂ (µg/m ³)	Vacuum (in Hg)	
California Regional Water Quality Control Board Environmental Screening Levels (May 2008)																									
Residential Land Use (Table E-1a)																									
Commercial/Industrial Land Use (Table E-1a)																									
VW6	03/27/09	b	---	---	---	84	63,000	980	21,000	21,000	21,000	10,000	9,400	---	---	---	94	---	4.1	---	---	---	---	---	---
VW6	10/12/10	5-6	16.1	<0.835	5.25	7.3	11	12	---	---	24	<12,000	<12	12	<14	<14	<3.4	<14	<6.4	---	---	---	---	---	---
VW6	10/11/11	5-6	---	<0.0010	3.9	11	16	19	4.6	14	18.6	2,100	<3.7	12	<4.2	<4.2	<4.1	<4.2	<7.8	7.0d, 5.3e	---	<1.0	15	-4.0	
VW7	03/27/09	5-6	6.94	<0.810	5.52	54	910	180	---	---	860	11,000	<12	<9.8	<14	<14	<3.3	<14	<6.2	---	<8.8	---	---	---	
VW8	03/27/09	5-6	2.91	2.61	5.98	<99	<120	<130	---	---	<540	4,400,000	<450	<380	<520	<520	<130	<520	<240	---	<330	---	---	---	
VW9	03/27/09	5-6	11.2	<0.820	4.36	25	250	51	---	---	260	65,000	<30	<25	<34	<34	<8.3	<34	<34	---	<22	---	---	---	
VW9 dup	03/27/09	5-6	<9.05	<9.05	<9.05	150	1,600	310	---	---	1,600	130,000	<130	<110	<150	<150	<37	<150	<70	---	<98	---	---	---	
VW9	10/12/10	5-6	7.01	<0.775	15.4	<2.5	3.7	<3.4	---	---	<13	<11,000	<11	<9.4	<13	<13	<3.1	<13	<8.0	---	---	---	---	---	
VW9	10/11/11	b	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
VW10	03/27/09	5-6	4.21	<0.780	2.69	38	520	120	---	---	550	880,000	<110	<95	<130	<130	<32	<130	<60	---	<84	---	---	---	
VW10	10/12/10	5-6	4.83	<0.815	6.32	<2.6	4.0	<3.5	---	---	<14	<11,000	<12	<9.9	<14	<14	<3.3	<14	<6.3	---	---	---	---	---	
VW10	10/11/11	5-6	---	<0.0010	1.1	17	31	22	8.9	26	34.9	1,600	<3.7	11	<4.2	<4.2	<4.1	<4.2	<7.8	8.4d, 5.6f	---	<1.0	18	-3.4	
VW11	03/27/09	5-6	6.18	<0.770	6.69	110	860	230	---	---	1,000	210,000	<110	<93	<130	<130	<31	<130	<59	---	5,300	---	---	---	
VW11	10/12/10	b	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
VW11	01/19/11	5-6	2.35	<0.725	12.4	45	<44	<50	---	---	<200	420,000	<170	<140	<190	<190	<47	<190	<69	---	---	---	---	---	
VW11	10/11/11	b	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
VW12	03/27/09	5-6	12.9	<1.26	4.78	90	1,700	340	---	---	1,500	17,000	<18	<15	<21	<21	<5.1	<21	<9.7	---	<14	---	---	---	
VW12	10/11/11	b	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	

- Notes:
- Bold** = Greater than or equal to the most stringent, applicable, commercial environmental screening level.
 - TPHg = Total petroleum hydrocarbons as gasoline analyzed using EPA Method TO-3M.
 - MTBE = Methyl tertiary butyl ether analyzed using EPA Method TO-15.
 - BTEX = Benzene, toluene, ethylbenzene, o-xylenes, and pm-xylenes analyzed using EPA Method TO-15.
 - 1,1-DFA = 1,1-difluoroethane analyzed using EPA Method TO-15.
 - Methane = Methane analyzed using EPA Method 8015M; prior to 2011, analyzed using ASTM D-1946.
 - O₂+ Ar = Oxygen plus argon analyzed using ASTM Method D- 1946.
 - EDB = 1,2-dibromoethane analyzed using EPA Method TO-15.
 - 1,2-DCA = 1,2-dichloroethane analyzed using EPA Method TO-15.
 - TAME = Tertiary amyl methyl ether analyzed using EPA Method TO-15.
 - TBA = Tertiary butyl alcohol analyzed using EPA Method TO-15.
 - ETBE = Ethyl tertiary butyl ether analyzed using EPA Method TO-15.
 - DIPE = Di-isopropyl ether analyzed using EPA Method TO-15.
 - Ethanol = Ethanol analyzed using EPA Method TO-15.
 - Add'l VOCs = Additional volatile organic compounds analyzed using EPA Method TO-15.
 - O₂ = Oxygen analyzed using ASTM 1945-46.
 - Vacuum = Vacuum measured using a vacuum gauge.
 - in Hg = Inches of mercury.
 - µg/m³ = Micrograms per meter cubed.
 - ND = Not detected.
 - < = Less than the stated laboratory reporting limit.
 - = Not applicable/Not specified.
 - a = Soil vapor samples were collected without purging.
 - b = Soil vapor samples were not collected due to the presence of water.
 - c = Trimethylbenzene
 - d = 1,2,4 Trimethylbenzene
 - e = Chloroform
 - f = 1,3,5 Trimethylbenzene

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

August 24, 2011

Ms. Jennifer Sedlachek (Sent via E-mail to: jennifer.c.sedlachek@exxonmobil.com)
Exxon Mobil
4096 Piedmont, #194
Oakland, CA 94611

MacArthur Boulevard Associates
c/o Mr. John Jay, Management Agent (Sent via E-mail to: johnjay@jayphares.com)
10700 MacArthur Boulevard, Suite 200
Oakland, CA 94605

Subject: Review of Addendum to Soil Vapor Sampling Report for Fuel Leak Case No. RO0002635 and GeoTracker Global ID T0600120383, Exxon #7-4121, 10605 Foothill Boulevard, Oakland, CA 94605

Dear Ms. Sedlachek and Mr. Jay:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site, including the most recently submitted document entitled, "Addendum to Soil Vapor Sampling Report," dated August 12, 2010 (Addendum). The Addendum, which was prepared by Cardno ERI, evaluates data from sampling of vapor wells VW2 and VW11 and the attempted sampling of vapor wells VW3 and VW4 in January 2011. Soil vapor samples collected from VW2 did not contain concentrations of Total Petroleum Hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, xylenes (BTEX), MTBE, or other volatile organic compounds at concentrations above reporting limits. A soil vapor sample collected from well VW11 contained TPHg at a concentration of 420,000 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and benzene at a concentration of 45 $\mu\text{g}/\text{m}^3$. The Addendum recommends re-sampling existing soil vapor probes at the site in September 2011 when water levels are expected to be lower.

