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RECEIVED
By Alameda County Environmental Health 9:03 am, Nov 18, 2015

13 November 2015

Mr. Keith Nowell
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: **Addendum to the Soil and Water Investigation and Focused SCM Report**
Former Exxon Retail Site #70234
3450 35th Avenue, Oakland, California
ACHCSA File No. RO0002515

Dear Mr. Nowell:

Attached for your review and comment is a copy of the *Addendum to the Soil and Water Investigation and Focused SCM Report* for the above-referenced site. The document, prepared by ETIC Engineering, Inc. (ETIC) of Pasadena, California, is submitted in response to correspondence from the Alameda County Health Care Services Agency dated March 22, 2013 and follow up to ETIC's Soil and Water Investigation and Focused SCM Report dated June 9, 2014.

Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

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

Sincerely,

Jennifer C. Sedlachek
Project Manager

Attachment: ETIC's Addendum to the Soil and Water Investigation and Focused SCM Report

c: w/ attachment:
Mr. Zack Spencer, FWS Highland LLC, 99 South Hill Drive, Brisbane, CA 94005
Mr. Shay Wideman, The Valero Companies, Environ. Liability Mgt., P.O. Box 696000, San Antonio, TX 78269

c: w/o attachment:
Mr. Sean Bowen - ETIC Engineering, Inc

Addendum to the Soil and Water Investigation and Focused SCM Report

Former Exxon Service Station 70234
3450 35th Avenue
Oakland, California

Prepared for

ExxonMobil Oil Corporation

Prepared by

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Date

CONTENTS

LIST OF FIGURES AND TABLES

Former Exxon Service Station 70234

SITE CONTACTS

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1.0 INTRODUCTION

At the request of ExxonMobil Environmental Services Company on behalf of ExxonMobil Oil Corporation (ExxonMobil), ETIC Engineering, Inc. (ETIC) has prepared this Addendum to Soil and Water Investigation and Focused Site Conceptual Model (SCM) Report for Former Exxon Service Station 70234, located at 3450 35th Avenue in Oakland, California.

The investigation was conducted in general accordance with the Work Plan for Subsurface Investigation dated May 2013 (ETIC 2013). The work plan outlined the proposed scope of work for the collection of soil vapor, soil, and groundwater samples to assess the risk to potential receptors via vapor intrusion and inhalation and to further assess the vertical extent of petroleum hydrocarbons and methyl tertiary butyl ether (MTBE) in the area of the former underground storage tank (UST) system excavations (ETIC 2013). In a letter dated 6 September 2013, the Alameda County Health Care Services Agency (ACHCSA) approved the proposed work with modifications outlined in the letter. Due to site access constraints, implementation of the field work could not be performed until April 2014, and approval of an extension request for submittal of the investigation report was granted by ACHCSA by email dated 23 January 2014. Copies of the correspondence from the ACHCSA are included in Appendix A. Due to an underground utility obstruction, proposed boring V6 was not initially installed and a Soil and Water Investigation and Focused SCM Report dated 9 June 2014 was submitted to ACHCSA without data from V6.

This amended report documents installation of soil vapor probe V6 and updates the SCM where appropriate.

Scope of Work

The work consisted of the following activities:

- The proposed drilling and sampling location was marked in the field and Underground Service Alert (USA) was subsequently notified. A private utility locating contractor checked the proposed work area for the presence of underground utilities.

- V6 was hand augered and completed as a soil vapor monitoring well. Soil samples collected from the boring were submitted for laboratory analysis.

- The drums of investigation-derived waste were loaded and transported offsite for proper disposal.

2.0 SITE BACKGROUND

2.1 SITE LOCATION AND LAND USE

Former Exxon Service Station 70234 is located at 3450 35th Avenue in Oakland, California. The site is situated on the eastern corner of the intersection of 35th Avenue and Quigley Street (Figures 1 and 2). Residential properties are northwest of the site across 35th Avenue and adjacent to the site on the northeastern and southeastern sides. An active ConocoPhillips 76 service station is located southwest of the site across Quigley Street.

An Exxon-branded service station was operated at the site and then sold to Valero Energy Corporation (Valero) in 2000. The underground fueling systems were removed in 2002; however, the station building and canopy remained at the site. The site is current unoccupied and the perimeter is surrounded by a fence. The former UST excavation was reportedly filled with gravel and resurfaced (Cardno ERI 2012a).

The site topography slopes generally to the southwest toward San Francisco Bay. The site is located approximately 2 miles northeast of the Oakland Estuary, which connects to San Francisco Bay. The nearest surface water is Peralta Creek, which flows to the southwest (toward San Francisco Bay) and passes within approximately 600 feet northwest and cross-gradient of the site (Figure 1).

2.2 UNDERGROUND STORAGE TANKS AND HYDRAULIC LIFTS

In August 1991, three 8,000-gallon gasoline USTs were excavated and removed from the site and were replaced with three 12,000-gallon gasoline USTs (Alton Geoscience 1992). A total of 1,200 cubic yards of soil was excavated from the vicinity of the USTs and disposed of (Alton Geoscience 1992). In June 1997, one 500-gallon used-oil UST and two hydraulic hoists were removed from the site (EA 1997). In 2002, the three 12,000-gallon gasoline USTs and associated product piping were excavated and removed from the site (TRC 2002). Approximately 150 cubic yards of pea gravel and 9,000 gallons of water from the UST cavity were removed and transported offsite for disposal (TRC 2002). The former UST excavation and product piping trenches were reportedly filled with gravel (Cardno ERI 2012a).

2.3 SUMMARY OF PREVIOUS INVESTIGATIONS

Various investigations were performed from 1986 to 2000 as part of the initial environmental case for the site. Well construction details are presented in Table 1. Data for soil samples and groundwater samples are presented in Tables 2 through 8. Soil borings B1 through B10, EB1, EB2, SB1, and SB2 were drilled and groundwater monitoring wells MW1 through MW3 were installed (Alton Geoscience 1991; IT 1992; Cardno ERI 2012a). Well construction details are presented in Table 1. Total Petroleum Hydrocarbons quantified as gasoline (TPH-g) and benzene were detected in soil samples from the borings at concentrations up to 440 milligrams per kilogram (mg/kg) and 0.7 mg/kg, respectively (boring B3 at 15.5 feet below ground surface

[bgs]). TPH-g, benzene, and methyl tertiary butyl ether (MTBE) were detected in groundwater samples at concentrations up to 75.0 micrograms per liter (μg/L), 6.6 μg/L, and 1.87 μg/L, respectively (Cardno ERI 2012a). The ACHCSA closed the environmental case for the site, and the groundwater monitoring wells were subsequently destroyed in 2000 (ERI 2000).

In March 2007, the ACHCSA opened an environmental case for the site based upon the discovery of MTBE in groundwater samples collected from the UST excavation during removal of the tanks in 2002 (Cardno ERI 2012a).

In September and November 2007, Environmental Resolutions, Inc. (ERI) observed the drilling of borings B11 through B18 (ERI 2007). In March 2009, ERI observed the drilling of borings B19 through B21 and the installation of groundwater monitoring wells MW4 through MW9 (ERI 2009). TPH-g, benzene, toluene, ethylbenzene, xylenes, MTBE, tertiary butyl alcohol (TBA), and 1,2-dichloroethane (1,2-DCA) were detected in soil samples collected from the borings at concentrations up to 300 mg/kg (B15 at 20 feet bgs), 6.1 mg/kg (B15 at 20 feet bgs), 36 mg/kg (B15 at 20 feet bgs), 14 mg/kg (B15 at 20 feet bgs), 72 mg/kg (B15 at 20 feet bgs), 1.7 mg/kg (B17 at 35.5 feet bgs), 0.70 mg/kg (B18 at 35 feet bgs), and 0.011 mg/kg (B15 at 15.5 feet bgs), respectively. TPH-g, benzene, toluene, ethylbenzene, xylenes, MTBE, and TBA were detected at concentrations up to 18,000 μg/L, 3,400 μg/L, 2,500 μg/L, 330 μg/L, 2,000 μg/L, 12,000 μg/L, and 1,900 μg/L, respectively, in the grab groundwater sample collected at 38 feet bgs from boring B15 situated near the southeastern edge of the former UST excavation (ERI 2007).

In December 2011, Cardno ERI observed the installation of recovery well RW1 at the site. The purpose of installing well RW1 was to conduct feasibility testing, including a step-drawdown and a constant-rate groundwater pumping test to evaluate whether groundwater extraction and treatment would be a viable remediation strategy. TPH-g was detected at 440 mg/kg in the soil sample collected at 40 feet bgs from the boring for well RW1 (Cardno ERI 2012a).

Quarterly groundwater monitoring was performed at the site from 1992 to 1995. Groundwater monitoring was also performed once in 1999. Non-aqueous-phase liquid (NAPL) was not detected. TPH-g, benzene, toluene, ethylbenzene, and xylenes (BTEX), and MTBE were detected in groundwater samples collected from monitoring wells MW1 (located west of the UST area) and MW3 (located upgradient of the fueling system). Groundwater monitoring wells MW1 through MW3 were destroyed in 2000 when the ACHCSA closed the initial environmental case for the site (Cardno ERI 2012a).

Groundwater monitoring wells MW4 through MW9 have been monitored since March 2009. The highest concentrations of TPH-g, BTEX, and MTBE have been detected in samples collected from wells MW5 (located southeast of the former UST excavation), MW6 (located southwest of the former UST excavation), and RW1 (located inside the former UST excavation).

In February 2012, Cardno ERI performed a step-drawdown pumping test and attempted subsequent constant-rate pumping tests in well RW1. The tests indicated a sustainable pumping

rate of no more than 0.2 gallons per minute. The data also yielded a corresponding transmissivity of 197.1 gallons per day per foot (gpd/ft), a storativity (specific yield) of 0.016, and a hydraulic conductivity of 5.8 x 10^{-4} centimeters per second (cm/sec). Based upon the data, the anticipated downgradient extent of the capture zone was approximately 14.5 feet and the anticipated cross-gradient extent of the capture zone was approximately 45 feet. Based upon the findings of the feasibility test, Cardno ERI indicated that groundwater extraction and treatment would not be an effective remedial alternative for the site (Cardno ERI 2012b).

In April 2014, ETIC observed the installation of five soil vapor monitoring wells (V1 through V5), the advancement of three cone penetration testing (CPT) borings (H1-CPT, H2-CPT, and H3-CPT), and the collection of soil and groundwater samples from 8 hydro-punch and direct push borings (H1-70, H1-95, H1-S, H2-62, H2-80, H3-65, H3-90, and H3-S) at the site. The purpose of the investigation was to assess the risk to potential receptors via vapor intrusion and inhalation and to further assess the vertical extent of petroleum hydrocarbons and MTBE in the area of the former UST system excavations. Two Hydropunch™ borings were advanced near each of the three CPT borings for the collection of grab groundwater samples. TBA was detected in the grab groundwater samples collected from Hydropunch™ borings H1-70 and H1-95 at concentrations of 18 and 11 µg/L, respectively (ETIC 2014).

Quarterly groundwater monitoring was performed at the site from 1992 to 1995. Groundwater monitoring was also performed once in 1999. Non-aqueous-phase liquid (NAPL) was not detected. TPH-g, benzene, toluene, ethylbenzene, and xylenes (BTEX), and MTBE were detected in groundwater samples collected from monitoring wells MW1 (located west of the UST area) and MW3 (located upgradient of the fueling system). Groundwater monitoring wells MW1 through MW3 were destroyed in 2000 when the ACHCSA closed the initial environmental case for the site (Cardno ERI 2012a).

Groundwater monitoring wells MW4 through MW9 have been monitored since March 2009. The highest concentrations of TPH-g, BTEX, and MTBE have been detected in samples collected from wells MW5 (located southeast of the former UST excavation), MW6 (located southwest of the former UST excavation), and RW1 (located inside the former UST excavation).

2.4 SUMMARY OF PREVIOUS REMEDIAL MEASURES

In 1991, approximately 1,200 cubic yards of fill material and soil were excavated when the gasoline USTs, dispensers, and product piping were removed and the excavation was enlarged to accommodate the larger replacement USTs. TPH-g and benzene were detected at concentrations up to 5 mg/kg and 0.36 mg/kg, respectively, in soil samples collected from the limits of the enlarged excavation (Alton Geoscience 1991).

In June 1997, one 500-gallon used-oil UST and two hydraulic hoists were removed from the site (EA 1997). Hydraulic oil was detected in the soil samples collected from the hydraulic lift excavations at concentrations up to 2,100 mg/kg. Total Petroleum Hydrocarbons quantified as motor oil (TPH-mo), diesel (TPH-d), TPH-g, toluene, ethylbenzene, and xylenes were detected

in the soil sample collected from the used-oil UST excavation at 680 mg/kg, 200 mg/kg, 8.6 mg/kg, 0.038 mg/kg, 0.016 mg/kg, and 0.046 mg/kg, respectively (EA 1997).

In 2002, approximately 170 cubic yards of pea gravel and soil were excavated during removal of the 12,000-gallon USTs (TRC 2002). Four soil samples were collected from the sidewalls of the UST excavation. TPH-g, BTEX, and MTBE were not detected in the samples. Four soil samples were collected beneath the product piping. TPH-g, BTEX, and MTBE were not detected in three of the four samples. TPH-g (24 mg/kg), benzene (0.057 mg/kg), toluene (0.11 mg/kg), ethylbenzene (0.12 mg/kg), total xylenes (1.2 mg/kg), and MTBE (0.020 mg/kg) were detected in soil sample B collected at approximately 4.9 feet bgs beneath the northeastern dispenser island (TRC 2002).

3.0 GEOLOGY AND HYDROGEOLOGY

3.1 REGIONAL GEOLOGY AND HYDROGEOLOGY

The site is located in the East Bay Plain Subbasin of the Santa Clara Valley Groundwater Basin. The East Bay Plain Subbasin is a northwest trending alluvial plain bounded on the north by San Pablo Bay, on the east by the contact with Franciscan Basement rock, and on the south by the Niles Cone Groundwater Basin. The East Bay Plain Basin extends beneath San Francisco Bay to the west. Numerous creeks including San Pablo Creek, Wildcat Creek, San Leandro Creek, and San Lorenzo Creek flow from the western slope of the Coast Ranges westward across the plain and into San Francisco Bay. The East Bay Plain Subbasin aquifer system consists of unconsolidated deposits of Quaternary age. Deposits include the early Pleistocene Santa Clara Formation, the late Pleistocene Alameda Formation, the early Holocene Temescal Formation, and Artificial Fill. The cumulative thickness of the unconsolidated deposits is about 1,000 feet (DWR 2003).

Early Pleistocene Santa Clara Formation

The Santa Clara Formation consists of alluvial fan deposits inter-fingered with lake, swamp, river channel, and flood plain deposits. The formation ranges from 300 to 600 feet thick (DWR 2003).

Late Pleistocene Alameda Formation

The Alameda Formation includes a sequence of alluvial fan deposits. The formation was deposited primarily in an estuarine environment and ranges from 26 to 245 feet thick (DWR 2003).

Early Holocene Temescal Formation

The Temescal Formation is an alluvial deposit consisting primarily of silt and clay with some gravel layers. The formation ranges from 1 to 50 feet thick (DWR 2003).

Artificial Fill

Artificial fill is found mostly along the bay front and wetlands areas and is derived primarily from dredging as well as quarrying, construction, demolition debris, and municipal waste. The fill ranges in thickness from 1 to 50 feet with the thickest deposits found closer to San Francisco Bay (DWR 2003).

3.2 LOCAL GEOLOGY AND HYDROGEOLOGY

The geologic and hydrogeologic characteristics of the site have been evaluated using data from boring logs from previous site investigations. Soil beneath the site generally consists of clayey sand and sandy clay with varying amounts of silt and gravel to approximately 45 feet bgs (Cardno ERI 2012a). Silty clay and silty sand were encountered in soil samples collected at approximately 54 feet bgs in borings H1-S and H3-S. The CPT logs indicate several intervals of very dense/stiff soil to the total depth investigated (approximately 100 feet bgs), and several intervals were noted as sandy silt and clayey silt (ETIC 2014).

The depth to groundwater measured in wells at the site during the 2014 monitoring event was approximately 29.81 to 34.01 feet bgs. However, historical data indicate that groundwater levels have fluctuated approximately 6 to 8 feet in some wells over time. Historical data also indicate that the predominant direction of groundwater flow beneath the site is to the southwest at a horizontal hydraulic gradient of approximately 0.02 to 0.0092 foot/foot (ETIC 2015).

4.0 SUBSURFACE INVESTIGATION

The following activities were performed for the installation and sampling of soil vapor monitoring well V6.

4.1 FIELD PREPARATION

Drilling and well installation permits were obtained from the Alameda County Public Works Agency (ACPWA) before performing this work. Copies of the permits are included in Appendix B. The proposed boring location was marked, and Underground Service Alert member companies were notified to check for the presence of underground utilities. A private subcontractor was hired to check each proposed drilling location for underground utilities. A site-specific health and safety plan was prepared and implemented during field activities.

4.2 SOIL VAPOR ASSESSMENT

One additional soil vapor monitoring well (V6) was installed at the location shown on Figure 2. Soil samples were collected for laboratory analysis.

4.2.1 Drilling and Soil Sampling

On 7 November 2014, one soil boring (V6) was advanced by Gregg Drilling and Testing, Inc. of Martinez, California (Gregg Drilling) using hand tools. The soil vapor monitoring well location was selected based on the historical petroleum hydrocarbon concentrations beneath the site and the location of structures. Well V6 was installed in the vicinity of the former used-oil UST near the onsite building to a depth of approximately 6.7 feet bgs.

Drilling equipment and tools were decontaminated prior to beginning the field activities and between uses. An ETIC geologist supervised the drilling and sampling activities. Soil samples were examined for lithologic identification in accordance with the Unified Soil Classification System and the Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), American Society for Testing and Materials (ASTM) Designation D2488 (ASTM 2000) and evidence of chemical impacts. The observations were recorded on a field log. A photoionization detector was used to monitor for organic vapors and to measure headspace vapors from soil samples. Technical guidance for the activities was provided by a California licensed Professional Geologist. A copy of the boring log and well construction diagram are included in Appendix C.

Soil samples were collected from approximately 2.5 to 3 feet bgs and 6 to 6.5 feet bgs in boring V6 to assess soil quality near the former used-oil UST. Soil samples were collected in clean liners. A soil sample was collected from boring V6 at approximately 5 to 6 feet bgs for physical parameter analysis. The sample for physical parameter analysis was collected using a short Shelby tube to obtain a relatively undisturbed sample. The liners and tube were sealed, labeled, placed with ice in a thermally insulated cooler, and transported under chain-of-custody protocol to Eurofins Calscience, Inc., a state-certified analytical laboratory.