An evaluation of the potential for vapor intrusion to existing adjacent residential properties and future onsite commercial buildings is needed in order to make decisions on whether this case can be closed or whether additional remedial action is needed. During previous sampling events, soil vapor samples have not been collected from vapor probes VW3 and VW4 due to water in the tubing. Sporadically, soil vapor samples have also not been collected from other probes due to water in the tubing or low flow conditions. This has resulted in an extended delay in completing the site assessment since the completion of excavation in the area of the former USTs in February 2010. In general, we have no objection to re-sampling all existing data probes in September 2011. However, we request that a replacement probe be installed and sampled at an adjacent location if a soil vapor sample cannot be collected from any of these existing probe locations: VW1, VW2, VW3, VW4, VW5, VW11, and VW12. The replacement probes, if needed, are to have similar construction to existing probes. The soil vapor samples are to be analyzed for TPHg using EPA Method TO-3, BTEX, MTBE, and the leak detection compound using EPA Method TO-15, and oxygen, methane, and carbon dioxide using ASTM D-1946. Please present the sampling results along with your evaluation of the potential for vapor intrusion and recommendations in the Site Assessment Report requested below no later than October 31, 2011.

Jennifer Sedlachek
John Jay
RO00026
August 24, 2011
Page 2

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **October 31, 2011** – Site Assessment Report

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org. Online case files are available for review at the following website: <http://www.acgov.org/aceh/index.htm>.

Sincerely,



Digitally signed by Jerry Wickham
DN: cn=Jerry Wickham, o=Alameda County
Environmental Health, ou,
email=jerry.wickham@acgov.org, c=US
Date: 2011.08.24 16:06:23 -07'00'

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

Attachments: Responsible Party(ies) Legal Requirements/Obligations

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032 (Sent via E-mail to: lgriffin@oaklandnet.com)

Heidi Dieffenbach-Carle, Cardno ERI, 601 North McDowell Blvd., Petaluma, CA 94954
(Sent via E-mail to: heidi.dieffenbach-carle@cardno.com)

Peter McIntyre, AEI Consultants, 2500 Camino Diablo, Suite 200, Walnut Creek, CA 94597
(Sent via E-mail to: pmcintyre@aeiconsultants.com)

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

Jerry Wickham, ACEH (Sent via E-mail to: jerry.wickham@acgov.org)

GeoTracker, eFile

Attachment 1

Responsible Party(ies) Legal Requirements / Obligations

REPORT REQUESTS

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

ELECTRONIC SUBMITTAL OF REPORTS

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

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

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

UNDERGROUND STORAGE TANK CLEANUP FUND

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

AGENCY OVERSIGHT

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

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

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

REQUIREMENTS

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

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

Submission Instructions

- 1) Obtain User Name and Password
 - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
 - i) Send an e-mail to deh.loptoxic@acgov.org
 - b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses, and the Case Numbers (RO# available in Geotracker) you will be posting for.**
- 2) Upload Files to the ftp Site
 - a) Using Internet Explorer (IE4+), go to <ftp://alcoftp1.acgov.org>
 - (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
 - b) Click on **Page** located on the Command bar on upper right side of window, and then scroll down to **Open FTP Site** in Windows Explorer.
 - c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
 - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
 - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.
- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
 - a) Send email to deh.loptoxic@acgov.org notify us that you have placed a report on our ftp site.
 - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
 - c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
 - d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

APPENDIX B

FIELD DATA FORMS

Former Exxon Service Station 74121
 10605 Foothill Blvd., Oakland CA

SVS Point Sampling

SVS Point VW1

Date 10/11/11
 Sampler UTB

a	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test	1135	1140	27/22	—	—
(2nd Vac Test)	—	—	—	—	—
Purge	1140				
Sample					

1 purge volume (@ 100cc/min) = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
 1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

WET WELL

b	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test					
(2nd Vac Test)					
Purge					
Sample					

1 purge volume = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
 1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

Duplicate	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test					
(2nd Vac Test)					
Purge					
Sample					

1 purge volume = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
 1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

Former Exxon Service Station 74121
 10605 Foothill Blvd., Oakland CA

SVS Point Sampling

SVS Point VW2

Date 10/11/11
 Sampler VTB

#024

a	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test	1145	1150	27.5/27.5	—	—
(2nd Vac Test)	~~~~~				
Purge	1150	1159.3	—	200 cc/min	20% / 0%
Sample	1200	(1204)	28/5	—	20%

1 purge volume (@ 100cc/min) = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
 1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

b	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test					
(2nd Vac Test)					
Purge					
Sample					

1 purge volume = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
 1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

#(31)

Duplicate	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test	NA	~~~~~			
(2nd Vac Test)	NA	~~~~~			
Purge	NA	~~~~~			
Sample	1204	(1208)	28/5	—	20%

1 purge volume = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
 1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

Former Exxon Service Station 74121
 10605 Foothill Blvd., Oakland CA

SVS Point Sampling

SVS Point VW3

Date 10/11/11
 Sampler VTB

a	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test	1255	1300	22.5/22.5	—	—
(2nd Vac Test)	—	—	—	—	—
Purge	1300				
Sample					

1 purge volume (@ 100cc/min) = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
 1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

WET WELL

b	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test					
(2nd Vac Test)					
Purge					
Sample					

1 purge volume = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
 1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

Duplicate	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test					
(2nd Vac Test)					
Purge					
Sample					

1 purge volume = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
 1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

Former Exxon Service Station 74121
 10605 Foothill Blvd., Oakland CA

SVS Point Sampling

SVS Point VW4

Date 10/11/11
 Sampler VTB

a	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test	1230	1235	27.5/27.5	—	—
(2nd Vac Test)	~~~~~				
Purge	1235				
Sample					