4.2.2 Soil Vapor Monitoring Well Installation

Gregg Drilling completed the boring as a soil vapor monitoring well (V6) for the collection of soil vapor samples. A 6-inch-long, 0.4-inch-diameter implant, consisting of tubular, stainless steel screen with a 0.0057-inch pore size, was attached to stainless steel tubing. The implant and tubing assembly was inserted through the borehole to a depth of approximately 6.4 feet bgs. A filter pack, consisting of Lonestar #3 sand, was placed in the annular space of the borehole around the implant. The filter pack extended beneath the implant to the total depth of the boring to a point approximately 3 inches above the implant. A 12-inch thick layer of dry bentonite was placed above the filter pack (from approximately 4.7 to 5.7 feet bgs). A 4.2-foot thick layer (from approximately 0.5 to 4.7 feet bgs) of hydrated bentonite chips was placed in the annular space of the borehole. Concrete was placed in the annular space of the borehole above the hydrated bentonite to just below ground surface. A Swagelok® valve and end-cap were installed at the surface end of the stainless steel tubing, and a flush-mounted, traffic-rated vault box was installed in the concrete. The well construction details are provided in Table 1 and are shown on the boring log in Appendix C.

4.2.3 Soil Vapor Sampling

On 19 November 2014 and 18 and 20 February 2015, ETIC attempted to sample V6. During the soil vapor sampling attempts, varying quantities of water were purged from the soil vapor well. The purge volume was estimated to be 900 milliliters (ml) based upon the internal volume of the tubing used, the volume of the screened implant, and an estimate of the air-filled void space in the filter pack within the annular space around the implant. The continued presence of water in the well prevented the collection of a soil vapor sample. Approximately 1,000 (mL) of water was extracted during each of the sampling attempts on 19 November 2014 and 18 February 2015. On 20 February 2015, V6 was continuously purged for seven hours and approximately 4.5 purge volumes (4.1 liters) of water were extracted. The source of the water is suspected to be from the surface drain located 4 feet northeast of V6.

4.2.4 Laboratory Analysis

The soil samples collected at approximately 5 to 6 feet bgs was analyzed for the following:

- Moisture content by API RP 40/ASTM D2216-92.
- Porosity (including dry bulk density) by API RP 40.
- Total Organic Carbon (TOC) by Walkley-Black.
- Air-Filled Void Space by API RP 40.

The soil samples collected at approximately 2.5 to 3 and 6 to 6.5 feet bgs were analyzed for the following:

- TPH-g by EPA Method 8015B (M).
- BTEX, MTBE, TBA, DIPE, ETBE, TAME, and naphthalene by EPA Method 8260B.

- Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270C.

4.3 WASTE CONTAINMENT AND DISPOSAL

Soil and decontamination water derived from investigation activities were contained in Department of Transportation (DOT)-approved drums and stored temporarily at the site. The waste soil profile used in April 2014 was used to characterize the soil generated during this investigation for proper disposal. The drums were removed from the site on 20 November 2014 by Dillard Environmental Services. The soil was transported for disposal at U.S Ecology in Beatty, Nevada, and the water was transported to Instrat in Rio Vista, California. Waste disposal documentation is included in Appendix D.

5.0 RESULTS

5.1 GEOLOGY AND HYDROGEOLOGY

Soils encountered during the advancement of boring V6 were generally consistent with those observed in previous borings at the site. The native soils encountered during drilling generally consisted of alternating layers of sandy silt and clay to 6.7 feet bgs, the maximum depth explored during this investigation. Detailed soil descriptions are presented on the soil boring log in Appendix C. Groundwater was not encountered during this investigation; however, water was present when purging the soil vapor probe.

5.2 ANALYTICAL DATA FOR SOIL SAMPLES

Two soil samples were analyzed for petroleum hydrocarbon constituents. One soil sample was analyzed for physical parameters. Analytical data for the three soil samples collected during this investigation are summarized in Tables 2 through 4. The laboratory analytical reports and chain of-custody documentation are included in Appendix E.

- TPH-g, BTEX, MTBE, TBA, DIPE, ETBE, TAME, and naphthalene were not detected at or above the laboratory reporting limits.
- PAHs were not detected at or above the laboratory reporting limits.
- The moisture content of the physical parameter sample was 16.7 percent by weight.
- The total porosity of the physical parameter sample was 41.22 percent of bulk volume.
- The air-filled porosity of the physical parameter sample was 15.3 percent of bulk volume.
- The water-filled porosity of the physical parameter sample was 25.9 percent of bulk volume.
- The dry bulk density of the physical parameter sample was 1.55 grams per cubic centimeter.
- The total organic carbon content of the physical parameter sample was 660 mg/kg.

On 7 November 2014, soil samples were collected at 3 and 6 feet bgs for V6. Analytical results from these samples were compared to the media-specific petroleum vapor intrusion to direct contact and outdoor air exposure of the Low-Threat Underground Storage Tank Case Closure Policy (LTCP). To evaluate risk for future construction in a non-bioattenuation zone the soil samples must be collected between 0 to 5 feet bgs and 5 to 10 feet bgs and be analyzed for benzene, ethylbenzene, naphthalene and poly-aromatic hydrocarbons (PAHs) concentrations must fall below specified levels (CRWQCB 2012).

The 2012 LTCP concentrations of petroleum constituents in soil that will have no significant risk of adversely affecting human health are summarized in the table below.

Constituent	LTCP Commercial Soil criteria 0 to 5 feet bgs mg/kg	LTCP Commercial Soil criteria 5 to 10 feet bgs mg/kg	Maximum detected concentration on 7 November 2014 0 to 5 feet bgs mg/kg	Maximum detected concentration on 7 November 2014 5 to 10 feet bgs mg/kg
Benzene	8.2	12	<0.0051	<0.0051
Ethylbenzene	89	134	<0.0051	<0.0051
Naphthalene	45	45	<0.051	<0.051
PAH	0.68	NA	<0.020	<0.020

Because benzene, ethylbenzene, naphthalene and PAHs were not detected in any of the soil samples collected on 7 November 2014 in V6, the highest laboratory reporting limits were used to compare to the LTCP commercial soil criteria. These laboratory reporting limiting limits were lower than the LTCP commercial soil criteria. Based on these results, the petroleum constituents in soil near the former used-oil UST have no significant risk of adversely affecting human health based on the criteria in the LTCP.

6.0 SUMMARY

At ExxonMobil's request, ETIC conducted a subsurface investigation at Former Exxon Service Station 70234 in November 2014. The purpose of the investigation was to assess the risk to potential receptors via vapor intrusion and inhalation near the former used-oil UST. In November 2014, ETIC observed the installation of one soil vapor monitoring well (V6) at the site in general accordance with the May 2013 work plan (ETIC 2013). Analytical data obtained from soil samples collected during the installation of soil vapor monitoring well V6 indicate that petroleum hydrocarbon constituents were not detected in samples collected in the upper 6 feet. Consequently, the analytical data for soil from this investigation in the vicinity of the former used-oil UST meet the concentration criteria under the LTCP, and the concentrations do not appear to represent an unacceptable risk for site occupants through the dermal contact pathway for soil. A soil vapor sample could not be collected from monitoring well V6 due to the presence of water in the well, which was suspected to be from the surface drain located 4 feet from the well.

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7.0 CONCLUSIONS AND SITE UPDATE

The following conclusions are based on findings from this report and the Soil and Water Investigation and Focused Site Conceptual Model submitted in 2014:

- Soil vapor samples were collected from vapor monitoring wells V1 through V5. None of the analytes were detected at concentrations exceeding criteria presented in the LTCP. Given the relatively low hydrocarbon concentrations detected in soil vapor samples at these locations, additional vapor monitoring of the existing soil vapor monitoring wells does not appear to be warranted. No vapor sample was able to be collected in the vicinity of the used-oil UST (V6) during this investigation; however, soil samples collected indicate concentrations are below the LTCP commercial soil criteria.

- The lateral and downgradient extent of TPH-g and MTBE in soil and groundwater are currently adequately defined by ConocoPhillips wells MW-1 and MW-2. ConocoPhillips well MW-3, further downgradient of both the former Exxon site and the Unocal site, had a TPH-g concentration of 220 μg/L and MTBE concentration of 570 μg/L during the second quarter 2015 semi-annual monitoring and sampling event (ETIC 2015). TPH-g and MTBE concentrations on the former Exxon site have shown a decreasing to stable trend. Natural attenuation parameters were collected from groundwater monitoring wells associated with the former Exxon site to evaluate natural attenuation of petroleum hydrocarbons at the site. A report summarizing this data is currently in progress.

- Previously undocumented features at the site including a cathodic protection well, an anode, and vent line risers were identified during this investigation. During a site visit investigation of the cathodic well on 25 September 2015, it appears that the well casing has been backfilled with cement or grout. Pictures of the cathodic well are included in Appendix F. The anode and vent risers remain onsite.

- A Corrective Action Plan evaluating natural attenuation and offsite MTBE groundwater trends will be submitted.

8.0 REFERENCES

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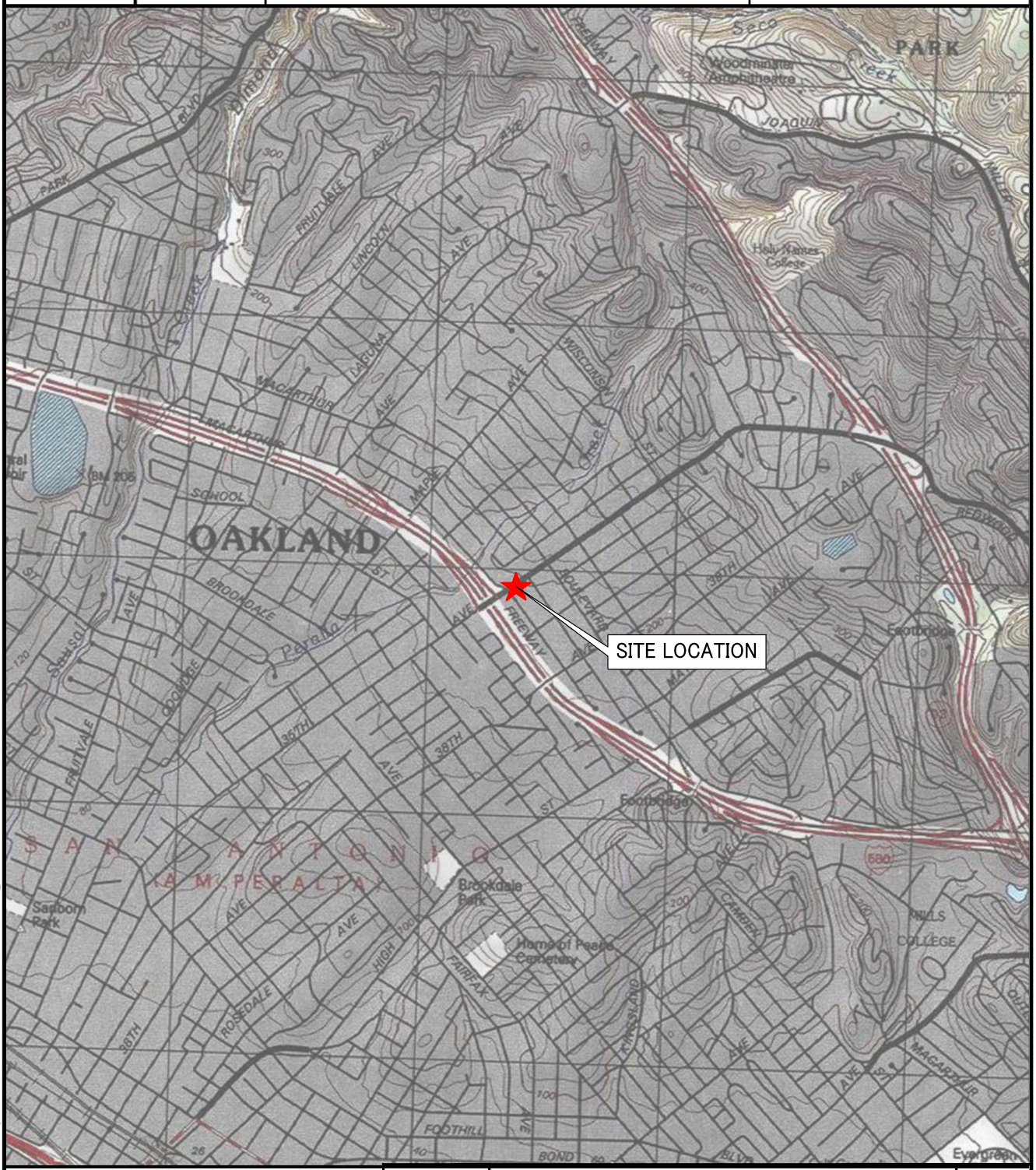
Figures



	15-070234-UP	EXXONMOBIL OIL CORPORATION	
	OR: KG	SITE LOCATION AND TOPOGRAPHIC MAP FORMER EXXON SERVICE STATION 70234 3450 35th AVENUE	FIGURE: 1
ETIC ENGINEERING 898 NORTH FAIR OAKS AVE. SUITE A PASADENA, CA 91103 (626) 432-5999	DR: AJW CK: FR:	OAKLAND, CALIFORNIA	

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LEGEND:

- EXCAVATED AREA
- GROUNDWATER MONITORING WELL
- GROUNDWATER MONITORING WELL (by others)
- DESTROYED GROUNDWATER MONITORING WELL
- GROUNDWATER RECOVERY WELL
- V1 SOIL VAPOR MONITORING WELL
- H3–CPT CONE PENETROMETER TESTING BORING
- H3–65 HYDROPUNCH GROUNDWATER SAMPLING LOCATION (WITH DEPTH BELOW GROUND SURFACE NOTED)
- H3–S SOIL BORING
- SOIL BORING (GTI, 1986)
- SOIL BORING (HLA, 1988)
- SOIL BORING (Alton, 1991)
- SOIL SAMPLE (Alton, 1991)
- SOIL SAMPLE (TRC, 2002)
- SOIL BORING (ERI, 2007)
- **SOIL BORING (ERI, 2009)**
- ORIGINAL LOCATION OF V6. PROBE WAS NOT INSTALLED AT LOCATION DUE TO PRESENCE OF UTILITIES

N

0 15 30

APPROX. SCALE (feet)

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ETIC ENGINEERING

898 NORTH FAIR OAKS AVE.
SUITE A
PASADENA, CA 91103
(626) 432-5999

15-070234-UP	
OR:	KG
DR:	AJW
CK:	
FR:	

EXXONMOBIL OIL CORPORATION

SITE MAP SHOWING SAMPLING LOCATIONS
FORMER EXXON SERVICE STATION 70234
3450 35th AVENUE
OAKLAND, CALIFORNIA

FIGURE: 2

Tables

TABLE 1 WELL CONSTRUCTION DETAILS, FORMER EXXON SERVICE STATION 70234, 3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date Installed	Date Destroyed	Elevation TOC (feet)	Borehole Diameter (inches)	Total Depth of Boring (feet bgs)	Well Depth (feet bgs)	Casing Diameter (inches)	Casing Material	Screened Interval (feet bgs)	Slot Size (inches)	Filter Pack Interval (feet bgs)	Filter Pack Material
MW1	07/15/92	Jun-00	192.00	11	45	45	4	Schedule 40 PVC	25-45	0.010	23-45	2/12 Lonestar Sand
MW2	07/15/92	Jun-00	194.85	11	45	45	4	Schedule 40 PVC	25-45	0.010	23-45	2/12 Lonestar Sand
MW3	07/15/92	Jun-00	196.90	11	45	45	4	Schedule 40 PVC	25-45	0.010	23-45	2/12 Lonestar Sand
MW4	03/02/09	---	197.62	8	45	45	2	Schedule 40 PVC	35-45	0.020	33-45	#3 Sand
MW5	03/06/09	---	196.35	8	40	40	2	Schedule 40 PVC	30-40	0.020	28-40	#3 Sand
MW6	03/09/09	---	192.41	8	40	39	2	Schedule 40 PVC	29-39	0.020	27-39	#3 Sand
MW7	03/09/09	---	194.34	8	40	40	2	Schedule 40 PVC	30-40	0.020	28-40	#3 Sand
MW8	03/04/09	---	192.96	8	40	40	2	Schedule 40 PVC	30-40	0.020	28-40	#3 Sand
MW9	03/05/09	---	195.16	8	40	40	2	Schedule 40 PVC	30-40	0.020	28-40	#3 Sand
RW1	12/22/11	---	195.15	10	40	40	4	Stainless Steel	25-39.5	0.020	23-40	#2/12 Sand
V1	04/14/14	---	---	5	7	6.75	0.25	Stainless Steel	6.25-6.75	0.0057	6-7	#3 Sand
V2	04/15/14	---	---	5	7	6.75	0.25	Stainless Steel	6.25-6.75	0.0057	6-7	#3 Sand
V3	04/15/14	---	---	5	7	6.75	0.25	Stainless Steel	6.25-6.75	0.0057	6-7	#3 Sand
V4	04/15/14	---	---	5	7.25	6.75	0.25	Stainless Steel	6.25-6.75	0.0057	6-7.25	#3 Sand
V5	04/15/14	---	---	5	7	6.75	0.25	Stainless Steel	6.25-6.75	0.0057	6-7	#3 Sand
V6	11/07/14	---	---	3	6.7	6.4	0.25	Stainless Steel	5.9-6.4	0.0057	5.7-6.7	#3 Sand

Notes: Data prior to 2013 provided by Cardno ERI.

TOC Top of well casing elevation; datum is mean sea level.
PVC Polyvinyl chloride.
feet bgs Feet below ground surface.
--- Not applicable.