1 purge volume (@ 100cc/min) = 9 minutes; 2 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
 1 purge volume (@ 200cc/min) = 5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

b	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test					
(2nd Vac Test)					
Purge					
Sample					

1 purge volume = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
 1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

Duplicate	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test					
(2nd Vac Test)					
Purge					
Sample					

1 purge volume = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
 1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

WET WELL

Former Exxon Service Station 74121
10605 Foothill Blvd., Oakland CA

SVS Point Sampling

SVS Point VW5

Date 10/11/11
Sampler VTB

#235

a	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test	1005	1010	26.5/26.5	—	—
(2nd Vac Test)	—	—	—	—	—
Purge	1010	1019.3	—	200 ^{cc} /min	20% / 0%
Sample	1020	1024	28/5	—	20%

1 purge volume (@ 100cc/min) = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

b	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test					
(2nd Vac Test)					
Purge					
Sample					

1 purge volume = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

Duplicate	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test					
(2nd Vac Test)					
Purge					
Sample					

1 purge volume = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

Former Exxon Service Station 74121
10605 Foothill Blvd., Oakland CA

SVS Point Sampling

SVS Point VW6

Date 10/11/11
Sampler VTB

#326

a	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test	1105	1110	27/27	—	—
(2nd Vac Test)	—	—	—	—	—
Purge	1110	1119.3	—	200 cc/min	20% / 0%
Sample	1120	1124	29.5/5	—	20%

1 purge volume (@ 100cc/min) = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

b	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test					
(2nd Vac Test)					
Purge					
Sample					

1 purge volume = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

Duplicate	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test					
(2nd Vac Test)					
Purge					
Sample					

1 purge volume = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

Former Exxon Service Station 74121
 10605 Foothill Blvd., Oakland CA

SVS Point Sampling

SVS Point VW9

Date 10/11/11
 Sampler VTB

a	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test	1215	1220	27.5/27.5	—	—
(2nd Vac Test)	~~~~~				
Purge	1220				
Sample					

1 purge volume (@ 100cc/min) = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
 1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

WET WELL

b	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test					
(2nd Vac Test)					
Purge					
Sample					

1 purge volume = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
 1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

Duplicate	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test					
(2nd Vac Test)					
Purge					
Sample					

1 purge volume = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
 1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

Former Exxon Service Station 74121
10605 Foothill Blvd., Oakland CA

SVS Point Sampling

SVS Point VW10

Date 10/11/11
Sampler VTB

#067

a	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test	1035	1040	22/22	—	—
(2nd Vac Test)	—	—	—	—	—
Purge	1040	1049.3	—	200 cc/min	20% / 0%
Sample	1050	(1054)	29.5 / 5	—	20%

1 purge volume (@ 100cc/min) = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

b	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test					
(2nd Vac Test)					
Purge					
Sample					

1 purge volume = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

Duplicate	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test					
(2nd Vac Test)					
Purge					
Sample					

1 purge volume = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

Former Exxon Service Station 74121
10605 Foothill Blvd., Oakland CA

SVS Point Sampling

SVS Point VW11

Date 10/11/11
Sampler VTB

a	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test	0935	0940	26.5/26.5	—	—
(2nd Vac Test)	WET				
Purge	0940	0942	—	200 cc/min	20% / 0.0025%
Sample	0950				

1 purge volume (@ 100cc/min) = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

b	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test					
(2nd Vac Test)					
Purge					
Sample					

1 purge volume = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

Duplicate	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test					
(2nd Vac Test)					
Purge					
Sample					

1 purge volume = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

Former Exxon Service Station 74121
 10605 Foothill Blvd., Oakland CA

SVS Point Sampling

SVS Point VW12

Date 10/11/11
 Sampler VIB

a	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test	1240	1245	27/27	—	—
(2nd Vac Test)	—	—	—	—	—
Purge	1245				
Sample					

1 purge volume (@ 100cc/min) = 9 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
 1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

WET WELL

b	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test					
(2nd Vac Test)					
Purge					
Sample					

1 purge volume = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
 1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

Duplicate	Start	End	Inches Hg	Flow Setting	He (ppm)
Vac Test					
(2nd Vac Test)					
Purge					
Sample					

1 purge volume = 19 minutes; 3 purge volumes = 57 minutes; 7 purge volumes = 133 minutes
 1 purge volume (@ 200cc/min) = 9.5 minutes; 3 purge volumes = 28.5 minutes; 7 purge volumes = 66.5 minutes

APPENDIX C

LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY RECORD



Mobile
Geochemistry
Inc.

RECEIVED
OCT 17 2011

BY:.....

17 October 2011



Ms. Paula Sime
Environmental Resolutions, Inc. - Petaluma
601 N. McDowell Blvd
Petaluma, CA 94954

H&P Project: ERI101311-10
Client Project: Former Exxon 74121

Dear Ms. Paula Sime:

Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 13-Oct-11 which were analyzed in accordance with the attached Chain of Custody record(s).

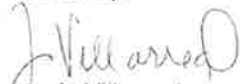
The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody

Unless otherwise noted, all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely,


Janis Villarreal
Laboratory Director

H&P Mobile Geochemistry, Inc. operates under CA Environmental Lab Accreditation Program Numbers 2579, 2740, 2741, 2742, 2743, 2745 and 2754. National Environmental Laboratory Accreditation Conference (NELAC) Standards Lab #11845

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1855 Coronado Avenue, Signal Hill, California 90755
www.HandPmg.com | 1-800-834-9888





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Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Environmental Resolutions, Inc. - Petaluma
601 N. McDowell Blvd
Petaluma, CA 94954

Project: ERI101311-10
Project Number: Former Exxon 74121
Project Manager: Ms, Paula Sime

Reported:
17-Oct-11 11:42

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
VW 2	E110037-01	Vapor	11-Oct-11	13-Oct-11
VW 2-Dup	E110037-02	Vapor	11-Oct-11	13-Oct-11
VW 5	E110037-03	Vapor	11-Oct-11	13-Oct-11
VW 6	E110037-04	Vapor	11-Oct-11	13-Oct-11
VW 10	E110037-05	Vapor	11-Oct-11	13-Oct-11
Trip Blank	E110037-06	Vapor	11-Oct-11	13-Oct-11



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Environmental Resolutions, Inc. - Petaluma 601 N. McDowell Blvd Petaluma, CA 94954	Project: ERI101311-10 Project Number: Former Exxon 74121 Project Manager: Ms. Paula Sime	Reported: 17-Oct-11 11:42
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Soil Gas and Vapor Analysis