TABLE 2 CUMULATIVE SOIL ANALYTICAL RESULTS, FORMER EXXON SERVICE STATION 70234, 3450 35TH AVENUE, OAKLAND, CALIFORNIA

Sample ID	Sampling Date	Depth (feet bgs)	TPH-g (mg/kg)	Kerosene (mg/kg)	TPH-d (mg/kg)	TPH-mo (mg/kg)	EHC-HO (mg/kg)	TOG (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	Lead (mg/kg)
Used-Oil UST Confirmation Soil Sample														
T1-12	06/18/97	---	8.6a	---	200b	680c	---	---	ND	0.038	0.016	0.046	---	8.8
Hydraulic Hoist Confirmation Samples														
H1-8	06/18/97	---	---	---	---	---	99d	---	---	---	---	---	---	---
H2-8	06/18/97	---	---	---	---	---	2,100d	---	---	---	---	---	---	---
Samples from the UST Cavity Sidewall														
Pit1@12'	06/14/02	12	<1.0	---	---	---	---	---	<0.005	<0.005	<0.005	<0.005	<0.005	---
Pit2@11.5'	06/14/02	11.5	<1.0	---	---	---	---	---	<0.005	<0.005	<0.005	<0.005	<0.005	---
Pit3@11'	06/14/02	11	<1.0	---	---	---	---	---	<0.005	<0.005	<0.005	<0.005	<0.005	---
Pit4@10'	06/14/02	10	<1.0	---	---	---	---	---	<0.005	<0.005	<0.005	<0.005	<0.005	---
Samples from Beneath Product Piping														
A-6.4	06/25/02	6.4	<1.0	---	---	---	---	---	<0.005	<0.005	<0.005	<0.005	<0.005	---
B-4.9	06/25/02	4.9	24	---	---	---	---	---	0.057	0.11	0.12	1.2	0.020	---
C-6.5	06/25/02	6.5	<1.0	---	---	---	---	---	<0.005	<0.005	<0.005	<0.005	<0.005	---
D-5.2	06/25/02	5.2	<1.0	---	---	---	---	---	<0.005	<0.005	<0.005	<0.005	<0.005	---
Soil Samples from 1991 UST Excavation														
S-1	08/28/91	10	<1.0	---	---	---	---	---	<0.005	<0.005	<0.005	<0.005	---	<5
S-2	08/28/91	10	<1.0	---	---	---	---	---	<0.005	<0.005	<0.005	<0.005	---	<5
S-3	08/28/91	10	<1.0	---	---	---	---	---	<0.005	<0.005	<0.005	<0.005	---	<5
S-4	08/28/91	10	290	---	---	---	---	---	2.8	6.5	5.2	27	---	<5
S-5	08/28/91	10	3.5	---	---	---	---	---	0.27	0.096	0.064	0.32	---	<5
S-6	08/28/91	11	4.1	---	---	---	---	---	0.19	0.13	0.056	0.23	---	<5
S-7	08/28/91	3	4.0	---	---	---	---	---	0.66	0.040	0.11	0.13	---	<5
S-8	08/28/91	3	<1.0	---	---	---	---	---	<0.005	<0.005	<0.005	<0.005	---	<5
S-9	08/28/91	3	210	---	---	---	---	---	1.4	7.2	3.0	18	---	<5
S-10	08/28/91	3	<1.0	---	---	---	---	---	<0.005	0.031	0.029	0.067	---	<5
S-11	08/28/91	1.5	<1.0	---	---	---	---	---	<0.005	<0.005	<0.005	<0.005	---	<5
S-12	08/28/91	15	3.1	---	---	---	---	---	0.36	0.048	0.052	0.16	---	---
S-13	08/28/91	15	1.8	---	---	---	---	---	0.26	0.008	0.009	0.041	---	---
S-14	08/28/91	4	5.0	---	---	---	---	---	0.047	0.063	0.009	0.041	---	---
S-15	08/28/91	15	<1.0	---	---	---	---	---	<0.005	<0.005	<0.005	<0.005	---	---
Soil Borings														
B-1	3/20/91	15.5	<1.0	---	---	---	---	---	0.011	0.007	0.011	0.04	---	---
B-1	3/20/91	20.5	<1.0	---	---	---	---	---	0.012	0.007	0.01	0.04	---	---
B-2	3/20/91	15.5	<1.0	---	---	---	---	---	0.036	0.026	0.012	0.055	---	---
B-2	3/20/91	20.5	<1.0	---	---	---	---	---	0.0073	0.0063	0.0098	0.038	---	---

TABLE 2 CUMULATIVE SOIL ANALYTICAL RESULTS, FORMER EXXON SERVICE STATION 70234, 3450 35TH AVENUE, OAKLAND, CALIFORNIA

Sample ID	Sampling Date	Depth (feet bgs)	TPH-g (mg/kg)	Kerosene (mg/kg)	TPH-d (mg/kg)	TPH-mo (mg/kg)	EHC-HO (mg/kg)	TOG (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	Lead (mg/kg)
B-3	3/20/91	10.5	1	---	---	---	---	---	0.006	0.006	0.008	0.036	---	---
B-3	3/20/91	15.5	440	---	---	---	---	---	0.7	5.4	4.7	24	---	---
B-4	3/20/91	10.5	5	---	---	---	---	---	0.013	0.019	0.014	0.082	---	<5
B-4	3/20/91	15.5	6.6	---	---	---	---	---	0.039	0.043	0.027	0.12	---	---
B-4	3/20/91	20.5	<1.0	---	---	---	---	---	0.0076	0.0073	0.011	0.054	---	---
B-5	3/20/91	10.5	26	---	---	---	---	---	0.055	0.061	0.17	0.67	---	---
B-6	3/20/91	10.5	240	---	---	---	---	---	0.28	2.2	2.8	13	---	---
B-6	3/20/91	15.5	1.4	---	---	---	---	---	0.0055	0.0054	0.009	0.034	---	---
B-7	3/20/91	10.5	<1.0	---	---	---	---	---	0.006	0.006	0.008	0.033	---	---
B-8	3/20/91	10.5	<1.0	---	---	---	---	---	0.006	0.005	0.008	0.035	---	---
B-9	3/20/91	10.5	---	---	---	---	---	<50	---	---	---	---	---	---
B-10	3/20/91	10.5	---	---	---	---	---	<50	---	---	---	---	---	---
S-5-B11	09/05/07	5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-10-B11	09/10/07	10	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-13.5-B11	09/10/07	13.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-18-B11	09/11/07	18	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-20-B11	09/11/07	20	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-25.5-B11	11/14/07	25.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-29.5-B11	11/14/07	29.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-34.5-B11	11/14/07	34.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-5-B12	09/04/07	5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-15.5-B12	11/13/07	15.5	43	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-20.5-B12	11/13/07	20.5	3.2	---	---	---	---	---	0.076	<0.0050	0.0053	<0.0050	0.15	---
S-5-B13	09/05/07	5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-10-B13	09/10/07	10	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-14.5-B13	09/10/07	14.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-20-B13	09/10/07	20	4.3	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-25-B13	11/12/07	25	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-30-B13	11/12/07	30	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-35-B13	11/12/07	35	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-5.0-B14	09/06/07	5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---

TABLE 2 CUMULATIVE SOIL ANALYTICAL RESULTS, FORMER EXXON SERVICE STATION 70234, 3450 35TH AVENUE, OAKLAND, CALIFORNIA

Sample ID	Sampling Date	Depth (feet bgs)	TPH-g (mg/kg)	Kerosene (mg/kg)	TPH-d (mg/kg)	TPH-mo (mg/kg)	EHC-HO (mg/kg)	TOG (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	Lead (mg/kg)
S-16-B14	11/13/07	16	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-20.5-B14	11/13/07	20.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	0.031	---
S-5-B15	09/04/07	5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-10.5-B15	11/15/07	10.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-15.5-B15	11/15/07	15.5	1.1	---	---	---	---	---	0.32	0.019	0.017	0.074	0.12	---
S-20-B15	11/15/07	20	300	---	---	---	---	---	6.1	36	14	72	<0.25	---
S-25.5-B15	11/15/07	25.5	220	---	---	---	---	---	3.1	18	6.8	36	<0.12	---
S-30.5-B15	11/15/07	30.5	59	---	---	---	---	---	2.9	5.6	1.5	20	<0.25	---
S-35.5-B15	11/15/07	35.5	3.3	---	---	---	---	---	0.28	0.21	0.26	0.79	0.26	---
S-5-B16	09/04/07	5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-11-B16	11/14/07	11	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-15.5-B16	11/14/07	15.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-21-B16	11/14/07	21	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-26-B16	11/14/07	26	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-30.5-B16	11/14/07	30.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-34.5-B16	11/14/07	34.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	0.021	---
S-38.5-B16	11/14/07	38.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-5-B17	09/05/07	5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-11-B17	11/13/07	11	90	---	---	---	---	---	0.052	<0.0050	0.086	0.020	0.036	---
S-16-B17	11/13/07	16	<0.50	---	---	---	---	---	0.0052	<0.0050	<0.0050	<0.0050	0.099	---
S-21-B17	11/13/07	21	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	0.011	---
S-24.5-B17	11/13/07	24.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	0.59	---
S-31-B17	11/13/07	31	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-35.5-B17	11/13/07	35.5	0.85	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	1.7	---
S-5-B18	09/04/07	5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-10-B18	11/12/07	10	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-15-B18	11/12/07	15	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	0.0051	---
S-20-B18	11/12/07	20	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	0.019	---
S-25-B18	11/12/07	25	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	0.18	---
S-30-B18	11/12/07	30	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	0.54	---
S-35-B18	11/12/07	35	24	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	0.53	---
S-5-B19	02/25/09	5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-10-B19	03/02/09	10	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-15.5-B19	03/03/09	15.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-20.5-B19	03/03/09	20.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-25.5-B19	03/03/09	25.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---

TABLE 2 CUMULATIVE SOIL ANALYTICAL RESULTS, FORMER EXXON SERVICE STATION 70234, 3450 35TH AVENUE, OAKLAND, CALIFORNIA

Sample ID	Sampling Date	Depth (feet bgs)	TPH-g (mg/kg)	Kerosene (mg/kg)	TPH-d (mg/kg)	TPH-mo (mg/kg)	EHC-HO (mg/kg)	TOG (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	Lead (mg/kg)
S-30.5-B19	03/03/09	30.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-35.5-B19	03/03/09	35.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	0.51	---
S-39.5-B19	03/03/09	39.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	0.048	---
S-5-B20	02/25/09	5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-10.5-B20	03/03/09	10.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-15.0-B20	03/03/09	15.0	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-20.5-B20	03/03/09	20.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-25.5-B20	03/03/09	25.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-30.5-B20	03/03/09	30.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-35.5-B20	03/03/09	35.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-39.5-B20	03/03/09	39.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-5-B21	02/25/09	5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-10.5-B21	03/04/09	10.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-15-B21	03/04/09	15	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-20.5-B21	03/04/09	20.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-25.5-B21	03/04/09	25.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-30.5-B21	03/04/09	30.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-35.5-B21	03/04/09	35.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-39.5-B21	03/04/09	39.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
Monitoring and Recovery Wells														
MW1	07/14/92	8	<1.0	---	---	---	---	---	<0.0050	<0.0050	<0.0050	0.0064	---	<10
MW1	07/14/92	29.5	<1.0	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	---	<10
MW2	07/14/92	28	<1.0	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	---	<10
MW3	07/14/92	29.5	<1.0	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	---	<10
S-5-MW4	02/25/09	5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-10.5-MW4	03/02/09	10.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-15.5-MW4	03/02/09	15.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-20.5-MW4	03/02/09	20.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-25.5-MW4	03/02/09	25.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-30.5-MW4	03/02/09	30.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-35.5-MW4	03/02/09	35.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-40-MW4	03/02/09	40	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-44.5-MW4	03/02/09	44.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-5-MW5	02/27/09	5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-10-MW5	03/05/09	10	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-15-MW5	03/05/09	15	0.70	---	---	---	---	---	0.22	0.022	0.071	0.31	0.036	---

TABLE 2 CUMULATIVE SOIL ANALYTICAL RESULTS, FORMER EXXON SERVICE STATION 70234, 3450 35TH AVENUE, OAKLAND, CALIFORNIA

Sample ID	Sampling Date	Depth (feet bgs)	TPH-g (mg/kg)	Kerosene (mg/kg)	TPH-d (mg/kg)	TPH-mo (mg/kg)	EHC-HO (mg/kg)	TOG (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	Lead (mg/kg)
S-20-MW5	03/05/09	20	260	---	---	---	---	---	5.4	19	11	63	<5.0	---
S-25-MW5	03/06/09	25	41	---	---	---	---	---	<0.0050	0.069	0.15	0.75	<0.50	---
S-30-MW5	03/06/09	30	0.91	---	---	---	---	---	0.14	0.0061	0.011	0.036	<0.50	---
S-35-MW5	03/06/09	35	5.4	---	---	---	---	---	<0.050	3.9	1.5	15	<0.50	---
S-39.5-MW5	03/06/09	39.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-5-MW6	02/27/09	5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-10-MW6	03/09/09	10	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-15.5-MW6	03/09/09	15.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	0.011	---
S-20.5-MW6	03/09/09	20.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	0.015	---
S-25.5-MW6	03/09/09	25.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-30.5-MW6	03/09/09	30.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	0.063	---
S-35.5-MW6	03/09/09	35.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-39.5-MW6	03/09/09	39.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-5-MW7	02/27/09	5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-10.5-MW7	03/09/09	10.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-15.5-MW7	03/09/09	15.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-20.5-MW7	03/09/09	20.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-25.5-MW7	03/09/09	25.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-30.5-MW7	03/09/09	30	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-35.5-MW7	03/09/09	35.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-39.5-MW7	03/09/09	39.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-5-MW8	02/25/09	5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-10.5-MW8	03/04/09	10.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-15.5-MW8	03/04/09	15.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-20.5-MW8	03/04/09	20.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-25.5-MW8	03/04/09	25.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-30.5-MW8	03/04/09	30.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-35.5-MW8	03/04/09	35.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-39.5-MW8	03/04/09	39.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-5-MW9	02/25/09	5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-10-MW9	03/05/09	10	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-15-MW9	03/05/09	15	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-20-MW9	03/05/09	20	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-25-MW9	03/05/09	25	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-30-MW9	03/05/09	30	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-35-MW9	03/05/09	35	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---
S-40-MW9	03/05/09	40	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	---

TABLE 2 CUMULATIVE SOIL ANALYTICAL RESULTS, FORMER EXXON SERVICE STATION 70234, 3450 35TH AVENUE, OAKLAND, CALIFORNIA

Sample ID	Sampling Date	Depth (feet bgs)	TPH-g (mg/kg)	Kerosene (mg/kg)	TPH-d (mg/kg)	TPH-mo (mg/kg)	EHC-HO (mg/kg)	TOG (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	Lead (mg/kg)
S-5.0-RW1	12/22/11	5.0	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-15.0-RW1	12/22/11	15.0	1.3e	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	0.0053	---
S-25.0-RW1	12/22/11	25.0	6.5e	---	---	---	---	---	<0.0050	<0.0050	<0.0050	0.029	0.0066g	---
S-28.0-RW1	12/22/11	28.0	27e	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
S-31.0-RW1	12/22/11	31.0	1.7	---	---	---	---	---	<0.0050	0.0072	<0.0050	0.096	0.50	---
S-32.5-RW1	12/22/11	32.5	0.95	---	---	---	---	---	<0.0050	<0.0050	<0.0050	0.0087	0.72	---
S-34.0-RW1	12/22/11	34.0	2.3e	---	---	---	---	---	<0.0050	<0.0050	<0.0050	0.0053	0.94	---
S-37.0-RW1	12/22/11	37.0	420	---	---	---	---	---	<0.50	<0.50	0.88	10	<0.50	---
S-38.5-RW1	12/22/11	38.5	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	0.0071	---
S-40.0-RW1	12/22/11	40.0	440	---	---	---	---	---	<1.0	<1.0	2.1	29	<1.0	---
Soil Stockpile Samples														
SP-1(S-SP1-S-SP4)	09/12/07	---	<0.10	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	7.2
SP(1-4)	06/18/97	---	ND	---	47b	150c	---	---	ND	ND	ND	ND	---	8.7
SP-2	03/09/09	---	<0.50	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	5.83
S-SP1 (1,2,3,4)	12/22/11	---	40	8.0	<5.0	<25	---	---	0.0068	0.012	0.048	0.46	<0.50	4.50
Soil Vapor Monitoring Wells														
V1-7	04/14/14	7	<0.51	---	---	---	---	---	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	---
V2-3	04/15/14	3	<0.52	---	---	---	---	---	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	---
V2-6.5	04/15/14	6.5	<0.49	---	---	---	---	---	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	---
V3-3	04/15/14	3	<0.49	---	---	---	---	---	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	---
V3-6.5	04/15/14	6.5	<0.48	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
V4-6.5	04/15/14	6.5	<0.48	---	---	---	---	---	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	---
V5-6.5	04/15/14	6.5	<0.49	---	---	---	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---
V6,3	11/07/14	3	<0.49	---	---	---	---	---	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	---
V6,6.5	11/07/14	6.5	<0.50	---	---	---	---	---	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	---
Soil Borings 2014														
H1-54	04/15/14	54	<0.50	---	---	---	---	---	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	---
H3-54	04/14/14	54	<0.52	---	---	---	---	---	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	---
Table A-1 ESL		--	100	NE	100	100	NE	100*	0.044	2.9	3.3	2.3	0.023	80
Table C-1 ESL		--	500	NE	110	500	NE	500*	0.044	2.9	3.3	2.3	0.023	80

Notes: Analytical data prior to 2013 provided by Cardno ERI.

TPH-g = Total Petroleum Hydrocarbons as gasoline analyzed using EPA Method 8015M.

Kerosene = Kerosene analyzed using EPA Method 8015B.

TABLE 2 CUMULATIVE SOIL ANALYTICAL RESULTS, FORMER EXXON SERVICE STATION 70234, 3450 35TH AVENUE, OAKLAND, CALIFORNIA

Sample ID	Sampling Date	Depth (feet bgs)	TPH-g (mg/kg)	Kerosene (mg/kg)	TPH-d (mg/kg)	TPH-mo (mg/kg)	EHC-HO (mg/kg)	TOG (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	Lead (mg/kg)

TPH-d	=	Total Petroleum Hydrocarbons as diesel.
TPH-mo	=	Total Petroleum Hydrocarbons as motor oil.
EHC-HO	=	Extractable hydrocarbons as hydraulic oil.
TOG	=	Total oil and grease.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8021B/8260B.
MTBE	=	Methyl tertiary butyl ether analyzed using EPA Method 8021B/8260B
Lead	=	Lead analyzed using EPA Method 6010B.
feet bgs	=	Feet below ground surface.
mg/kg	=	Milligrams per kilogram.
ND	=	Not detected at or above the laboratory reporting limit.
NE	=	Not establlished.
<	=	Less than the stated laboratory reporting limit.
---	=	Not analyzed/not applicable.
a	=	Unidentified C8-C12.
b	=	Unidentified C9-C24.
c	=	Unidentified C16-C36.
d	=	Unidentified C16-C40.
e	=	Hydrocarbon pattern does not match that of the specified standard.
Table A-1 ESL	=	Residential Environmental Screening Level, Shallow Soil (=< 3m bgs), Groundwater is a Current or Potential Source of Drinking Water, San Francisco Bay Regional Water Quality Control Board, December 2013.
Table C-1 ESL	=	Residential Environmental Screening Level, Deep Soil (> 3m bgs), Groundwater is a Current or Potential Source of Drinking Water, San Francisco Bay Regional Water Quality Control Board, December 2013.
*	=	The ESL is for total petroleum hydrocarbons quantified as motor oil (TPH-motor oil).

TABLE 3 ADDITIONAL CUMULATIVE SOIL ANALYTICAL RESULTS
FORMER EXXON SERVICE STATION 70234, 3450 35TH AVENUE, OAKLAND, CALIFORNIA

Sample ID	Sampling Date	Depth (feet bgs)	1,2-DCA (mg/kg)	EDB (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	Ethanol (mg/kg)	VOCs (mg/kg)	SVOCs (mg/kg)	HVOCs (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)	Naphthalene (mg/kg)	PAHs (mg/kg)
Used-Oil UST Confirmation Soil Sample																		
T1-12	06/18/97	---	---	---	---	---	---	---	---	---	ND	ND	ND	47	56	84	---	---
Hydraulic Hoist Confirmation Samples																		
Not analyzed for these analytes.																		
Samples from the UST Cavity Sidewall																		
Not analyzed for these analytes.																		
Samples from Beneath Product Piping																		
Not analyzed for these analytes.																		
Soil Samples from 1991 UST Excavation																		
Not analyzed for these analytes.																		
Soil Borings																		
Soil borings sampled prior to 2007 not analyzed for these analytes.																		
S-5-B11	09/05/07	5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-10-B11	09/10/07	10	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-13.5-B11	09/10/07	13.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-18-B11	09/11/07	18	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-20-B11	09/11/07	20	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-25.5-B11	11/14/07	25.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-29.5-B11	11/14/07	29.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-34.5-B11	11/14/07	34.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-5-B12	09/04/07	5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-15.5-B12	11/13/07	15.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-20.5-B12	11/13/07	20.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-5-B13	09/05/07	5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-10-B13	09/10/07	10	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-14.5-B13	09/10/07	14.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-20-B13	09/10/07	20	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-25-B13	11/12/07	25	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-30-B13	11/12/07	30	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-35-B13	11/12/07	35	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-5.0-B14	09/06/07	5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-16-B14	11/13/07	16	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-20.5-B14	11/13/07	20.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-5-B15	09/04/07	5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-10.5-B15	11/15/07	10.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-15.5-B15	11/15/07	15.5	0.011	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---

TABLE 3 ADDITIONAL CUMULATIVE SOIL ANALYTICAL RESULTS
FORMER EXXON SERVICE STATION 70234, 3450 35TH AVENUE, OAKLAND, CALIFORNIA

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

TABLE 3 ADDITIONAL CUMULATIVE SOIL ANALYTICAL RESULTS
FORMER EXXON SERVICE STATION 70234, 3450 35TH AVENUE, OAKLAND, CALIFORNIA

Sample ID	Sampling Date	Depth (feet bgs)	1,2-DCA (mg/kg)	EDB (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	Ethanol (mg/kg)	VOCs (mg/kg)	SVOCs (mg/kg)	HVOCs (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)	Naphthalene (mg/kg)	PAHs (mg/kg)
S-35.5-B20	03/03/09	35.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-39.5-B20	03/03/09	39.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-5-B21	02/25/09	5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-10.5-B21	03/04/09	10.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-15-B21	03/04/09	15	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-20.5-B21	03/04/09	20.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-25.5-B21	03/04/09	25.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-30.5-B21	03/04/09	30.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-35.5-B21	03/04/09	35.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-39.5-B21	03/04/09	39.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
Monitoring and Recovery Wells																		
MW1	07/14/92	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW2	07/14/92	29.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW3	07/14/92	28	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW4	07/14/92	29.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S-5-MW4	02/25/09	5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-10.5-MW4	03/02/09	10.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-15.5-MW4	03/02/09	15.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-20.5-MW4	03/02/09	20.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-25.5-MW4	03/02/09	25.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-30.5-MW4	03/02/09	30.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-35.5-MW4	03/02/09	35.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-40-MW4	03/02/09	40	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-44.5-MW4	03/02/09	44.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-5-MW5	02/27/09	5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-10-MW5	03/05/09	10	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-15-MW5	03/05/09	15	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-20-MW5	03/05/09	20	<5.0	<5.0	<10	<10	<10	<50	<250	---	---	---	---	---	---	---	---	---
S-25-MW5	03/06/09	25	<0.50	<0.50	<1.0	<1.0	<1.0	<5.0	<25	---	---	---	---	---	---	---	---	---
S-30-MW5	03/06/09	30	<0.50	<0.50	<1.0	<1.0	<1.0	<5.0	<25	---	---	---	---	---	---	---	---	---
S-35-MW5	03/06/09	35	<0.50	<0.50	<1.0	<1.0	<1.0	<5.0	<25	---	---	---	---	---	---	---	---	---
S-39.5-MW5	03/06/09	39.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-5-MW6	02/27/09	5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-10-MW6	03/09/09	10	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-15.5-MW6	03/09/09	15.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-20.5-MW6	03/09/09	20.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-25.5-MW6	03/09/09	25.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-30.5-MW6	03/09/09	30.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-35.5-MW6	03/09/09	35.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	0.054	<0.25	---	---	---	---	---	---	---	---	---
S-39.5-MW6	03/09/09	39.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---

TABLE 3 ADDITIONAL CUMULATIVE SOIL ANALYTICAL RESULTS
FORMER EXXON SERVICE STATION 70234, 3450 35TH AVENUE, OAKLAND, CALIFORNIA

Sample ID	Sampling Date	Depth (feet bgs)	1,2-DCA (mg/kg)	EDB (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	Ethanol (mg/kg)	VOCs (mg/kg)	SVOCs (mg/kg)	HVOCs (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)	Naphthalene (mg/kg)	PAHs (mg/kg)
S-5-MW7	02/27/09	5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-10.5-MW7	03/09/09	10.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-15.5-MW7	03/09/09	15.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-20.5-MW7	03/09/09	20.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-25.5-MW7	03/09/09	25.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-30.5-MW7	03/09/09	30	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-35.5-MW7	03/09/09	35.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-39.5-MW7	03/09/09	39.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-5-MW8	02/25/09	5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-10.5-MW8	03/04/09	10.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-15.5-MW8	03/04/09	15.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-20.5-MW8	03/04/09	20.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-25.5-MW8	03/04/09	25.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-30.5-MW8	03/04/09	30.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-35.5-MW8	03/04/09	35.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-39.5-MW8	03/04/09	39.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-5-MW9	02/25/09	5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-10-MW9	03/05/09	10	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-15-MW9	03/05/09	15	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-20-MW9	03/05/09	20	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-25-MW9	03/05/09	25	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-30-MW9	03/05/09	30	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-35-MW9	03/05/09	35	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-40-MW9	03/05/09	40	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	---	---	---	---	---	---	---
S-5.0-RW1	12/22/11	5.0	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-15.0-RW1	12/22/11	15.0	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-25.0-RW1	12/22/11	25.0	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-28.0-RW1	12/22/11	28.0	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-31.0-RW1	12/22/11	31.0	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-32.5-RW1	12/22/11	32.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	0.17	---	---	---	---	---	---	---	---	---	---
S-34.0-RW1	12/22/11	34.0	<0.0050	<0.0050	<0.010	<0.010	<0.010	0.42	---	---	---	---	---	---	---	---	---	---
S-37.0-RW1	12/22/11	37.0	<0.50	<0.50	<1.0	<1.0	<1.0	<5.0	---	---	---	---	---	---	---	---	---	---
S-38.5-RW1	12/22/11	38.5	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	---	---
S-40.0-RW1	12/22/11	40.0	<1.0	<1.0	<2.0	<2.0	<2.0	<10	---	---	---	---	---	---	---	---	---	---
Soil Stockpile Samples																		
SP-1(S-SP1-S-SP4)	09/12/07	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.020	---	---	---	---	---	---	---	---	---	---
SP(1-4)	06/18/97	---	---	---	---	---	---	---	---	ND	ND	---	ND	55	53	43	---	---
SP-2	03/09/09	---	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.25	---	---	ND	---	---	---	---	---	---
S-SP1 (1,2,3,4)	12/22/11	---	<0.0050	<0.0050	<0.010	<0.010	<0.010	0.076	---	a	---	---	---	---	---	---	---	---

TABLE 3 ADDITIONAL CUMULATIVE SOIL ANALYTICAL RESULTS
FORMER EXXON SERVICE STATION 70234, 3450 35TH AVENUE, OAKLAND, CALIFORNIA

Sample ID	Sampling Date	Depth (feet bgs)	1,2-DCA (mg/kg)	EDB (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	Ethanol (mg/kg)	VOCs (mg/kg)	SVOCs (mg/kg)	HVOCs (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)	Naphthalene (mg/kg)	PAHs (mg/kg)
Soil Vapor Monitoring Wells																		
V1-7	04/14/14	7	---	---	<0.010	<0.010	<0.010	<0.051	---	---	---	---	---	---	---	---	<0.051	---
V2-3	04/15/14	3	---	---	<0.0096	<0.0096	<0.0096	<0.048	---	---	---	---	---	---	---	---	<0.048	---
V2-6.5	04/15/14	6.5	---	---	<0.010	<0.010	<0.010	<0.052	---	---	---	---	---	---	---	---	<0.052	---
V3-3	04/15/14	3	---	---	<0.011	<0.011	<0.011	<0.053	---	---	---	---	---	---	---	---	<0.053	---
V3-6.5	04/15/14	6.5	---	---	<0.0099	<0.0099	<0.0099	<0.050	---	---	---	---	---	---	---	---	<0.050	---
V4-6.5	04/15/14	6.5	---	---	<0.010	<0.010	<0.010	<0.051	---	---	---	---	---	---	---	---	<0.051	---
V5-6.5	04/15/14	6.5	---	---	<0.010	<0.010	<0.010	<0.050	---	---	---	---	---	---	---	---	<0.050	---
V6,3	11/07/14	3	---	---	<0.010	<0.010	<0.010	<0.051	---	---	---	---	---	---	---	---	<0.051	<0.020
V6,6.5	11/07/14	6.5	---	---	<0.010	<0.010	<0.010	<0.051	---	---	---	---	---	---	---	---	<0.051	<0.020
Soil Borings 2014																		
H1-54	04/15/14	54	---	---	<0.010	<0.010	<0.010	<0.051	---	---	---	---	---	---	---	---	<0.051	---
H3-54	04/14/14	54	---	---	<0.010	<0.010	<0.010	<0.052	---	---	---	---	---	---	---	---	<0.052	---
Table A ESL			0.0045	0.00033	NE	NE	NE	0.075	NE	---	---	---	12	1,000	150	600	1.2	#
Table C ESL			0.0045	0.00033	NE	NE	NE	0.075	NE	---	---	---	78	2,500	1,500	2,500	1.2	#

Notes:		Analytical data prior to 2013 provided by Cardno ERI.
1,2-DCA	=	1,2-dichloroethane analyzed using EPA Method 8260B.
EDB	=	Ethylene dibromide (1,2-dibromoethane) analyzed using EPA Method 8260B.
DIPE	=	Di-isopropyl ether analyzed using EPA Method 8260B.
ETBE	=	Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
TAME	=	Tertiary amyl methyl ether analyzed using EPA Method 8260B.
TBA	=	Tertiary butyl alcohol analyzed using EPA Method 8260B.
Ethanol	=	Ethanol analyzed using EPA Method 8260B.
VOCs	=	Volatile organic compounds.
SVOCs	=	Semi-volatile organic compounds.
HVOCs	=	Halogenated volatile organic compounds analyzed using EPA Method 8260B.
PAHs	=	Polycyclic aromatic hydrocarbons.
feet bgs	=	Feet below ground surface.
mg/kg	=	Milligrams per kilogram.
ND	=	Not detected at or above the laboratory reporting limit.
NE	=	Not establlished.
<	=	Less than the stated laboratory reporting limit.
---	=	Not analyzed/not applicable.
a	=	1.1 mg/kg 1,2,4-trimethylbenzene; 0.16 mg/kg 1,3,5-trimethylbenzene; 0.022 mg/kg isopropyltoluene; 0.078 mg/kg naphthalene; 0.059 mg/kg n-butylbenzene; 0.091 mg/kg n-propylbenzene; 0.0070 p-isopropyltoluene; 0.012 sec-butylbenzene.
Table A ESL	=	Residential Environmental Screening Level, Shallow Soil (=< 3m bgs), Groundwater is a Current or Potential Source of Drinking Water, San Francisco Bay Regional Water Quality Control Board, December 2013.

TABLE 3 ADDITIONAL CUMULATIVE SOIL ANALYTICAL RESULTS
FORMER EXXON SERVICE STATION 70234, 3450 35TH AVENUE, OAKLAND, CALIFORNIA

Sample ID	Sampling Date	Depth (feet bgs)	1,2-DCA (mg/kg)	EDB (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	Ethanol (mg/kg)	VOCs (mg/kg)	SVOCs (mg/kg)	HVOCs (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)	Naphthalene (mg/kg)	PAHs (mg/kg)

Table C ESL = Residential Environmental Screening Level, Deep Soil (> 3m bgs), Groundwater is a Current or Potential Source of Drinking Water, San Francisco Bay Regional Water Quality Control Board, December 2013.

= The ESLs vary from compound to compound.

TABLE 4 ANALYTICAL RESULTS FOR SOIL SAMPLES, PHYSICAL PROPERTIES
FORMER EXXON SERVICE STATION 70234, 3450 35TH AVENUE, OAKLAND, CALIFORNIA

Boring ID	Sample Date	Sample Depth (feet bgs)	Moisture Content (% by weight)	Total Porosity (% of bulk volume)	Air-filled Porosity (% of bulk volume)	Water-filled Porosity (% of bulk volume)	Dry Bulk Density (g/cc)	Total Organic Carbon (mg/kg)
V1	04/14/14	5-6.5	7.9	24.3	8.0	16.2	2.05	1,850
V2	04/15/14	5-6	22.2	39.8	4.3	35.4	1.59	1,150
V3	04/15/14	5-6	22.3	43.3	9.7	33.6	1.50	1,250
V4	04/15/14	5-6	24.8	42.6	4.8	37.8	1.52	1,600
V5	04/15/14	5-6	15.2	34.2	7.6	26.6	1.75	620
V6	11/07/14	5-6	16.7	41.22	15.3	25.9	1.55	660

feet bgs Feet below ground surface.
g/cc Grams per cubic centimeter.
% Percent.
mg/kg Milligrams per kilogram.

TABLE 5 HISTORICAL GROUNDWATER MONITORING DATA,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date	Elevation TOC (feet)	Depth to Water (feet below TOC)	Groundwater Elevation (feet)	LPH Thickness (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8260B (µg/l)	Total Pb (µg/L)	Organic Pb (mg/L)
MW1	SCREEN INTERVAL (feet bgs) 25-45												
MW1	07/15/92	---	Well installed.										
MW1	07/17/92	192.00	33.02	158.98	0.00	67	6.6	6.9	2.0	4.5	---	17	---
MW1	10/22/92	192.00	34.07	157.93	0.00	<50	2.9	<0.5	<0.5	<0.5	---	16	---
MW1	02/04/93	192.00	29.43	162.57	0.00	<50	0.8	<0.5	<0.5	<0.5	---	4	---
MW1	05/03/93	192.00	29.72	162.28	0.00	71	2.8	7.2	2.2	22	---	40	---
MW1	07/30/93	192.00	32.95	159.05	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	5	---
MW1	10/19/93	192.00	34.34	157.66	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	12	---
MW1	02/23/94	192.00	31.72	160.28	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	4	---
MW1	06/06/94	192.00	31.77	160.23	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---
MW1	08/18/94	192.00	33.76	158.24	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	130	---
MW1	11/15/94	192.00	34.08	157.92	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3.0	<100
MW1	02/06/95	192.00	28.50	163.50	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
MW1	05/10/95	192.00	29.30	162.70	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
MW1	09/20/99	192.00	33.30	158.70	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<75	<50
MW1	Well destroyed in June 2000.												
MW2	SCREEN INTERVAL (feet bgs) 25-45												
MW2	07/15/92	---	Well installed.										
MW2	07/17/92	194.85	34.65	160.20	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---
MW2	10/22/92	194.85	35.64	159.21	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	--	---
MW2	02/04/93	194.85	31.13	163.72	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---
MW2	05/03/93	194.85	31.08	163.77	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	3	---
MW2	07/30/93	194.85	34.34	160.51	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	14	---
MW2	10/19/93	194.85	36.00	158.85	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---
MW2	02/23/94	194.85	33.92	160.93	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---
MW2	06/06/94	194.85	33.50	161.35	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---
MW2	08/18/94	194.85	35.38	159.47	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3.0	---
MW2	11/15/94	194.85	35.93	158.92	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3.0	<100
MW2	02/06/95	194.85	30.38	164.47	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
MW2	05/10/95	194.85	30.77	164.08	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
MW2	09/20/99	194.85	35.15	159.70	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<75	<0.5
MW2	Well destroyed in June 2000.												
MW3	SCREEN INTERVAL (feet bgs) 25-45												
MW3	07/15/92	---	Well installed.										
MW3	07/17/92	196.90	37.24	159.66	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	50	---
MW3	10/22/92	196.90	35.95	160.95	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	9	---
MW3	02/04/93	196.90	29.85	167.05	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---
MW3	05/03/93	196.90	29.87	167.03	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	3	---
MW3	07/30/93	196.90	33.85	163.05	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	22	---
MW3	10/19/93	196.90	35.89	161.01	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	12	---
MW3	02/23/94	196.90	32.88	164.02	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	25	---