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
VW 2 (E110037-01) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
Carbon dioxide	4.5	0.2	%	1	EJ11304	13-Oct-11	13-Oct-11	ASTM 1945-96	
Oxygen	13	0.2	"	"	"	"	"	"	
Helium (LCC)	ND	1.0	"	"	"	"	"	ASTM D1945M	
Methane	0.044	0.0010	"	"	"	"	"	EPA 8015M	
Vacuum	-7.9	-30.0	inch of Hg	"	EJ11704	13-Oct-11	13-Oct-11	Vacuum Gauge	
VW 2-Dup (E110037-02) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
Carbon dioxide	4.4	0.2	%	1	EJ11304	13-Oct-11	13-Oct-11	ASTM 1945-96	
Oxygen	12	0.2	"	"	"	"	"	"	
Helium (LCC)	ND	1.0	"	"	"	"	"	ASTM D1945M	
Methane	0.043	0.0010	"	"	"	"	"	EPA 8015M	
Vacuum	-4.6	-30.0	inch of Hg	"	EJ11704	13-Oct-11	13-Oct-11	Vacuum Gauge	
VW 5 (E110037-03) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
Carbon dioxide	4.4	0.2	%	1	EJ11304	13-Oct-11	13-Oct-11	ASTM 1945-96	
Oxygen	16	0.2	"	"	"	"	"	"	
Helium (LCC)	ND	1.0	"	"	"	"	"	ASTM D1945M	
Methane	0.056	0.0010	"	"	"	"	"	EPA 8015M	
Vacuum	-5.2	-30.0	inch of Hg	"	EJ11704	13-Oct-11	13-Oct-11	Vacuum Gauge	
VW 6 (E110037-04) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
Carbon dioxide	3.9	0.2	%	1	EJ11304	13-Oct-11	13-Oct-11	ASTM 1945-96	
Oxygen	15	0.2	"	"	"	"	"	"	
Helium (LCC)	ND	1.0	"	"	"	"	"	ASTM D1945M	
Methane	ND	0.0010	"	"	"	"	"	EPA 8015M	
Vacuum	-4.0	-30.0	inch of Hg	"	EJ11704	13-Oct-11	13-Oct-11	Vacuum Gauge	



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Environmental Resolutions, Inc. - Petaluma 601 N. McDowell Blvd Petaluma, CA 94954	Project: ER1101311-10 Project Number: Former Exxon 74121 Project Manager: Ms. Paula Sime	Reported: 17-Oct-11 11:42
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Soil Gas and Vapor Analysis

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
VW 10 (E110037-05) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
Carbon dioxide	1.1	0.2	%	1	EJ11304	13-Oct-11	13-Oct-11	ASTM 1945-96	
Oxygen	18	0.2	"	"	"	"	"	"	
Helium (LCC)	ND	1.0	"	"	"	"	"	ASTM D1945M	
Methane	ND	0.0010	"	"	"	"	"	EPA 8015M	
Vacuum	-3.4	-30.0	inch of Hg	"	EJ11704	13-Oct-11	13-Oct-11	Vacuum Gauge	
Trip Blank (E110037-06) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
Carbon dioxide	ND	0.2	%	1	EJ11304	13-Oct-11	13-Oct-11	ASTM 1945-96	
Oxygen	6.4	0.2	"	"	"	"	"	"	
Helium (LCC)	ND	1.0	"	"	"	"	"	ASTM D1945M	
Methane	ND	0.0010	"	"	"	"	"	EPA 8015M	



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Environmental Resolutions, Inc. - Petaluma
 601 N. McDowell Blvd
 Petaluma, CA 94954

Project: ERI101311-10
 Project Number: Former Exxon 74121
 Project Manager: Ms. Paula Sime

Reported:
 17-Oct-11 11:42

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
VW 2 (E110037-01) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
Dichlorodifluoromethane (F12)	ND	5.0	ug/m3	1	EJ11305	13-Oct-11	13-Oct-11	EPA TO-15	
Chloromethane	ND	2.1	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	7.1	"	"	"	"	"	"	
Vinyl chloride	ND	2.6	"	"	"	"	"	"	
Bromomethane	ND	16	"	"	"	"	"	"	
Chloroethane	ND	8.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	5.7	"	"	"	"	"	"	
Acetone	ND	24	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	6.7	6.1	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	7.7	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	3.5	"	"	"	"	"	"	
Carbon disulfide	ND	6.3	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	8.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	3.7	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.1	"	"	"	"	"	"	
2-Butanone (MEK)	ND	30	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	4.2	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	4.2	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.5	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	4.1	"	"	"	"	"	"	
Benzene	7.1	3.2	"	"	"	"	"	"	
Carbon tetrachloride	ND	6.4	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	4.2	"	"	"	"	"	"	
Trichloroethene	ND	5.5	"	"	"	"	"	"	
1,2-Dichloropropane	ND	9.4	"	"	"	"	"	"	
Bromodichloromethane	ND	6.8	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	8.3	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
Toluene	10	3.8	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.5	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	8.3	"	"	"	"	"	"	
Dibromochloromethane	ND	8.6	"	"	"	"	"	"	
Tetrachloroethene	ND	6.9	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	7.8	"	"	"	"	"	"	



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Environmental Resolutions, Inc. - Petaluma 601 N. McDowell Blvd Petaluma, CA 94954	Project: ERI101311-10 Project Number: Former Exxon 74121 Project Manager: Ms. Paula Sime	Reported: 17-Oct-11 11:42
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Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
VW 2 (E110037-01) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
1,1,1,2-Tetrachloroethane	ND	7.0	ug/m3	1	EJ11305	13-Oct-11	13-Oct-11	EPA TO-15	
Chlorobenzene	ND	4.7	"	"	"	"	"	"	
Ethylbenzene	18	4.4	"	"	"	"	"	"	
m,p-Xylene	ND	8.8	"	"	"	"	"	"	
Styrene	ND	4.3	"	"	"	"	"	"	
o-Xylene	ND	4.4	"	"	"	"	"	"	
Bromoform	ND	10	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
4-Ethyltoluene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	6.9	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	7.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	11	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>									
		103 %	76-134	"	"	"	"	"	
<i>Surrogate: Toluene-d8</i>									
		118 %	78-125	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>									
		101 %	77-127	"	"	"	"	"	
VW 2-Dup (E110037-02) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
Dichlorodifluoromethane (F12)	ND	5.0	ug/m3	1	EJ11305	13-Oct-11	13-Oct-11	EPA TO-15	
Chloromethane	ND	2.1	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	7.1	"	"	"	"	"	"	
Vinyl chloride	ND	2.6	"	"	"	"	"	"	
Bromomethane	ND	16	"	"	"	"	"	"	
Chloroethane	ND	8.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	5.7	"	"	"	"	"	"	
Acetone	ND	24	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	6.5	6.1	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	7.7	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	3.5	"	"	"	"	"	"	
Carbon disulfide	ND	6.3	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	8.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	3.7	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.1	"	"	"	"	"	"	