TABLE 5 HISTORICAL GROUNDWATER MONITORING DATA,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date		Elevation TOC (feet)	Depth to Water (feet below TOC)	Groundwater Elevation (feet)	LPH Thickness (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8260B (µg/l)	Total Pb (µg/L)	Organic Pb (mg/L)
MW3	06/06/94		196.90	32.40	164.50	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---
MW3	08/18/94		196.90	35.07	161.83	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3.0	---
MW3	11/15/94		196.90	35.97	160.93	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3.0	<100
MW3	02/06/95		196.90	28.39	168.51	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
MW3	05/10/95		196.90	28.90	168.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
MW3	09/20/99		196.90	34.68	162.22	0.00	75.0	<0.5	11.5	1.8	18.0	1.87	<75	<0.5
MW3	Well destroyed in June 2000.													
MW4	SCREEN INTERVAL (feet bgs) 35-45													
MW4	03/02/09		---	Well installed.										
MW4	03/30/09		197.62	30.94	166.68	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW4	04/02/09		197.62	Well surveyed.										
MW4	05/28/09		197.62	32.00	165.62	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW4	08/31/09		197.62	35.43	162.19	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW4	12/11/09		197.62	35.01	162.61	0.00	<50	<0.50	0.83	<0.50	1.1	<0.50	---	---
MW4	05/07/10		197.62	29.11	168.51	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW4	11/01/10		197.62	34.95	162.67	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW4	05/27/11	a	197.62	30.65	166.97	0.00	---	---	---	---	---	---	---	---
MW4	11/23/11		197.62	33.49	164.13	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW4	05/24/12		197.62	30.02	167.60	0.00	58	0.84	4.4	0.64c	3.5	<0.50	---	---
MW4	10/31/12		197.62	35.14	162.48	0.00	110	5.3	45	4.2	21	<0.50	---	---
MW4	05/02/13	e	197.62	32.03	165.59	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW4	11/09/13		197.62	36.53	161.09	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW4	05/12/14	a	197.62	33.51	164.11	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW4	11/19/14	a	197.62	36.96	160.66	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW4	**05/13/15**	**a**	**197.62**	**34.01**	**163.61**	**0.00**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	---	---
MW5	SCREEN INTERVAL (feet bgs) 30-40													
MW5	03/06/09		---	Well installed.										
MW5	03/30/09		196.35	30.05	166.30	0.00	4,200	540	140	<12	310	1,900		
MW5	04/02/09		196.35	Well surveyed.									---	---
MW5	05/28/09		196.35	31.45	164.90	0.00	5,300	890	150	<25	140	3,600	---	---
MW5	08/31/09		196.35	34.70	161.65	0.00	5,800	550	<100	<100	<100	3,500	---	---
MW5	12/11/09		196.35	34.52	161.83	0.00	4,000b	230	<100	<100	<100	3,800	---	---
MW5	05/07/10		196.35	30.84	165.51	0.00	2,700b	73	5.3	3.6	6.5	1,700	---	---
MW5	11/01/10		196.35	33.93	162.42	0.00	2,400b	320	71	21	40	3,400	---	---
MW5	05/27/11	a	196.35	31.65	164.70	0.00	---	---	---	---	---	---	---	---
MW5	11/23/11		196.35	32.58	163.77	0.00	1,900b	72	2.7	3.1	8.1	3,200	---	---
MW5	05/24/12		196.35	30.26	166.09	0.00	2,900b	54	31	5.2	17	1,700	---	---
MW5	10/31/12		196.35	33.94	162.41	0.00	2,200b	220	72	8.7	47	2,700	---	---
MW5	05/02/13	c	196.35	31.33	165.02	0.00	2,200b	61	<0.50	3.8	7.9	1,300	---	---
MW5	11/09/13		196.35	35.69	160.66	0.00	1,300b	120	<5.0	<5.0	8.8	370	---	---
MW5	05/12/14	a	196.35	32.64	163.71	0.00	1,200	120	<5.0	<5.0	<5.0	490	---	---

TABLE 5 HISTORICAL GROUNDWATER MONITORING DATA,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date		Elevation TOC (feet)	Depth to Water (feet below TOC)	Groundwater Elevation (feet)	LPH Thickness (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8260B (µg/l)	Total Pb (µg/L)	Organic Pb (mg/L)
MW5	11/19/14	a	196.35	36.05	160.30	0.00	1,400 HD	140	2.0 J	<2.5	4.7	120	---	---
MW5	**05/13/15**	**a**	**196.35**	**33.31**	**163.04**	**0.00**	**1,100 HD**	**74**	**<2.5**	**<2.5**	**2.7**	**310**	---	---
MW6	SCREEN INTERVAL (feet bgs) 29-39													
MW6	03/09/09		---	Well installed.										
MW6	03/30/09		192.41	26.94	165.47	0.00	2,800	0.91	<0.50	<0.50	<0.50	4,800	---	---
MW6	04/02/09		192.41	Well surveyed.									---	---
MW6	05/28/09		192.41	28.04	164.37	0.00	2,800	<100	<100	<100	<100	6,000	---	---
MW6	08/31/09		192.41	30.57	161.84	0.00	4,900	<100	<100	<100	<100	6,600	---	---
MW6	12/11/09		192.41	30.78	161.63	0.00	4,900b	<100	<100	<100	<100	6,200	---	---
MW6	05/07/10		192.41	25.42	166.99	0.00	2,900b	2.7	<0.50	0.74c	<1.0	3,700	---	---
MW6	11/01/10		192.41	30.68	161.73	0.00	850b	2.1	<0.50	<0.50	<1.0	6,100	---	---
MW6	05/27/11	a	192.41	27.07	165.34	0.00	---	---	---	---	---	---	---	---
MW6	11/23/11		192.41	29.25	163.16	0.00	1,600b	<0.50	<0.50	<0.50	<1.0	6,400	---	---
MW6	05/24/12		192.41	26.36	166.05	0.00	2,000b	1.3c	9.7	0.97c	5.5	3,400	---	---
MW6	10/31/12		192.41	30.74	161.67	0.00	1,400b	3.8	28	2.2	11	5,400	---	---
MW6	05/02/13		192.41	27.91	164.50	0.00	1,900b	<0.50	<0.50	<0.50	<0.50	2,600	---	---
MW6	11/09/13		192.41	32.15	160.26	0.00	3,600b	<40	<40	<40	<40	4,800	---	---
MW6	05/12/14	a	192.41	29.28	163.13	0.00	190 HD	<5.0	<5.0	<5.0	<5.0	280	---	---
MW6	11/19/14	a	192.41	32.49	159.92	0.00	420 HD	<10	<10	<10	<10	530	---	---
MW6	**05/13/15**	**a**	**192.41**	**29.81**	**162.60**	**0.00**	**200 HD**	**<10**	**<10**	**<10**	**<10**	**26**	---	---
MW7	SCREEN INTERVAL (feet bgs) 30-40													
MW7	03/09/09		---	Well installed.									---	---
MW7	03/30/09		194.34	29.15	165.19	0.00	55	<0.50	<0.50	<0.50	<0.50	66	---	---
MW7	04/02/09		194.34	Well surveyed.										
MW7	05/28/09		194.34	30.16	164.18	0.00	50	<1.0	<1.0	<1.0	<1.0	67	---	---
MW7	08/31/09		194.34	33.31	161.03	0.00	<50	<0.50	0.60	<0.50	<0.50	12	---	---
MW7	12/11/09		194.34	32.71	161.63	0.00	<50	0.78	1.7	0.62	2.4	31	---	---
MW7	05/07/10		194.34	27.54	166.80	0.00	510b	<0.50	<0.50	<0.50	<1.0	700	---	---
MW7	11/01/10		194.34	32.82	161.52	0.00	68b	<0.50	<0.50	<0.50	<1.0	140	---	---
MW7	05/27/11	a	194.34	28.85	165.49	0.00	---	---	---	---	---	---	---	---
MW7	11/23/11		194.34	31.39	162.95	0.00	190b	<0.50	<0.50	<0.50	<1.0	300	---	---
MW7	05/24/12	a	194.34	28.31	166.03	0.00	---	---	---	---	---	---	---	---
MW7	10/31/12		194.34	32.86	161.48	0.00	230b	2.9	21	1.8	9.2	290	---	---
MW7	05/02/13		194.34	29.93	164.41	0.00	570b	<0.50	<0.50	<0.50	<0.50	790	---	---
MW7	11/09/13		194.34	34.23	160.11	0.00	370b	<10	<10	<10	<10	460	---	---
MW7	05/12/14	a	194.34	31.33	163.01	0.00	310 HD	<10	<10	<10	<10	980	---	---
MW7	11/19/14	a	194.34	34.31	160.03	0.00	400 HD	<12	<12	<12	<12	660	---	---
MW7	**05/13/15**	**a**	**194.34**	**31.65**	**162.69**	**0.00**	**660 HD**	**<20**	**<20**	**<20**	**<20**	**870**	---	---
MW8	SCREEN INTERVAL (feet bgs) 30-40													
MW8	03/04/09		---	Well installed.										

TABLE 5 HISTORICAL GROUNDWATER MONITORING DATA,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date		Elevation TOC (feet)	Depth to Water (feet below TOC)	Groundwater Elevation (feet)	LPH Thickness (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8260B (µg/l)	Total Pb (µg/L)	Organic Pb (mg/L)
MW8	03/30/09		192.96	27.35	165.61	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW8	04/02/09		192.96	Well surveyed.									---	---
MW8	05/28/09		192.96	28.72	164.24	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW8	08/31/09		192.96	31.93	161.03	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW8	12/11/09		192.96	31.24	161.72	0.00	<50	0.74	1.6	0.59	2.3	<0.50	---	---
MW8	05/07/10		192.96	25.68	167.28	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW8	11/01/10		192.96	31.18	161.78	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW8	05/27/11		192.96	27.55	165.41	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW8	11/23/11		192.96	29.74	163.22	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW8	05/24/12		192.96	26.93	166.03	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW8	10/31/12		192.96	31.35	161.61	0.00	75	2.5	19	1.7	8.7	<0.50	---	---
MW8	05/02/13		192.96	28.44	164.52	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW8	11/09/13		192.96	32.89	160.07	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW8	05/12/14	a	192.96	30.27	162.69	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW8	11/19/14	a	192.96	33.16	159.80	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW8	**05/13/15**	**a**	**192.96**	**30.35**	**162.61**	**0.00**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	---	---
MW9	SCREEN INTERVAL (feet bgs) 30-40													
MW9	03/05/09		---	Well installed.										
MW9	03/30/09		195.16	28.31	166.85	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW9	04/02/09		195.16	Well surveyed.									---	---
MW9	05/28/09		195.16	29.69	165.47	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW9	08/31/09		195.16	33.20	161.96	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW9	12/11/09		195.16	32.62	162.54	0.00	<50	0.73	1.7	0.54	2.2	<0.50	---	---
MW9	05/07/10		195.16	26.59	168.57	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW9	11/01/10		195.16	32.45	162.71	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW9	05/27/11		195.16	29.62	165.54	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW9	11/23/11		195.16	30.56	164.60	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW9	05/24/12		195.16	27.94	167.22	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---
MW9	10/31/12		195.16	32.66	162.50	0.00	140	6.9	38	2.7	13	<0.50	---	---
MW9	05/02/13		195.16	29.58	165.58	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW9	11/09/13		195.16	Well inaccessible.										
MW9	05/12/14	b	195.16	Well inaccessible.										
MW9	11/19/14	a	195.16	34.60	160.56	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW9	**05/13/15**	**a**	**195.16**	**31.66**	**163.50**	**0.00**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	---	---
RW1	SCREEN INTERVAL (feet bgs) 29-39.5													
RW1	12/22/11		---	Well installed.										
RW1	12/30/11		195.15	Well surveyed.										
RW1	05/24/12		195.15	28.55	166.60	0.00	5,500b	920	5.9c	51	14	2,500	---	---
RW1	10/31/12	a	195.15	---	---	---	---	---	---	---	---	---	---	---
RW1	05/02/13	c	195.15	30.27	164.88	0.00	4,300b	1,200	<2.5	41	14	2,300	---	---
RW1	11/09/13		195.15	34.64	160.51	0.00	810b	210	<10	<10	<10	520	---	---

TABLE 5 HISTORICAL GROUNDWATER MONITORING DATA,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date		Elevation TOC (feet)	Depth to Water (feet below TOC)	Groundwater Elevation (feet)	LPH Thickness (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8260B (µg/l)	Total Pb (µg/L)	Organic Pb (mg/L)
RW1	05/12/14	a	195.15	31.54	163.61	0.00	830 HD	450	<10	13	<10	490	---	---
RW1	11/19/14	a	195.15	34.94	160.21	0.00	910 HD	450	<10	<10	<10	590	---	---
RW1	**05/13/15**	**a**	**195.15**	**32.26**	**162.89**	**0.00**	**1,300 HD**	**560**	**<5.0**	**8.1**	**2.4 JA**	**480**	---	---
Grab Groundwater Samples														
Pit Water	06/14/02		---	---	---	---	5,600	140	840	100	530	12,000	---	---
UST Pit	06/19/02		---	---	---	---	680	2.7	36	18	130	640	---	---
W-38-B11	11/14/07		---	---	---	---	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
W-15-B12	11/13/07		---	---	---	---	8,400	67	<5.0	140	150	78	---	---
W-40-B13	11/12/07		---	---	---	---	<50	<0.50	<0.50	<0.50	<0.50	0.53	---	---
W-15-B14	11/13/07		---	---	---	---	2,500	1.7	3.0	26	13	16	---	---
W-38-B15	11/15/07		---	---	---	---	18,000	3,400	2,500	330	2,000	12,000	---	---
W-40-B16	11/15/07		---	---	---	---	<50	<0.50	<0.50	<0.50	<0.50	7.7	---	---
W-37-B17	11/13/07		---	---	---	---	630	1.8	<0.50	4.1	1.4	2,200	---	---
W-38-B18	11/12/07		---	---	---	---	4,300	52	<12	56	96	1,400	---	---
W-35-B19	03/03/09		---	---	---	---	4,400	<0.50	<0.50	<0.50	<1.0	7,100	---	---
W-35-B20	03/03/09		---	---	---	---	640	<0.50	<0.50	<0.50	<1.0	440	---	---
W-35-B21	03/03/09		---	---	---	---	<50	<0.50	<0.50	<0.50	<1.0	1.4	---	---

TOC	Top of casing.	bgs	Below ground surface.
LPH	Liquid-phase hydrocarbons.	µg/L	Micrograms per liter.
TPH-g	Total Petroleum Hydrocarbons as gasoline.	--	Not sampled or not analyzed.
MTBE	Methyl tertiary butyl ether.	NA	Not available.
NM	Not measured.	NC	Not calculated.

Total Pb	Total lead analyzed using EPA Method 6010.
Organic Pb	Organic lead analyzed using CA DHS LUFT method.
a	Well purged prior to sampling.
b	Well inaccessible.
c	Well sampled the following day.
HD	Chromat. profile inconsistent with the ref. fuel stnds.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.

Notes: Data prior to 1999 provided by EA Engineering, Science, and Technology. Data prior to 2013 provided by Cardno ERI.

TABLE 6 GROUNDWATER ANALYTICAL RESULTS FOR DETECTED VOCs,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date		Depth (feet)	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Ethanol (µg/L)	Naphthalene (µg/L)
MW1	7/17/1992 - 09/20/1999		Not analyzed for these analytes.								
MW1	Well destroyed in June 2000.										
MW2	7/17/1992 - 09/20/1999		Not analyzed for these analytes.								
MW2	Well destroyed in June 2000.										
MW3	7/17/1992 - 09/20/1999		Not analyzed for these analytes.								
MW3	Well destroyed in June 2000.										
MW4	03/30/09		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW4	05/28/09		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW4	08/31/09		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW4	12/11/09		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW4	05/07/10		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW4	11/01/10		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW4	05/27/11	d	---	---	---	---	---	---	---	---	---
MW4	11/23/11		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW4	05/24/12		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW4	10/31/12		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW4	05/03/13		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW4	11/09/13		---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	---
MW4	05/12/14		---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	<1.0
MW4	11/19/14		---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	---
MW4	**05/13/15**		**---**	**<0.50**	**<0.50**	**<0.50**	**<10**	**<0.50**	**<0.50**	**---**	**---**
MW5	03/30/09		---	<12	17	<12	450	<12	<12	---	---
MW5	05/28/09		---	<25	<25	<25	530	<25	<25	---	---
MW5	08/31/09		---	<100	<100	<100	<1,000	<100	<100	---	---
MW5	12/11/09		---	<100	<100	<100	2,000	<100	<100	---	---
MW5	05/07/10		---	<25	<25	<25	400	<25	<25	---	---
MW5	11/01/10		---	<50	<50	<50	1,500	<50	<50	---	---
MW5	05/27/11	d	---	---	---	---	---	---	---	---	---
MW5	11/23/11		---	<50	<50	<50	<500	<50	<50	---	---
MW5	05/24/12		---	<50	<50	<50	1,400	<50	<50	---	---
MW5	10/31/12		---	<50	<50	<50	730	<50	<50	---	---
MW5	05/03/13		---	<20	<20	<20	590	<20	<20	---	---
MW5	11/09/13		---	<5.0	<5.0	<5.0	1,100	<5.0	<5.0	---	---
MW5	05/12/14		---	<5.0	<5.0	<5.0	1,000	<5.0	<5.0	---	<10
MW5	11/19/14		---	<2.5	<2.5	<2.5	600	<2.5	<2.5	---	---
MW5	**05/13/15**		**---**	**<2.5**	**<2.5**	**<2.5**	**950**	**<2.5**	**<2.5**	**---**	**---**
MW6	03/30/09		---	<0.50	<0.50	1.3	410	<0.50	0.82	---	---
MW6	05/28/09		---	<100	<100	<100	<1,000	<100	<100	---	---
MW6	08/31/09		---	<100	<100	<100	1,100	<100	<100	---	---
MW6	12/11/09		---	<100	<100	<100	2,600	<100	<100	---	---
MW6	05/07/10		---	<100	<100	<100	<1,000	<100	<100	---	---
MW6	11/01/10		---	<50	<50	<50	2,400	<50	<50	---	---
MW6	05/27/11	d	---	---	---	---	---	---	---	---	---
MW6	11/23/11		---	<100	<100	<100	<1,000	<100	<100	---	---
MW6	05/24/12		---	<100	<100	<100	2,700	<100	<100	---	---
MW6	10/31/12		---	<100	<100	<100	<1,000	<100	<100	---	---
MW6	05/02/13		---	<40	<40	<40	570	<40	<40	---	---
MW6	11/09/13		---	<40	<40	<40	2,100	<40	<40	---	---
MW6	05/12/14		---	<5.0	<5.0	<5.0	1,700	<5.0	<5.0	---	<10
MW6	11/19/14		---	<10	<10	<10	2,100	<10	<10	---	---
MW6	**05/13/15**		**---**	**<10**	**<10**	**<10**	**2,400**	**<10**	**<10**	**---**	**---**