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Environmental Resolutions, Inc. - Petaluma
 601 N. McDowell Blvd
 Petaluma, CA 94954

Project: ERI101311-10
 Project Number: Former Exxon 74121
 Project Manager: Ms. Paula Sime

Reported:
 17-Oct-11 11:42

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
VW 2-Dup (E110037-02) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
2-Butanone (MEK)	ND	30	ug/m3	1	EJ11305	13-Oct-11	13-Oct-11	EPA TO-15	
cis-1,2-Dichloroethene	ND	4.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	4.2	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	4.2	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.5	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	4.1	"	"	"	"	"	"	
Benzene	6.3	3.2	"	"	"	"	"	"	
Carbon tetrachloride	ND	6.4	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	4.2	"	"	"	"	"	"	
Trichloroethene	ND	5.5	"	"	"	"	"	"	
1,2-Dichloropropane	ND	9.4	"	"	"	"	"	"	
Bromodichloromethane	ND	6.8	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	8.3	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
Toluene	10	3.8	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.5	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	8.3	"	"	"	"	"	"	
Dibromochloromethane	ND	8.6	"	"	"	"	"	"	
Tetrachloroethene	ND	6.9	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	7.8	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
Chlorobenzene	ND	4.7	"	"	"	"	"	"	
Ethylbenzene	14	4.4	"	"	"	"	"	"	
m,p-Xylene	ND	8.8	"	"	"	"	"	"	
Styrene	ND	4.3	"	"	"	"	"	"	
o-Xylene	ND	4.4	"	"	"	"	"	"	
Bromoform	ND	10	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
4-Ethyltoluene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	5.5	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	7.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	11	"	"	"	"	"	"	



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Environmental Resolutions, Inc. - Petaluma
 601 N. McDowell Blvd
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Project: ERI101311-10
 Project Number: Former Exxon 74121
 Project Manager: Ms. Paula Sime

Reported:
 17-Oct-11 11:42

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
VW 2-Dup (E110037-02) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
Surrogate: 1,2-Dichloroethane-d4		101 %	76-134		EJ11305	13-Oct-11	13-Oct-11	EPA TO-15	
Surrogate: Toluene-d8		111 %	78-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.5 %	77-127		"	"	"	"	
VW 5 (E110037-03) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
Dichlorodifluoromethane (F12)	ND	25	ug/m3	5	EJ11305	13-Oct-11	13-Oct-11	EPA TO-15	
Chloromethane	ND	10	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	35	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	79	"	"	"	"	"	"	
Chloroethane	ND	40	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	28	"	"	"	"	"	"	
Acetone	ND	120	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	39	31	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	39	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	18	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	18	"	"	"	"	"	"	
1,1-Dichloroethane	ND	21	"	"	"	"	"	"	
2-Butanone (MEK)	ND	150	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	20	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	21	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	21	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	32	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	21	"	"	"	"	"	"	
Trichloroethene	ND	27	"	"	"	"	"	"	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	34	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	23	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	23	"	"	"	"	"	"	
Toluene	ND	19	"	"	"	"	"	"	



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Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
VW 5 (E110037-03) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
1,1,2-Trichloroethane	ND	28	ug/m3	5	EJ11305	13-Oct-11	13-Oct-11	EPA TO-15	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	43	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	35	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	31	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	22	"	"	"	"	"	"	
o-Xylene	ND	22	"	"	"	"	"	"	
Bromoform	ND	52	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	35	"	"	"	"	"	"	
4-Ethyltoluene	ND	25	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	25	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	25	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	38	"	"	"	"	"	"	
Hexachlorobutadiene	ND	54	"	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	103 %	76-134	"	"	"	"	"	"
Surrogate: Toluene-d8	118 %	78-125	"	"	"	"	"	"
Surrogate: 4-Bromofluorobenzene	92.8 %	77-127	"	"	"	"	"	"



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Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
VW 6 (E110037-04) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
Dichlorodifluoromethane (F12)	ND	5.0	ug/m3	1	EJ11305	13-Oct-11	13-Oct-11	EPA TO-15	
Chloromethane	ND	2.1	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	7.1	"	"	"	"	"	"	
Vinyl chloride	ND	2.6	"	"	"	"	"	"	
Bromomethane	ND	16	"	"	"	"	"	"	
Chloroethane	ND	8.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	5.7	"	"	"	"	"	"	
Acetone	ND	24	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	12	6.1	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	7.7	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	3.5	"	"	"	"	"	"	
Carbon disulfide	ND	6.3	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	8.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	3.7	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.1	"	"	"	"	"	"	
2-Butanone (MEK)	ND	30	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	4.2	"	"	"	"	"	"	
Chloroform	5.3	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	4.2	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.5	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	4.1	"	"	"	"	"	"	
Benzene	11	3.2	"	"	"	"	"	"	
Carbon tetrachloride	ND	6.4	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	4.2	"	"	"	"	"	"	
Trichloroethene	ND	5.5	"	"	"	"	"	"	
1,2-Dichloropropane	ND	9.4	"	"	"	"	"	"	
Bromodichloromethane	ND	6.8	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	8.3	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
Toluene	16	3.8	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.5	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	8.3	"	"	"	"	"	"	
Dibromochloromethane	ND	8.6	"	"	"	"	"	"	
Tetrachloroethene	ND	6.9	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	7.8	"	"	"	"	"	"	



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Project: ERI101311-10
 Project Number: Former Exxon 74121
 Project Manager: Ms. Paula Sime

Reported:
 17-Oct-11 11:42

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
VW 6 (E110037-04) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
1,1,1,2-Tetrachloroethane	ND	7.0	ug/m3	1	EJ11305	13-Oct-11	13-Oct-11	EPA TO-15	
Chlorobenzene	ND	4.7	"	"	"	"	"	"	
Ethylbenzene	19	4.4	"	"	"	"	"	"	
m,p-Xylene	14	8.8	"	"	"	"	"	"	
Styrene	ND	4.3	"	"	"	"	"	"	
o-Xylene	4.6	4.4	"	"	"	"	"	"	
Bromoform	ND	10	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
4-Ethyltoluene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	7.0	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	7.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	11	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>									
		106 %	76-134	"	"	"	"	"	
<i>Surrogate: Toluene-d8</i>									
		110 %	78-125	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>									
		92.8 %	77-127	"	"	"	"	"	
VW 10 (E110037-05) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
Dichlorodifluoromethane (F12)	ND	5.0	ug/m3	1	EJ11305	13-Oct-11	13-Oct-11	EPA TO-15	
Chloromethane	ND	2.1	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	7.1	"	"	"	"	"	"	
Vinyl chloride	ND	2.6	"	"	"	"	"	"	
Bromomethane	ND	16	"	"	"	"	"	"	
Chloroethane	ND	8.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	5.7	"	"	"	"	"	"	
Acetone	ND	24	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	11	6.1	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	7.7	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	3.5	"	"	"	"	"	"	
Carbon disulfide	ND	6.3	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	8.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	3.7	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.1	"	"	"	"	"	"	



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Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
VW 10 (E110037-05) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
2-Butanone (MEK)	ND	30	ug/m3	1	EJ11305	13-Oct-11	13-Oct-11	EPA TO-15	
cis-1,2-Dichloroethene	ND	4.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	4.2	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	4.2	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.5	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	4.1	"	"	"	"	"	"	
Benzene	17	3.2	"	"	"	"	"	"	
Carbon tetrachloride	ND	6.4	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	4.2	"	"	"	"	"	"	
Trichloroethene	ND	5.5	"	"	"	"	"	"	
1,2-Dichloropropane	ND	9.4	"	"	"	"	"	"	
Bromodichloromethane	ND	6.8	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	8.3	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
Toluene	31	3.8	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.5	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	8.3	"	"	"	"	"	"	
Dibromochloromethane	ND	8.6	"	"	"	"	"	"	
Tetrachloroethene	ND	6.9	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	7.8	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
Chlorobenzene	ND	4.7	"	"	"	"	"	"	
Ethylbenzene	22	4.4	"	"	"	"	"	"	
m,p-Xylene	26	8.8	"	"	"	"	"	"	
Styrene	ND	4.3	"	"	"	"	"	"	
o-Xylene	8.9	4.4	"	"	"	"	"	"	
Bromoform	ND	10	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
4-Ethyltoluene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	5.6	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	8.6	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	7.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	11	"	"	"	"	"	"	



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Project: ERI101311-10
 Project Number: Former Exxon 74121
 Project Manager: Ms. Paula Sime

Reported:
 17-Oct-11 11:42

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
VW 10 (E110037-05) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
Surrogate: 1,2-Dichloroethane-d4		101 %	76-134		EJ11305	13-Oct-11	13-Oct-11	EPA TO-15	
Surrogate: Toluene-d8		109 %	78-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.9 %	77-127		"	"	"	"	
Trip Blank (E110037-06) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
Dichlorodifluoromethane (F12)	ND	5.0	ug/m3	1	EJ11305	13-Oct-11	13-Oct-11	EPA TO-15	
Chloromethane	ND	2.1	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	7.1	"	"	"	"	"	"	
Vinyl chloride	ND	2.6	"	"	"	"	"	"	
Bromomethane	ND	16	"	"	"	"	"	"	
Chloroethane	ND	8.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	5.7	"	"	"	"	"	"	
Acetone	ND	24	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	6.1	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	7.7	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	3.5	"	"	"	"	"	"	
Carbon disulfide	ND	6.3	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	8.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	3.7	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.1	"	"	"	"	"	"	
2-Butanone (MEK)	ND	30	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	4.2	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	4.2	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.5	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	4.1	"	"	"	"	"	"	
Benzene	ND	3.2	"	"	"	"	"	"	
Carbon tetrachloride	ND	6.4	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	4.2	"	"	"	"	"	"	
Trichloroethene	ND	5.5	"	"	"	"	"	"	
1,2-Dichloropropane	ND	9.4	"	"	"	"	"	"	
Bromodichloromethane	ND	6.8	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	8.3	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
Toluene	ND	3.8	"	"	"	"	"	"	



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Project: ERI101311-10
 Project Number: Former Exxon 74121
 Project Manager: Ms. Paula Sime

Reported:
 17-Oct-11 11:42

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
Trip Blank (E110037-06) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
1,1,2-Trichloroethane	ND	5.5	ug/m3	1	EJ11305	13-Oct-11	13-Oct-11	EPA TO-15	
2-Hexanone (MBK)	ND	8.3	"	"	"	"	"	"	
Dibromochloromethane	ND	8.6	"	"	"	"	"	"	
Tetrachloroethene	ND	6.9	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	7.8	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
Chlorobenzene	ND	4.7	"	"	"	"	"	"	
Ethylbenzene	ND	4.4	"	"	"	"	"	"	
m,p-Xylene	ND	8.8	"	"	"	"	"	"	
Styrene	ND	4.3	"	"	"	"	"	"	
o-Xylene	ND	4.4	"	"	"	"	"	"	
Bromofom	ND	10	"	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
4-Ethyltoluene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	7.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	11	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		104 %		76-134	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		105 %		78-125	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		97.4 %		77-127	"	"	"	"	



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Project: ERI101311-10
 Project Number: Former Exxon 74121
 Project Manager: Ms. Paula Sime