TABLE 6 GROUNDWATER ANALYTICAL RESULTS FOR DETECTED VOCs,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date		Depth (feet)	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Ethanol (µg/L)	Naphthalene (µg/L)
MW7	03/30/09		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW7	05/28/09		---	<1.0	<1.0	<1.0	<10	<1.0	<1.0	---	---
MW7	08/31/09		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW7	12/11/09		---	<0.50	<0.50	<0.50	12	<0.50	<0.50	---	---
MW7	05/07/10		---	<0.50	<0.50	<0.50	130	<0.50	<0.50	---	---
MW7	11/01/10		---	<2.5	<2.5	<2.5	27	<2.5	<2.5	---	---
MW7	05/27/11	d	---	---	---	---	---	---	---	---	---
MW7	11/23/11		---	<5.0	<5.0	<5.0	<50	<5.0	<5.0	---	---
MW7	05/24/12	d	---	---	---	---	---	---	---	---	---
MW7	10/31/12		---	<5.0	<5.0	<5.0	<50	<5.0	<5.0	---	---
MW7	05/02/13		---	<5.0	<5.0	<5.0	57	<5.0	<5.0	---	---
MW7	11/09/13		---	<10	<10	<10	<200	<10	<10	---	---
MW7	05/12/14		---	<10	<10	<10	<200	<10	<10	---	<20
MW7	11/19/14		---	<12	<12	<12	<250	<12	<12	---	---
MW7	**05/13/15**		**---**	**<20**	**<20**	**<20**	**<400**	**<20**	**<20**	**---**	**---**
MW8	03/30/09		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	05/28/09		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	08/31/09		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	12/11/09		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	05/07/10		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	11/01/10		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	05/27/11		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	11/23/11		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	05/24/12		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	10/31/12		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	05/02/13		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	11/09/13		---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	---
MW8	05/12/14		---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	<1.0
MW8	11/19/14		---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	---
MW8	**05/13/15**		**---**	**<0.50**	**<0.50**	**<0.50**	**<10**	**<0.50**	**<0.50**	**---**	**---**
MW9	03/30/09		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	05/28/09		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	08/31/09		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	12/11/09		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	05/07/10		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	11/01/10		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	05/27/11		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	11/23/11		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	05/24/12		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	10/31/12		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	05/02/13		---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	11/09/13	d	---	Well inaccessible.							
MW9	11/19/14		---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	---
MW9	**05/13/15**		**---**	**<0.50**	**<0.50**	**<0.50**	**<10**	**<0.50**	**<0.50**	**---**	**---**
RW1	05/24/12		---	<50	<50	<50	1,900	<50	<50	---	---
RW1	10/31/12	d	---	---	---	---	---	---	---	---	---
RW1	05/03/13		---	<40	<40	<40	880	<40	<40	---	---
RW1	11/09/13		---	<10	<10	<10	1,100	<10	<10	---	---
RW1	05/12/14		---	<10	<10	<10	840	<10	<10	---	<20
RW1	11/19/14		---	<10	<10	<10	1,300	<10	<10	---	<20
RW1	**05/13/15**		**---**	**<5.0**	**<5.0**	**<5.0**	**880**	**<5.0**	**<5.0**	**---**	**---**

TABLE 6 GROUNDWATER ANALYTICAL RESULTS FOR DETECTED VOCs,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date	Depth (feet)	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Ethanol (µg/L)	Naphthalene (µg/L)
Grab Groundwater Samples										
Pit Water	06/14/02	11.5a	---	---	---	---	---	---	---	---
UST Pit	06/19/02	13.5a	---	---	---	---	---	---	---	---
W-38-B11	11/14/07	38	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<50	---
W-15-B12	11/13/07	15	<5.0	<5.0	<5.0	<100	<5.0	<5.0	<500	---
W-40-B13	11/12/07	40	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<50	---
W-15-B14	11/13/07	15	<1.0	<1.0	<1.0	<20	<1.0	<1.0	<100	---
W-38-B15	11/15/07	38	<25	<25	<25	1,900	<25	<25	<2,500	---
W-40-B16	11/15/07	40	<0.50	<0.50	<0.50	<10	<0.50	<0.50	85	---
W-37-B17	11/13/07	37	<0.50	<0.50	<0.50	58	<0.50	<0.50	<50	---
W-38-B18	11/12/07	38	<12	<12	<12	<250	<12	<12	<1,200	---
W-35-B19	03/03/09	35	<50	<50	<50	<500	<50	<50	<5,000	---
W-35-B20	03/03/09	35	<0.50	<0.50	<0.50	12	<0.50	<0.50	<50	---
W-35-B21	03/03/09	35	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<50	---

EDB 1,2-Dibromoethane analyzed using EPA Method 8260B.
1,2-DCA 1,2-Dichloroethane analyzed using EPA Method 8260B.
TBA Tertiary butyl alcohol analyzed using EPA Method 8260B.
TAME Tertiary amyl methyl ether analyzed using EPA Method 8260B.
ETBE Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
DIPE Di-isopropyl ether analyzed using EPA Method 8260B.
Ethanol Ethanol analyzed using EPA Method 8260B.
µg/L Micrograms per liter.
--- Not sampled/Not analyzed/Not measured/Not applicable.
a Approximate depth to groundwater surface at time of sampling.
d Well inaccessible.

Notes: Data prior to 1999 provided by EA Engineering, Science, and Technology, data prior to 2013 provided by Cardno ERI.

B Analyte was present in the associated method blank.
J Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
QO Compound did not meet method-described identification guidelines. Identification was based on additional GC/MS characteristics.

TABLE 7 GRAB GROUNDWATER ANALYTICAL RESULTS
FORMER EXXON SERVICE STATION 70234, 3450 35TH AVENUE, OAKLAND, CALIFORNIA

Sample ID	Sampling Date	Depth (feet bgs)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (8260B) (µg/L)
Pit Water	06/14/02	11.5a	5,600	140	840	100	530	12,000
UST Pit	06/19/02	13.5a	680	2.7	36	18	130	640
W-38-B11	11/14/07	38	<50	<0.50	<0.50	<0.50	<0.50	<0.50
W-15-B12	11/13/07	15	8,400	67	<5.0	140	150	78
W-40-B13	11/12/07	40	<50	<0.50	<0.50	<0.50	<0.50	0.53
W-15-B14	11/13/07	15	2,500	1.7	3.0	26	13	16
W-38-B15	11/15/07	38	18,000	3,400	2,500	330	2,000	12,000
W-40-B16	11/15/07	40	<50	<0.50	<0.50	<0.50	<0.50	7.7
W-37-B17	11/13/07	37	630	1.8	<0.50	4.1	1.4	2,200
W-38-B18	11/12/07	38	4,300	52	<12	56	96	1,400
W-35-B19	03/03/09	35	4,400	<0.50	<0.50	<0.50	<1.0	7,100
W-35-B20	03/03/09	35	640	<0.50	<0.50	<0.50	<1.0	440
W-35-B21	03/03/09	35	<50	<0.50	<0.50	<0.50	<1.0	1.4
H1-70	04/15/14	56.5-70	<50	<0.50	<0.50	<0.50	<0.50	<0.50
H1-95	04/15/14	85-95	<50	<0.50	<0.50	<0.50	<0.50	<0.50
H2-62	04/10/14	58-62	<50	<0.50	<0.50	<0.50	<0.50	<0.50
H2-80	04/11/14	75-80	<50	<0.50	<0.50	<0.50	<0.50	<0.50
H3-65	04/14/14	55-65	<50	<0.50	<0.50	<0.50	<0.50	<0.50
H3-90	04/14/14	85-90	<50	<0.50	<0.50	<0.50	<0.50	<0.50
San Francisco Bay RWQCB ESLs [b]			100	1.0	40	30	20	5.0

Notes: Data prior to 2013 provided by Cardno ERI.
TPH-g 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 8021B.
bgs Below ground surface.
µg/L Micrograms per liter.
< Less than the stated laboratory reporting limit.
a Approximate depth to groundwater surface at time of sampling.
b San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels where groundwater is a current or potential source of drinking water, Interim Final-December 2013.

TABLE 8 ADDITIONAL GRAB GROUNDWATER ANALYTICAL RESULTS, FORMER EXXON SERVICE STATION 70234, 3450 35TH AVENUE, OAKLAND, CALIFORNIA

Sample ID	Sampling Date	Depth (feet bgs)	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Ethanol (µg/L)	Naphthalene (µg/L)
Pit Water	06/14/02	11.5a	---	---	---	---	---	---	---	---
UST Pit	06/19/02	13.5a	---	---	---	---	---	---	---	---
W-38-B11	11/14/07	38	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<50	---
W-15-B12	11/13/07	15	<5.0	<5.0	<5.0	<100	<5.0	<5.0	<500	---
W-40-B13	11/12/07	40	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<50	---
W-15-B14	11/13/07	15	<1.0	<1.0	<1.0	<20	<1.0	<1.0	<100	---
W-38-B15	11/15/07	38	<25	<25	<25	1,900	<25	<25	<2,500	---
W-40-B16	11/15/07	40	<0.50	<0.50	<0.50	<10	<0.50	<0.50	85	---
W-37-B17	11/13/07	37	<0.50	<0.50	<0.50	58	<0.50	<0.50	<50	---
W-38-B18	11/12/07	38	<12	<12	<12	<250	<12	<12	<1,200	---
W-35-B19	03/03/09	35	<50	<50	<50	<500	<50	<50	<5,000	---
W-35-B20	03/03/09	35	<0.50	<0.50	<0.50	12	<0.50	<0.50	<50	---
W-35-B21	03/03/09	35	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<50	---
H1-70	04/15/14	56.5-70	---	---	<0.50	**18**	<0.50	<0.50	---	<1.0
H1-95	04/15/14	85-95	---	---	<0.50	11	<0.50	<0.50	---	<1.0
H2-62	04/10/14	58-62	---	---	<0.50	<10	<0.50	<0.50	---	<1.0
H2-80	04/11/14	75-80	---	---	<0.50	<10	<0.50	<0.50	---	<1.0
H3-65	04/14/14	55-65	---	---	<0.50	<10	<0.50	<0.50	---	<1.0
H3-90	04/14/14	85-90	---	---	<0.50	<10	<0.50	<0.50	---	<1.0
San Francisco Bay RWQCB ESLs [b]			0.05	0.5	NE	12	NE	NE	NE	6.1

Notes:
Data prior to 2013 provided by Cardno ERI.
EDB Ethylene dibromide or 1,2-Dibromoethane analyzed using EPA Method 8260B.
1,2-DCA 1,2-Dichloroethane analyzed using EPA Method 8260B.
TAME Tertiary amyl methyl ether analyzed using EPA Method 8260B.
TBA Tertiary butyl alcohol analyzed using EPA Method 8260B.
ETBE Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
DIPE Di-isopropyl ether analyzed using EPA Method 8260B.
Ethanol Ethanol analyzed using EPA Method 8260B.
Naphthalene Naphthalene analyzed using EPA Method 8260B.
µg/L Micrograms per liter.
bgs Below ground surface.
< Less than the stated laboratory reporting limit.
--- Not sampled/Not analyzed/Not measured/Not applicable.
a Approximate depth to groundwater surface at time of sampling.
b San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels where groundwater is a current or potential source of drinking water, Interim Final-December 2013.
NE Not established.

TABLE 9 SOIL VAPOR SAMPLE ANALYTICAL RESULTS, FORMER EXXON SERVICE STATION 70234, 3450 35TH AVENUE, OAKLAND, CALIFORNIA

Soil Vapor Monitoring Well	Screened Interval Depth (feet bgs)	Sampling Date	Concentration (% by Volume)				(% by volume)		Concentration (µg/m^3)										
			Oxygen and Argon	Carbon Dioxide	Methane	Lab Helium	Field Helium in Purged Soil Vapor	Field Helium under Shroud	TPH-g	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	DIPE	ETBE	TAME	Naphthalene
V1	6.25-6.75	4/22/2014	12.9	4.81	<0.500	0.0348	0	21.7	30,000	<7.4	75	<10	<10	<34	<28	<39	<39	<39	<120
V2	6.25-6.75	4/22/2014	14.2	7.09	<0.500	0.0220	0	21.7	36,000	<6.5	110	<8.9	<8.9	<29	<25	<34	<34	<34	<110/<20*
V3	6.25-6.75	4/22/2014	15.4	5.76	<0.500	0.0969	0	38.8	24,000	<1.6	110	3.8	2.7	<7.2	<6.1	<8.4	<8.4	<8.4	<26
V4	6.25-6.75	4/23/2014	18.7	3.01	<0.500	0.0241	0	23.6	24,000	<1.6	<1.9	<2.2	<2.2	<7.2	<6.1	<8.4	<8.4	<8.4	<26
V5	6.25-6.75	4/23/2014	8.76	6.20	<0.500	0.0209	--	22.0	22,000	3.4	46	<2.2	<2.2	<7.2	<6.1	<8.4	<8.4	<8.4	<26
V5 (duplicate)	6.25-6.75	4/23/2014	9.12	6.03	<0.500	0.0298	--	22.0	19,000	3.2	38	2.5	2.3	<7.2	<6.1	<8.4	<8.4	<8.4	<26
V6	5.9-6.4	11/19/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
V6	5.9-6.4	2/18/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
V6	5.9-6.4	2/20/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Table E ESL	--	--	--	--	--	--	--	--	50,000	42	160,000	490	52,000	4,700	NE	NE	NE	NE	36
LTCP	--	--	--	--	--	--	--	--	--	280	--	3,600	--	--	--	--	--	--	310

Notes:

bgs	Below ground surface.
TPH-g	Total Petroleum Hydrocarbons as gasoline.
MTBE	Methyl tertiary butyl ether.
TBA	Tertiary butyl alcohol.
ETBE	Ethyl tertiary butyl ether.
DIPE	Di-isopropyl ether.
TAME	Tertiary amyl methyl ether.
%	Percent.
µg/m^3	Micrograms per cubic meter.
--	Not analyzed, not measured, or not applicable.
Table E ESL	Residential Environmental Screening Level, Soil Gas, San Francisco Bay Regional Water Quality Control Board, December 2013.
LTCP	Low threat closure policy soil gas criteria for the no bioattenuation zone for commercial use. California Regional Water Quality Control Board, 2012.
<26	Not detected at or above the reporting limit indicated.
NE	Not established.
*	The first result is from EPA Method TO-15. The second result is from EPA Method TO-17.

Appendix A

Regulatory Correspondence

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
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September 6, 2013

Ms. Jennifer Sedlachek
ExxonMobil
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Oakland, CA 94611
(*Sent via E-mail to:*
jennifer.c.sedlachek@exxonmobil.com)

Mr. R.J. Dodd
BNY Western Trust Company
3200 SW FRWY #3050
Houston, TX 77027

Mr. Roger Levin
The Valero Companies
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West Minster, CO 80021
(Sent via E-mail to: roger.levin@valero.com)

MHCB (USA) Leasing Corp
c/o Ad Valorem Tax Department
PO Box 690110
San Antonio, TX 78269-0110

Subject: Fuel Leak Case No. RO0002515 and Geotracker Global ID #T06019757161, Exxon #7-0234 3450 35th Avenue, Oakland, CA 94619

Dear Messrs. Levin, Dold and Ms. Sedlachek:

Alameda County Environmental Health (ACEH) staff has reviewed the case file including the *Work Plan for Subsurface Investigation*, dated May 24, 2013, *Conceptual Site Model* (CSM) dated May 9, 2013 and *Project Plan* dated May 24, 2013, which were prepared by ETIC Engineering Inc. (ETIC) for the subject site. The CSM identifies soil vapor and the vertical extent of contamination as being the remaining data gaps. The work plan addresses these data gaps and recommends installing and sampling six soil vapor wells to evaluate vapor intrusion at the site and advancing two deep cone penetrometer borings to define the vertical extent of contamination.

ACEH has evaluated the data and recommendations presented in the above-mentioned reports, in conjunction with the case files, and the State Water Resources Control Board's (SWRCBs) Low Threat Underground Storage Tank Case Closure Policy (LTCP). Based on ACEH staff review, we have determined that the site fails to meet LTCP General Criteria e (CSM) and f (secondary source removal), and the Media-Specific Criteria for Groundwater and the Media-Specific Criteria for Vapor Intrusion to Indoor Air.

ACEH generally concurs with the proposed scope of work presented in the work plan and the modifications discussed in the teleconference call dated September 5, 2013 that address the technical comments below. Submittal of a revised Work Plan is not required unless an alternate scope of work outside that described in the Work Plan and technical comments below is proposed. However, please submit a revised figure showing the modified boring locations.

TECHNICAL COMMENTS

1. **General Criteria e (Site Conceptual Model) –** According to the LTCP, the SCM is a fundamental element of a comprehensive site investigation. The SCM establishes the source and attributes of the unauthorized release, describes all affected media (including soil, groundwater, and soil vapor as appropriate), describes local geology, hydrogeology and other physical site characteristics that affect contaminant environmental transport and fate, and identifies all confirmed and potential contaminant receptors (including water supply wells, surface water bodies, structures and their inhabitants). The SCM is relied upon by practitioners as a guide for investigative design and data collection. All relevant site characteristics identified by the SCM shall be assessed and supported by data so that the nature, extent and mobility of the release have been established to determine conformance with applicable criteria in this policy.

   ACEH's review of the case files indicates that insufficient data and analysis has been presented to assess the nature, extent, and mobility of the release and to support compliance with General Criteria f, as discussed in Technical Comment 2 below and the Media Specific Criteria for Groundwater and Media Specific Criteria for Vapor Intrusion to Indoor Air as described in Technical Comments 3 and 4, respectively.

   Please update the SCM and submit with the Soil and Water Investigation Report (SWI) described in Technical Comment 5 and update with each with each subsequent submittal.

2. **General Criteria f (Secondary Source) –** The LTCP defines "secondary source" as petroleum-impacted soil or groundwater located at or immediately beneath the point of release from the primary source. Unless site attributes prevent secondary source removal (e.g. physical or infrastructural constraints exist whose removal or relocation would be technically or economically infeasible), petroleum-release sites are required to undergo secondary source removal to the extent practicable as described herein. "To the extent practicable" means implementing a cost-effective corrective action which removes or destroys-in-place the most readily recoverable fraction of source-area mass. According to the LTCP, following removal or destruction of the secondary source, additional removal or active remedial actions shall not be required by regulatory agencies unless (1) necessary to abate a demonstrated threat to human health or (2) the groundwater plume does not meet the definition of low threat as described in this policy."

   ACEH's review of the case files indicates that insufficient data and analysis has been presented to support whether the secondary source in the vicinity of wells RW-1 and MW-5, and B-15 has been removed to the extent practicable. Specifically:

   - TPHg was detected in soil samples collected from RW-1 at concentrations of 420 mg/kg at 37 feet below ground surface (bgs), and 440 mg/kg at 40 feet bgs.
   - Soil samples collected from borings MW-5 and B-15 contained TPHg at concentrations of 260 mg/kg and 300 mg/kg at 20 feet bgs, respectively.
   - The TPHg soil concentrations noted above are above the SWRCB's "Rule of Thumb" indicators for indirect evidence of free product presented in the

Technical Justification Paper for Vapor Intrusion into Indoor Air (e.g., 100 mg/kg to 200 mg/kg).