Reported:
 17-Oct-11 11:42

TPHv on Vapors by EPA Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
VW 2 (E110037-01) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
TPHv (C5 - C11)	5400	100	ug/m3	1	EJ11305	13-Oct-11	13-Oct-11	EPA TO-15	
VW 2-Dup (E110037-02) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
TPHv (C5 - C11)	3500	100	ug/m3	1	EJ11305	13-Oct-11	13-Oct-11	EPA TO-15	
VW 5 (E110037-03) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
TPHv (C5 - C11)	110000	500	ug/m3	5	EJ11305	13-Oct-11	13-Oct-11	EPA TO-15	
VW 6 (E110037-04) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
TPHv (C5 - C11)	2100	100	ug/m3	1	EJ11305	13-Oct-11	13-Oct-11	EPA TO-15	
VW 10 (E110037-05) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
TPHv (C5 - C11)	1600	100	ug/m3	1	EJ11305	13-Oct-11	13-Oct-11	EPA TO-15	
Trip Blank (E110037-06) Vapor Sampled: 11-Oct-11 Received: 13-Oct-11									
TPHv (C5 - C11)	ND	100	ug/m3	1	EJ11305	13-Oct-11	13-Oct-11	EPA TO-15	



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Soil Gas and Vapor Analysis - Quality Control
H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EJ11304 - GC

Blank (EJ11304-BLK1)

Prepared & Analyzed: 13-Oct-11

Helium (LCC)	ND	1.0	%							
Carbon dioxide	ND	0.2	"							
Methane	ND	0.001	"							



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Project: ERI101311-10
 Project Number: Former Exxon 74121
 Project Manager: Ms. Paula Sime

Reported:
 17-Oct-11 11:42

Volatile Organic Compounds by EPA TO-15 - Quality Control
H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EJ11305 - TO-15

Blank (EJ11305-BLK1)

Prepared & Analyzed: 13-Oct-11

Dichlorodifluoromethane (F12)	ND	5.0	ug/m3							
Chloromethane	ND	2.1	"							
Dichlorotetrafluoroethane (F114)	ND	7.1	"							
Vinyl chloride	ND	2.6	"							
Bromomethane	ND	16	"							
Chloroethane	ND	8.0	"							
Trichlorofluoromethane (F11)	ND	5.7	"							
Acetone	ND	24	"							
1,1-Dichloroethene	ND	4.0	"							
Tertiary-butyl alcohol (TBA)	ND	6.1	"							
1,1,2-Trichlorotrifluoroethane (F113)	ND	7.7	"							
Methylene chloride (Dichloromethane)	ND	3.5	"							
Carbon disulfide	ND	6.3	"							
trans-1,2-Dichloroethene	ND	8.0	"							
Methyl tertiary-butyl ether (MTBE)	ND	3.7	"							
1,1-Dichloroethane	ND	4.1	"							
2-Butanone (MEK)	ND	30	"							
cis-1,2-Dichloroethene	ND	4.0	"							
Diisopropyl ether (DIPE)	ND	4.2	"							
Chloroform	ND	5.0	"							
Ethyl tert-butyl ether (ETBE)	ND	4.2	"							
1,1,1-Trichloroethane	ND	5.5	"							
1,2-Dichloroethane (EDC)	ND	4.1	"							
Benzene	ND	3.2	"							
Carbon tetrachloride	ND	6.4	"							
Tertiary-amyl methyl ether (TAME)	ND	4.2	"							
Trichloroethene	ND	5.5	"							
1,2-Dichloropropane	ND	9.4	"							
Bromodichloromethane	ND	6.8	"							
cis-1,3-Dichloropropene	ND	4.6	"							
4-Methyl-2-pentanone (MIBK)	ND	8.3	"							
trans-1,3-Dichloropropene	ND	4.6	"							
Toluene	ND	3.8	"							
1,1,2-Trichloroethane	ND	5.5	"							



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Volatile Organic Compounds by EPA TO-15 - Quality Control
H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EJ11305 - TO-15

Blank (EJ11305-BLK1)

Prepared & Analyzed: 13-Oct-11

2-Hexanone (MBK)	ND	8.3	ug/m3							
Dibromochloromethane	ND	8.6	"							
Tetrachloroethene	ND	6.9	"							
1,2-Dibromoethane (EDB)	ND	7.8	"							
1,1,1,2-Tetrachloroethane	ND	7.0	"							
Chlorobenzene	ND	4.7	"							
Ethylbenzene	ND	4.4	"							
m,p-Xylene	ND	8.8	"							
Styrene	ND	4.3	"							
o-Xylene	ND	4.4	"							
Bromoform	ND	10	"							
1,1,2,2-Tetrachloroethane	ND	7.0	"							
4-Ethyltoluene	ND	5.0	"							
1,3,5-Trimethylbenzene	ND	5.0	"							
1,2,4-Trimethylbenzene	ND	5.0	"							
1,3-Dichlorobenzene	ND	12	"							
1,4-Dichlorobenzene	ND	12	"							
1,2-Dichlorobenzene	ND	12	"							
1,2,4-Trichlorobenzene	ND	7.5	"							
Hexachlorobutadiene	ND	11	"							

Surrogate: 1,2-Dichloroethane-d4	229		"	214		107	76-134			
Surrogate: Toluene-d8	207		"	207		100	78-125			
Surrogate: 4-Bromofluorobenzene	347		"	365		95.3	77-127			

LCS (EJ11305-BS1)

Prepared & Analyzed: 13-Oct-11

Dichlorodifluoromethane (F12)	100	5.0	ug/m3	101		100	65-135			
Vinyl chloride	51	2.6	"	52.0		98.7	65-135			
Chloroethane	50	8.0	"	53.6		93.5	65-135			
Trichlorofluoromethane (F11)	110	5.7	"	113		96.6	65-135			
1,1-Dichloroethene	90	4.0	"	80.8		111	65-135			
1,1,2-Trichlorotrifluoroethane (F113)	150	7.7	"	155		99.0	65-135			
Methylene chloride (Dichloromethane)	63	3.5	"	70.8		88.6	65-135			
trans-1,2-Dichloroethene	89	8.0	"	80.8		110	65-135			



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 17-Oct-11 11:42

Volatile Organic Compounds by EPA TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ11305 - TO-15										
LCS (EJ11305-BS1)				Prepared & Analyzed: 13-Oct-11						
1,1-Dichloroethane	84	4.1	ug/m3	82.4		102	65-135			
cis-1,2-Dichloroethene	86	4.0	"	80.0		107	65-135			
Chloroform	99	5.0	"	99.2		99.7	65-135			
1,1,1-Trichloroethane	110	5.5	"	111		100	65-135			
1,2-Dichloroethane (EDC)	81	4.1	"	82.4		97.9	65-135			
Benzene	68	3.2	"	64.8		106	65-135			
Carbon tetrachloride	130	6.4	"	128		101	65-135			
Trichloroethene	120	5.5	"	110		112	65-135			
Toluene	77	3.8	"	76.8		101	65-135			
1,1,2-Trichloroethane	110	5.5	"	111		101	65-135			
Tetrachloroethene	130	6.9	"	138		96.5	65-135			
1,1,1,2-Tetrachloroethane	150	7.0	"	140		110	65-135			
Ethylbenzene	110	4.4	"	88.4		121	65-135			
m,p-Xylene	240	8.8	"	177		134	65-135			
o-Xylene	120	4.4	"	88.4		133	65-135			
1,1,2,2-Tetrachloroethane	170	7.0	"	140		120	65-135			
Surrogate: 1,2-Dichloroethane-d4	213		"	214		99.4	76-134			
Surrogate: Toluene-d8	205		"	207		98.8	78-125			
Surrogate: 4-Bromofluorobenzene	369		"	365		101	77-127			



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 Project Manager: Ms. Paula Sime

Reported:
 17-Oct-11 11:42

TPHv on Vapors by EPA Method TO-15 - Quality Control
H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EJ11305 - TO-15

Blank (EJ11305-BLK1)

Prepared & Analyzed: 13-Oct-11

TPHv (C5 - C11)	ND	100	ug/m3							
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Reported:
17-Oct-11 11:42

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the Environmental Laboratory Accreditation Program (CA) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste for the following methods:

Certificate# 2741, 2743, 2579, 2754 & 2740 approved for EPA 8260 and LUFT GC/MS
Certificate# 2742, 2745, & 2741 approved for LUFT
Certificate# 2745 & 2742 approved for EPA 418.1

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the National Environmental Accreditation Conference Standards for the category Environmental Analysis Air and Emissions for the following analytes and methods:

1,2,4-Trichlorobenzene by EPA TO-15 & TO-14A
Hexachlorobutadiene by EPA TO-15 & TO-14A
1,2,4-Trimethylbenzene by EPA TO-14A
1,2-Dichlorobenzene by EPA TO-15 & TO-14A
1,3,5-Trimethylbenzene by EPA TO-14A
1,4-Dichlorobenzene by EPA TO-15 & TO-14A
Benzene by EPA TO-15 & TO-14A
Chlorobenzene by EPA TO-15 & TO-14A
Ethyl benzene by EPA TO-15 & TO-14A
Styrene by EPA TO-15 & TO-14A
Toluene by EPA TO-15 & TO-14A
Total Xylenes by EPA TO-15 & TO-14A
1,1,1-Trichloroethane by EPA TO-15 & TO-14A
1,1,2,2-Tetrachloroethane by EPA TO-15 & TO-14A
1,1,2-Trichloroethane by EPA TO-15 & TO-14A
1,1-Dichloroethane by EPA TO-15 & TO-14A
1,1-Dichloroethane by EPA TO-15 & TO-14A
1,2-Dichloroethane by EPA TO-15 & TO-14A
1,2-Dichloropropane by EPA TO-15 & TO-14A
Bromoform by EPA TO-15
Bromomethane by EPA TO-15 & TO-14A
Carbon tetrachloride by EPA TO-15 & TO-14A
Chloroethane by EPA TO-15
Chloroform by EPA TO-15 & TO-14A
Chloromethane by EPA TO-15 & TO-14A
cis-1,2-Dichloroethene by EPA TO-15
cis-1,2-Dichloropropene by EPA TO-15 & TO-14A
Methylene chloride by EPA TO-15 & TO-14A
Tetrachloroethane by EPA TO-15 & TO-14A
trans-1,2-Dichloroethene by EPA TO-15
trans-1,2-Dichloropropene by EPA TO-15 & TO-14A
Trichloroethane by EPA TO-15 & TO-14A
Vinyl chloride by EPA TO-15 & TO-14A
2-Butanone by EPA TO-15
4-Methyl-2-Pentanone by EPA TO-15
Hexane by EPA TO-15
Methyl tert-butyl ether by EPA TO-15
Vinyl acetate by EPA TO-15

This certification applies to samples analyzed in summa canisters

APPENDIX D

FIELD PROTOCOL

Cardno ERI
Soil Vapor Sampling Well Installation and Sampling Field Protocol

Preliminary Activities

Prior to the onset of field activities at the site, Cardno ERI obtains the appropriate permit(s) from the governing agency(s). Advance notification is made as required by the agency(s) prior to the start of work. Cardno ERI marks the borehole locations and contacts the local one call utility locating service at least 48 hours prior to the start of work to mark buried utilities. Borehole locations may also be checked for buried utilities by a private geophysical surveyor.

Prior to drilling, the borehole location is cleared in accordance with the client's procedures. Fieldwork is conducted under the advisement of a registered professional geologist and in accordance with an updated site-specific safety plan prepared for the project, which is available at the job site during field activities.

Well Construction

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

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

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

Soil Vapor Sampling

Samples are collected using a soil vapor purging and sampling manifold consisting of a flow regulator, vacuum gauges, vacuum pump, shroud, and laboratory-prepared, gas-tight, opaque containers such as Summa™ canisters. Samples may also be collected using a syringe and analyzed by a mobile laboratory. Prior to use, Summa™ canisters are checked to ensure they are under the laboratory induced vacuum between 31 and 25 inches of mercury

(in. Hg). New inert tubing is used to purge and sample each well. Prior to purging and sampling each SVS well, the sampling manifold is connected to the gas-tight vacuum fitting or valve at the wellhead, and the downstream tubing and fittings are vacuum tested at approximately 24 to 28 in. Hg. Purging and sampling are conducted only on SVS wells when the tubing and fittings hold the applied vacuum for 5 minutes per vacuum gauge reading.

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

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

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

Decontamination Procedures

If soil samples are collected, Cardno ERI or the contracted driller decontaminates the soil sampling equipment between each sampling interval using a non-phosphate solution, followed by a minimum of two tap water rinses.

De-ionized water may be used for the final rinse. Downhole drilling equipment is steam-cleaned or triple-rinsed prior to advancing each borehole.

Waste Treatment and Disposal

Soil cuttings generated from the well installation are stored on site in labeled, Department of 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 water is stored on site in labeled, regulatory-approved storage containers, and is subsequently transported under manifest to a client- and regulatory-approved facility for disposal or treated with a permitted mobile or fixed-base carbon treatment system.