- Benzene concentrations in groundwater samples collected in well RW-1 are increasing with the most recent concentration detected at 1,200 µg/L, and are the highest benzene current concentrations detected in the monitoring well network.
- MTBE concentrations in groundwater samples collected in well RW-1 are fluctuating in the vicinity of 2,500 µg/L, and are the highest current MTBE concentrations detected in the monitoring well network.
- TPH-g concentrations in groundwater samples collected in well RW-1 are fluctuating in the vicinity of 5,000 µg/L, and are the highest current TPH-g concentrations detected in the monitoring well network.

Please advance a boring in the vicinity of RW-1 to define the vertical impacts to groundwater in this potential source area.

3. **LTCP Media Specific Criteria for Vapor Intrusion to Indoor Air –** The LTCP describes conditions, including bioattenuation zones, which if met will assure that exposure to petroleum vapors in indoor air will not pose unacceptable health risks to human occupants of existing or future site buildings, and adjacent parcels. Appendices 1 through 4 of the LTCP criteria illustrate four potential exposure scenarios and describe characteristics and criteria associated with each scenario.

   Our review of the case files indicates that the site data may support the requisite characteristics of the bioattenuation zone and therefore, soil gas samples may not be necessary. ACEH recommends that you evaluate the depth to water and total petroleum hydrocarbon (TPH) concentrations in the upper ten feet of soil to see whether soil gas sampling is necessary. Please present your evaluation in the SWI requested in Item 5.

   ETIC proposes installing 6 soil vapor monitoring wells to 6 feet below ground surface (bgs) using a hand auger. Please note that closure under the LTCP media specific criteria for vapor intrusion to indoor air is based on soil vapor concentrations of benzene, ethylbenzene and naphthalene meeting the concentrations listed in the policy. Please ensure that all soil gas samples including naphthalene are collected in accordance with DTSC protocols. Please collect confirmation samples using TO-17 for naphthalene in accordance with the DTSC guidance document. The work plan proposes collecting samples of additional analytes and comparing results to current Regional Water Quality Control Board, San Francisco Bay Region, environmental screening levels (ESLs).

   Please note that closure under the vapor intrusion to Indoor air criteria are based on the LTCP screening levels for naphthalene, benzene and ethylbenzene.

   Also, please ensure that the proposed depths of the soil probes are a minimum of five feet below existing and potential borings.

   Please present the results of the investigation in the SWI described in Item 5 below.

4. **LTCP Media Specific Criteria for Groundwater –** To satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites listed in the policy.

Our review of the case files indicates that insufficient data and analysis has been presented to support the requisite characteristics of plume stability or plume classification. Specifically, the lateral and vertical extent of the source in the vicinity of RW-1 and MW-5 as discussed in Technical Comment 2 above, is undefined as is the vertical and lateral extent of the off-site MTBE plume.

ETIC proposes advancing two CPT borings to define the vertical extent of contamination at the site and determine if contaminants are coming onto the site from upgradient. In addition to these borings, and as discussed in our teleconference call please include an on-site boring to the northwest of MW-7 to define the downgradient extent of MTBE in this area in both the first water bearing zone and the second one encountered in proposed boring H1, borings in the vicinity of wells RW-1 and MW-5, and boring B-15. ETIC proposes to analyze the grab groundwater samples for naphthalene. ACEH requests that ETIC perform naphthalene analysis on the groundwater monitoring wells in the next groundwater monitoring event.

Please present the results of the investigation in the SWI described in Item 5 below.

5. **Soil and Water Investigation Report –** Please prepare an SWI presenting the results of the field investigation and submit by the due date specified below. Please update the SCM and submit with the SWI.

   In order to expedite review, ACEH requests the focused SCM be presented in a tabular format that highlights the major SCM elements and associated data gaps, which need to be addressed to progress the site to case closure under the LTCP. Please see Attachment A "Site Conceptual Model Requisite Elements".

6. **Groundwater Monitoring –** ACEH is amenable to ETICs proposal to eliminate DIPE, ETBE, TAME, EDB, and EDC from the analytical suite in groundwater. However, we would like to ensure that tertiary butyl alcohol (TBA) is analyzed. Please continue to coordinate groundwater monitoring with the adjacent downgradient ConocoPhillips site and submit results in the Semi-Annual Groundwater Monitoring Reports according to the schedule below.

TECHNICAL REPORT REQUEST

Please submit technical reports to ACEH (Attention: Barbara Jakub), according to Attachment 1 and the following naming convention and schedule:

- **December 6, 2013** – Soil and Water Investigation and Focused SCM Report
  (File to be named: SWI_R_yyyy-mm-dd)

- **December 30, 2013** – Second Half Semi Annual Groundwater Monitoring Report
  (File to be named: GWM_R_yyyy-mm-dd)

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

Sincerely,

Digitally signed by Barbara J. Jakub
DN: cn=Barbara J. Jakub, o, ou, email=barbara.jakub@acgov.org, c=US
Date: 2013.09.06 14:02:32 -07'00'

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

Enclosures: Attachment 1 - Responsible Party(ies) Legal Requirements/Obligations &
ACEH Electronic Report Upload (ftp) Instructions

cc: Thomas Neely, ETIC Engineering, Inc., 2285 Morello Avenue, Pleasant Hill, CA 94523 (*Sent via E-mail to:* tneely@eticeng.com)
Dilan Roe, ACEH (*Sent via E-mail to: dilan.roe@acgov.org)*
Barbara Jakub, ACEH (*Sent via E-mail to: barbara.jakub@acgov.org*)
GeoTracker, file

Attachment 1
Responsible Party(ies) Legal Requirements/Obligations

REPORT/DATA REQUESTS

These reports/data are being requested pursuant to Division 7 of the California Water Code (Water Quality), Chapter 6.7 of Division 20 of the California Health and Safety Code (Underground Storage of Hazardous Substances), and Chapter 16 of Division 3 of Title 23 of the California Code of Regulations (Underground Storage Tank Regulations).

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (Local Oversight Program [LOP] for unauthorized releases from petroleum Underground Storage Tanks [USTs], and Site Cleanup Program [SCP] for unauthorized releases of non-petroleum hazardous substances) require submission of reports in electronic format pursuant to Chapter 3 of Division 7, Sections 13195 and 13197.5 of the California Water Code, and Chapter 30, Articles 1 and 2, Sections 3890 to 3895 of Division 3 of Title 23 of the California Code of Regulations (23 CCR). Instructions for submission of electronic documents to the ACEH FTP site are provided on the attached "Electronic Report Upload Instructions."

Submission of reports to the ACEH FTP site is in addition to requirements for electronic submittal of information (ESI) to the State Water Resources Control Board's (SWRCB) Geotracker website. In April 2001, the SWRCB adopted 23 CCR, Division 3, Chapter 16, Article 12, Sections 2729 and 2729.1 (Electronic Submission of Laboratory Data for UST Reports). Article 12 required electronic submittal of analytical laboratory data submitted in a report to a regulatory agency (effective September 1, 2001), and surveyed locations (latitude, longitude and elevation) of groundwater monitoring wells (effective January 1, 2002) in Electronic Deliverable Format (EDF) to Geotracker. Article 12 was subsequently repealed in 2004 and replaced with Article 30 (Electronic Submittal of Information) which expanded the ESI requirements to include electronic submittal of any report or data required by a regulatory agency from a cleanup site. The expanded ESI submittal requirements for petroleum UST sites subject to the requirements of 23 CCR, Division, 3, Chapter 16, Article 11, became effective December 16, 2004. All other electronic submittals required pursuant to Chapter 30 became effective January 1, 2005. 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, 7835, 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, late 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 SCP)	**REVISION DATE:** July 25, 2012
	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 (petroleum UST and SCP) 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.

Nowell, Keith, Env. Health

To: Joseph Muehleck
Cc: Sedlachek, Jennifer C; 'Roger.Levin@valero.com'; Roe, Dilan, Env. Health
Subject: RE: RO2515, Exxon #70234, 3450 35th Avenue, Oakland, CA 94619

Dear Mr. Muehleck,

The extension request for the submittal of the Soil and Water Investigation and Focused SCM Report for the subject case is approved and has been extended to June 9, 2014.

Regards,
Keith Nowell

Keith Nowell PG, CHG
Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda , CA 94502-6540
phone: 510 / 567 - 6764
fax: 510 / 337 - 9335
email: keith.nowell@acgov.org

PDF copies of case files can be reviewed/downloaded at:

http://www.acgov.org/aceh/lop/ust.htm

From: Joseph Muehleck [mailto:jmuehleck@eticeng.com]
Sent: Thursday, January 23, 2014 11:39 AM
To: Nowell, Keith, Env. Health
Cc: Sedlachek, Jennifer C; 'Roger.Levin@valero.com'
Subject: RO2515, Exxon #70234, 3450 35th Avenue, Oakland, CA 94619

Dear Mr. Nowell –

As discussed on Wednesday, 22 January 2014, outside counsel for ExxonMobil Environmental Services has been in contact with the property owner about access to perform a proposed investigation at the referenced site. Per previous email to Alameda County Environmental Health (Dilan Roe) dated 7 November 2013, the site was being used for parking for a nearby construction project that would last into 2014, which delayed the investigation. The property owner has recently indicated that the property should be accessible for the investigation by 1 April 2014. Therefore, on behalf of ExxonMobil Environmental Services, we request an extension of the Soil and Water Investigation and Focused SCM Report due date to 9 June 2014.

Please respond at your earliest convenience. Thank you for your consideration.

Joseph Muehleck
Project Manager
jmuehleck@eticeng.com
www.eticeng.com
ETIC Engineering, Inc.
2285 Morello Ave.
Pleasant Hill, CA 94523
Tel: 925-602-4710 x2127
Fax: 925-602-4720
Mobile: 925-301-7428

Appendix B

Drilling and Well Installation Permit

Alameda County Public Works Agency - Water Resources Well Permit

Public Works Agency
Alameda County

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

Application Approved on: 10/16/2013 By jamesy

Permit Numbers: W2013-0873 to W2013-0874
Permits Valid from 11/07/2014 to 11/07/2014

Application Id:	1381772486401	**City of Project Site:**	Oakland
Site Location:	3450 35th Ave, Oakland, CA		
Project Start Date:	11/04/2013	**Completion Date:**	11/13/2013
Assigned Inspector:	Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org		
Extension Start Date:	11/07/2014	**Extension End Date:**	11/07/2014
Extension Count:	2	**Extended By:**	priest

Applicant:	GREGG - Chris Pruner 950 Howe Road, Martinez, CA 94553	**Phone:** 925-313-5800
Property Owner:	FWS Highland LLC 99 S Hill Drive, Brisbane, CA 94005	**Phone:** 415-468-5000
Client:	ExxonMobil Corp 4096 Piedmont Ave #194, Oakland, CA 94611	**Phone:** 510-547-8196

	Total Due:	$530.00
Receipt Number: WR2013-0399	**Total Amount Paid:**	$530.00
Payer Name : ETIC Engineering	Paid By: CHECK	**PAID IN FULL**

Works Requesting Permits:

Well Construction-Vapor monitoring well-Vapor monitoring well - 6 Wells
Driller: Gregg - Lic #: 485165 - Method: other **Work Total: $265.00**

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2013-0873	10/16/2013	02/02/2014	V1	4.00 in.	0.40 in.	4.00 ft	7.00 ft
W2013-0873	10/16/2013	02/02/2014	V2	4.00 in.	0.40 in.	4.00 ft	7.00 ft
W2013-0873	10/16/2013	02/02/2014	V3	4.00 in.	0.40 in.	4.00 ft	7.00 ft
W2013-0873	10/16/2013	02/02/2014	V4	4.00 in.	0.40 in.	4.00 ft	7.00 ft
W2013-0873	10/16/2013	02/02/2014	V5	4.00 in.	0.40 in.	4.00 ft	7.00 ft
W2013-0873	10/16/2013	02/02/2014	V6	4.00 in.	0.40 in.	4.00 ft	7.00 ft

Specific Work Permit Conditions

1. Drilling Permit(s) can be voided/ cancelled only in writing. It is the applicant's responsibility to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.

2. Compliance with the above well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate state reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days, including permit number and site map.

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and

all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

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

5. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

6. No changes in construction procedures or well type shall change, as described on this permit application. This permit may be voided if it contains incorrect information.

7. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.

8. Applicant shall contact Steve Miller for an inspection time at (510) 670-5517 or email to stevem@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

9. Remove the Christy box or similar structure. Overdrill or clean out to original depth. After the seal has set, backfill the remaining hole with concrete or compacted material to match existing.

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

11. Vapor monitoring wells constructed with tubing shall be decomissioned by complete removal of tubing, grout seal, and fill material of sand or bentonite. Fill material may be removed by hand auger if material can be removed completely.

Vapor monitoring wells constructed with pvc pipe less than 2" shall be overdrilled to total depth.

Vapor monitoring wells constructed with 2" pvc pipe or larger may be grouted by tremie pipe (any depth) or pressure grouted (less than 30', 25 psi for 5 min).

Borehole(s) for Investigation-Environmental/Monitorinig Study - 11 Boreholes
Driller: Gregg - Lic #: 485165 - Method: other **Work Total: $265.00**

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2013-0874	10/16/2013	02/02/2014	11	3.00 in.	100.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or

with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

4. Applicant shall contact Steve Miller for an inspection time at (510) 670-5517 or email to stevem@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

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

6. NOTE:
Under California laws, the owner/operator are responsible for reporting the contamination to the governmental regulatory agencies under Section 25295(a). The owner/operator is liable for civil penalties under Section 25299(a)(4) and criminal penalties under Section 25299(d) for failure to report a leak. The owner/operator is liable for civil penalties under Section 25299(b)(4) for knowing failure to ensure compliance with the law by the operator. These penalty provisions do not apply to a potential buyer.

7. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

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

Appendix C

Boring Log, Well Construction Diagram, and DWR 188 Well Completion Report

ETIC ENGINEERING

PROJECT NAME: FORMER EXXON SERVICE STATION 70234
PROJECT NO: 14-070234-UP
LOCATION: 3450 35TH AVE, OAKLAND, CA

DRILLING COMPANY: Gregg Drilling	LICENSE No.: C57-485165	ELEVATION AND DATUM (FT.): -	
DRILLING METHOD 1: Hand Auger	DRILLER: Armando Torres	DATE STARTED: 11/7/14	DATE FINISHED: 11/7/14
DRILLING METHOD 2: -	DRILL BIT: -	BORING DEPTH (FT.) 6.7	WELL DEPTH (FT.) 6.4
DRILLING EQUIPMENT: 3" Hand Auger	SAMPLER: Slide Hammer/ 3"Ø Shelby Tube	NO. OF SAMPLES: SOIL: 3	GW: 0 / OTHER: -
SIZE AND TYPE OF CASING: 1/4" Ø stainless steel		DEPTH TO WATER (FT.) FIRST: - / COMPLETION: - / OTHER: -	
TYPE OF PERFORATION: Stainless steel 0.0057" mesh	FROM 5.9 TO 6.4 FT.	TIME: - - -	
SIZE AND TYPE OF FILTER PACK: #3 sand	FROM 5.7 TO 6.7 FT.	LOGGED BY: Karina Gillette	CHECKED BY:
TYPE OF SEAL: Dry Granular Bentonite	FROM 4.7 TO 5.7 FT.		
TYPE OF SEAL: Bentonite Slurry	FROM 0.5 TO 4.7 FT.		

DEPTH (FT.)	DESCRIPTION	LITHOLOGY	USCS	WELL CONSTRUCTION DIAGRAM	WATER LEVEL	SAMPLES: DRIVEN (in.)	SAMPLES: RECOVERY (in.)	SAMPLES: SAMPLING INTERVAL	SAMPLES: BLOW COUNTS (per 6-in.)	SAMPLES: OVM (ppmv)	REMARKS (Drilling Rate, Fluid Loss, Odor, etc.)
	Concrete + traffic box 0-0.5 Ft.										
1	Concrete SANDY SILT: Dark yellowish brown (10YR 4/4), stiff, moist.		ML								Swagelok valve on top of stainless steel tubing.
2											
3	CLAY: Yellowish brown (10YR 5/6), medium plasticity, very stiff, moist.		CL							0	V6, 3 collected @ 1050 on 11/7/14.
4											
5											
6						12	12				V6, 6 collected @ 1120 on 11/7/14.
7	SANDY SILT: Dark yellowish brown (10YR 4/6), firm, moist, fine to medium sand, trace angular gravel up to 2"Ø.		ML			6	6			0	V6, 6.5 collected at 1145 on 11/7/14.
8	END OF BORING AT 6.7 feet.										
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

BORING NO.: V6

ETIC ENGINEERING

LETTER OF TRANSMITTAL

TO:

Department of Water Resources
(DWR Forms 188)
North Central Region
3500 Industrial Blvd
West Sacramento, CA 95691

DATE: December 15, 2014		
PROJECT NO.	TASK	DEPT
14-070234-UP	2.7	
RE: Well Completion Reports Former Exxon Service Station 70234 3450 35th Avenue Oakland, CA		

Enclosed are the following items:

No. Copies	Description
1	Well Completion Report (DWR 188) No. e0246105 for Well V6
	Each 188 form includes the log, well construction diagram, and site map

These are transmitted as checked below:

☒ For your use ☒ As requested

Message:

Enclosed is the Well Completion Report (DWR form 188) with the corresponding geologic log, well construction diagram, and site map for one soil vapor monitoring wells installed at the Former Exxon Service Station 70234 in Oakland, California. Copies have also been sent to the Alameda County Public Works Agency (the permitting agency).

Please contact me at (925) 602-4710, ext. 2133 with any questions you may have.

Respectfully yours,

Karina Gillette
ETIC Engineering, Inc.

Copy to: **Signed**

Sent via:

☐ Federal Express Priority ☐ Federal Express Standard ☐ Federal Express 2-Day
☐ Express Mail ☐ Priority Mail ☐ Hand delivery ☐ Courier Service
☐ UPS Ground ☒ First Class Mail ☐ Other

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

State of California
Well Completion Report

Refer to Instruction Pamphlet

No. e0246105

Page 1 of 3

Owner's Well Number V6

Date Work Began 11/07/2014 Date Work Ended 11/7/2014

Local Permit Agency Alameda County Public Works Agency

Permit Number W2013-0873 Permit Date 10/16/13

DWR Use Only – Do Not Fill In

State Well Number/Site Number

Latitude N Longitude W

APN/TRS/Other

Geologic Log

Orientation ⦿ Vertical ○ Horizontal ○ Angle Specify

Drilling Method Hand Auger Drilling Fluid

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc
		See attached geologic log.

Total Depth of Boring 6.7 Feet

Total Depth of Completed Well 6.4 Feet

Well Owner

Name ExxonMobil Corp.

Mailing Address 4096 Piedmont Ave #194

City Oakland State CA Zip 94611

Well Location

Address 3450 35th Avenue

City Oakland County Alameda

Latitude 37 Deg. 47 Min. 34 Sec. N Longitude 122 Deg. 12 Min. 6 Sec. W

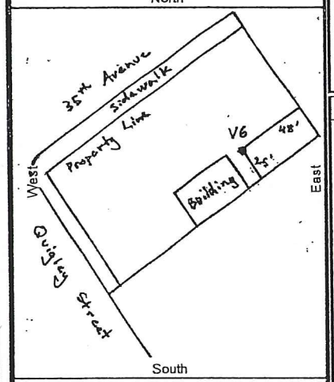
Datum NAD83 Dec. Lat. 37.792658 Dec. Long. -122.201766

APN Book 30 Page 1980 Parcel 20-1

Township 2S Range 3W Section 4

Location Sketch

(Sketch must be drawn by hand after form is printed.)



Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

⦿ New Well
○ Modification/Repair
○ Deepen
○ Other
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

○ Water Supply
☐ Domestic ☐ Public
☐ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
⦿ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other

Water Level and Yield of Completed Well

Depth to first water (Feet below surface)

Depth to Static Water Level (Feet) Date Measured

Estimated Yield * (GPM) Test Type

Test Length (Hours) Total Drawdown (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
0	5.9	3	Blank	304 Stainless Steel	0.0625	0.25		
5.9	6.4	3	Screen	304 Stainless Steel		0.4	Mesh	0.0057

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0	0.5	Concrete	Well Box/Concrete
0.5	4.7	Bentonite	Hydrated Granular Bentonite
4.7	5.7	Bentonite	Dry Bentonite
5.7	6.7	Filter Pack	#3 Sand

Attachments

☑ Geologic Log
☑ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☑ Other Site Map

Attach additional information, if it exists.

Certification Statement

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief

Name Gregg Drilling & Testing, Inc. (Person, Firm or Corporation)

950 Howe Avenue (Address) Martinez (City) CA (State) 94553 (Zip)

Signed (C-57 Licensed Water Well Contractor) 12/15/14 (Date Signed) C57-485165 (C-57 License Number)

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

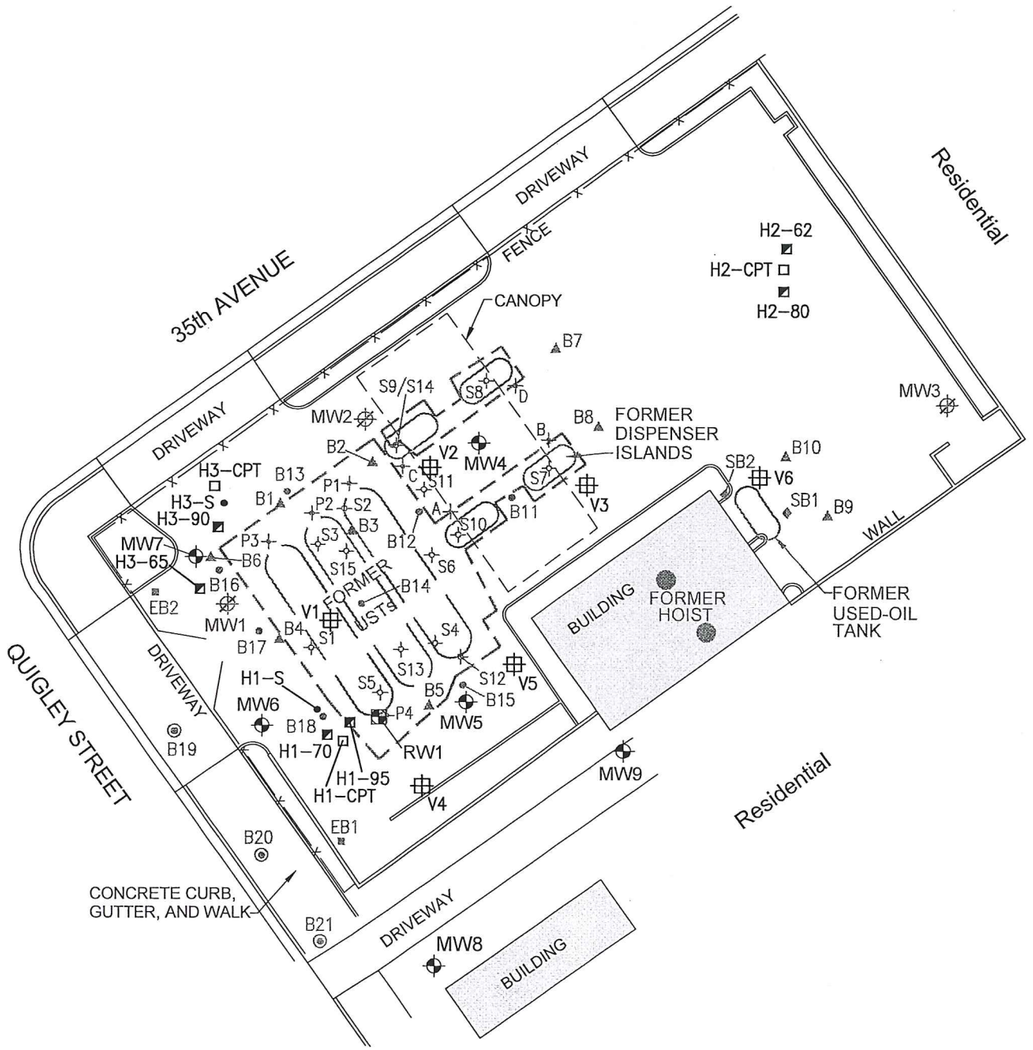
ETIC ENGINEERING

PROJECT NAME: FORMER EXXON SERVICE STATION 70234
PROJECT NO: 14-070234-UP
LOCATION: 3450 35TH AVE, OAKLAND, CA

DRILLING COMPANY: Gregg Drilling	LICENSE No.: C57-485165	ELEVATION AND DATUM (FT.): -	
DRILLING METHOD 1: Hand Auger	DRILLER: Armando Torres	DATE STARTED: 11/7/14	DATE FINISHED: 11/7/14
DRILLING METHOD 2: -	DRILL BIT: -	BORING DEPTH (FT.) 6.7	WELL DEPTH (FT.) 6.4
DRILLING EQUIPMENT: 3" Hand Auger	SAMPLER: Slide Hammer/ 3"Ø Shelby Tube	NO. OF SAMPLES: SOIL: 3	GW: 0 / OTHER: -
SIZE AND TYPE OF CASING: 1/4" Ø stainless steel		DEPTH TO WATER (FT.) ▽ FIRST: -	▼COMPLETION: - / OTHER: -
TYPE OF PERFORATION: Stainless steel 0.0057" mesh	FROM 5.9 TO 6.4 FT.	TIME: -	- / -
SIZE AND TYPE OF FILTER PACK: #3 sand	FROM 5.7 TO 6.7 FT.	LOGGED BY: Karina Gillette	CHECKED BY:
TYPE OF SEAL: Dry Granular Bentonite	FROM 4.7 TO 5.7 FT.		
TYPE OF SEAL: Bentonite Slurry	FROM 0.5 TO 4.7 FT.		

DEPTH (FT.)	DESCRIPTION	LITHOLOGY	USCS	WELL CONSTRUCTION DIAGRAM	WATER LEVEL	SAMPLES: DRIVEN (in.)	SAMPLES: RECOVERY (in.)	SAMPLES: SAMPLING INTERVAL	SAMPLES: BLOW COUNTS (per 6-in.)	SAMPLES: OVM (ppmv)	REMARKS (Drilling Rate, Fluid Loss, Odor, etc.)
	Concrete + traffic box 0-0.5 Ft.										
1	Concrete										Swagelok valve on top of stainless steel tubing.
2	SANDY SILT: Dark yellowish brown (10YR 4/4), stiff, moist.		ML								
3	CLAY: Yellowish brown (10YR 5/6), medium plasticity, very stiff, moist.									0	V6, 3 collected @ 1050 on 11/7/14.
4			CL								
5						12	12				V6, 6 collected @ 1120 on 11/7/14.
6						6	6			0	V6, 6.5 collected at 1145 on 11/7/14.
7	SANDY SILT: Dark yellowish brown (10YR 4/6), firm, moist, fine to medium sand, trace angular gravel up to 2"Ø.		ML								
8	END OF BORING AT 6.7 feet.										
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

BORING NO.: V6



LEGEND:

- EXCAVATED AREA
- GROUNDWATER MONITORING WELL
- GROUNDWATER MONITORING WELL (by others)
- DESTROYED GROUNDWATER MONITORING WELL
- GROUNDWATER RECOVERY WELL
- V1 SOIL VAPOR MONITORING WELL
- H3–CPT CONE PENETROMETER TESTING BORING
- H3–65 HYDROPUNCH GROUNDWATER SAMPLING LOCATION (WITH DEPTH BELOW GROUND SURFACE NOTED)
- H3–S SOIL BORING
- SOIL BORING (GTI, 1986)
- SOIL BORING (HLA, 1988)
- SOIL BORING (Alton, 1991)
- SOIL SAMPLE (Alton, 1991)
- SOIL SAMPLE (TRC, 2002)
- SOIL BORING (ERI, 2007)
- SOIL BORING (ERI, 2009)

0 15 30

1″ = 30 FEET

12/12/2014, 12:32, G:\Graphics\14\070234\SITE1214.dwg, Tab: F2

ETIC ENGINEERING

2285 MORELLO AVENUE
PLEASANT HILL, CA 94523
(925) 602-4710
eticeng.com

14-070234-UP	EXXONMOBIL OIL CORPORATION
OR: TEN	SITE MAP
DR: AJW	FORMER EXXON SERVICE STATION 70234
CK:	3450 35th AVENUE
FR:	OAKLAND, CALIFORNIA

FIGURE: 2

Appendix D

Waste Disposal Documentation

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
N/A	1	800-575-1066	11072014A

GENERATOR

5. Generator's Name and Mailing Address
Exxon Mobil Oil Corporation (70234)
2555 W. 190TH Street, #1105
Torrance, CA 90504 USA
Generator's Phone: 310-212-2938-32

Generator's Site Address (if different than mailing address)
3450 35th Ave
Oakland, CA 94604 USA

6. Transporter 1 Company Name
DILLARD ENVIRONMENTAL SERVICES

U.S. EPA ID Number
CAD982523433

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
JUSTCAT, INC.
1105 AIRPORT DRIVE
RIO VISTA, CA 94571
Facility's Phone: 520-753-1829

U.S. EPA ID Number

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non Hazardous Waste Liquid (Monitoring Well Purge Water)	~~2~~ 1	DM	~~165~~ 55	G	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
DES JOB # 911-233 1x55

ON BEHALF OF EXXONMOBIL OIL CORPORATION:

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: John Haberland
Signature: John Haberland
Month: 11 Day: 20 Year: 14

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: KEN WILSON
Signature: K Wilson
Month: 11 Day: 20 Year: 14

Transporter 2 Printed/Typed Name
Signature
Month: Day: Year:

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17a

Printed/Typed Name: MICHAEL WHITEHEAD
Signature
Month: 11 Day: 20 Year: 14

169-BLC-O 5 11977 (Rev. 9/09)

DESIGNATED FACILITY TO GENERATOR

NOV 24 2014

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
N/A	1	800-675-1066	11102014A

GENERATOR

5. Generator's Name and Mailing Address
ExxonMobil Oil Corporation (70234)
2555 W. 190TH Street, #1105
Torrance, CA 90504 USA
Generator's Phone: 310-212-2936-32

Generator's Site Address (if different than mailing address)
3450 35th Ave
Oakland, CA 94604 USA

6. Transporter 1 Company Name
DILLARD ENVIRONMENTAL SERVICES
U.S. EPA ID Number
CAD982523433

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
US ECOLOGY CORPORATION
HIGHWAY 95 - 12 MILES SOUTH OF BEATTY
BEATTY, NV 89003 USA
U.S. EPA ID Number
NVT330010000
Facility's Phone: 800-239-3943

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1. Non Hazardous Waste Solid (Soil drill cuttings)	~~4~~ 3 KG	DM	~~1200~~ 1200 KG	P
2.				
3.				
4.				

13. Special Handling Instructions and Additional Information
DES JOB #911-233
PF#070128043-5734 3x55
ON BEHALF OF EXXONMOBIL OIL CORPORATION

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: John Haberland
Signature: John Haberland
Month: 11 Day: 20 Year: 14

INTL

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: KEN WILSON
Signature: K Wilson
Month: 11 Day: 20 Year: 14

Transporter 2 Printed/Typed Name
Signature
Month: Day: Year:

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

17b. Alternate Facility (or Generator) Manifest Reference Number:
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Brianna Thompson
Signature:
Month: 12 Day: 9 Year: 14

159-BCC-D 5 11977 (Rev. 9/09)

DESIGNATED FACILITY TO GENERATOR

NOV 24 2014

Appendix E

Laboratory Analytical Reports and Chain-of-Custody Documentation

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WORK ORDER NUMBER: 14-11-0690

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ETIC Engineering, Inc.

Client Project Name: ExxonMobil 70234

Attention: Sean Bowen
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Approved for release on 11/21/2014 by:
Cecile deGuia
Project Manager

ResultLink

Email your PM

ACCREDITED IN ACCORDANCE WITH nelac

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Contents

Client Project Name: ExxonMobil 70234
Work Order Number: 14-11-0690

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Work Order Narrative

Work Order: 14-11-0690 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 11/08/14. They were assigned to Work Order 14-11-0690.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: http://www.calscience.com/PDF/New_York.pdf

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

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Return to Contents

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Sample Summary

Client:	ETIC Engineering, Inc. 898 N. Fair Oaks Avenue, Suite A Pasadena, CA 91103-3065	Work Order:	14-11-0690
		Project Name:	ExxonMobil 70234
		PO Number:	4410233413
		Date/Time Received:	11/08/14 09:00
		Number of Containers:	3
Attn:	Sean Bowen		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
V6,3	14-11-0690-1	11/07/14 10:50	1	Solid
V6,6	14-11-0690-2	11/07/14 11:20	1	Solid
V6,6.5	14-11-0690-3	11/07/14 11:45	1	Solid

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Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Project: ExxonMobil 70234

Date Received: 11/08/14
Work Order: 14-11-0690
Preparation: EPA 5030C
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V6,3	**14-11-0690-1-A**	**11/07/14 10:50**	**Solid**	**GC 1**	**11/10/14**	**11/11/14 01:17**	**141110L072**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	ND	0.49	0.41	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	85	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V6,6.5	**14-11-0690-3-A**	**11/07/14 11:45**	**Solid**	**GC 1**	**11/10/14**	**11/11/14 03:04**	**141110L072**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	ND	0.50	0.42	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	83	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-571-1973**	**N/A**	**Solid**	**GC 1**	**11/10/14**	**11/11/14 00:06**	**141110L072**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	ND	0.50	0.42	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	85	42-126	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Project: ExxonMobil 70234

Date Received: 11/08/14
Work Order: 14-11-0690
Preparation: EPA 3545
Method: EPA 8270C SIM PAHs
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V6,3	**14-11-0690-1-A**	**11/07/14 10:50**	**Solid**	**GC/MS AAA**	**11/11/14**	**11/12/14 20:56**	**141111L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Naphthalene	ND	0.020	0.0059	1.00	
2-Methylnaphthalene	ND	0.020	0.0036	1.00	
1-Methylnaphthalene	ND	0.020	0.0040	1.00	
Acenaphthylene	ND	0.020	0.0030	1.00	
Acenaphthene	ND	0.020	0.0036	1.00	
Fluorene	ND	0.020	0.0029	1.00	
Phenanthrene	ND	0.020	0.0020	1.00	
Anthracene	ND	0.020	0.0016	1.00	
Fluoranthene	ND	0.020	0.0019	1.00	
Pyrene	ND	0.020	0.0020	1.00	
Benzo (a) Anthracene	ND	0.020	0.0031	1.00	
Chrysene	ND	0.020	0.0023	1.00	
Benzo (k) Fluoranthene	ND	0.020	0.0028	1.00	
Benzo (b) Fluoranthene	ND	0.020	0.0020	1.00	
Benzo (a) Pyrene	ND	0.020	0.0020	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.020	0.0021	1.00	
Dibenz (a,h) Anthracene	ND	0.020	0.0021	1.00	
Benzo (g,h,i) Perylene	ND	0.020	0.0019	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	67	22-130	
Nitrobenzene-d5	58	20-145	
p-Terphenyl-d14	75	33-147	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

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Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Project: ExxonMobil 70234

Date Received: 11/08/14
Work Order: 14-11-0690
Preparation: EPA 3545
Method: EPA 8270C SIM PAHs
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V6,6.5	**14-11-0690-3-A**	**11/07/14 11:45**	**Solid**	**GC/MS AAA**	**11/11/14**	**11/12/14 21:20**	**141111L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Naphthalene	ND	0.020	0.0060	1.00	
2-Methylnaphthalene	ND	0.020	0.0036	1.00	
1-Methylnaphthalene	ND	0.020	0.0040	1.00	
Acenaphthylene	ND	0.020	0.0030	1.00	
Acenaphthene	ND	0.020	0.0036	1.00	
Fluorene	ND	0.020	0.0029	1.00	
Phenanthrene	ND	0.020	0.0020	1.00	
Anthracene	ND	0.020	0.0016	1.00	
Fluoranthene	ND	0.020	0.0020	1.00	
Pyrene	ND	0.020	0.0020	1.00	
Benzo (a) Anthracene	ND	0.020	0.0031	1.00	
Chrysene	ND	0.020	0.0023	1.00	
Benzo (k) Fluoranthene	ND	0.020	0.0028	1.00	
Benzo (b) Fluoranthene	ND	0.020	0.0020	1.00	
Benzo (a) Pyrene	ND	0.020	0.0020	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.020	0.0021	1.00	
Dibenz (a,h) Anthracene	ND	0.020	0.0021	1.00	
Benzo (g,h,i) Perylene	ND	0.020	0.0019	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	76	22-130	
Nitrobenzene-d5	69	20-145	
p-Terphenyl-d14	84	33-147	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Project: ExxonMobil 70234

Date Received: 11/08/14
Work Order: 14-11-0690
Preparation: EPA 3545
Method: EPA 8270C SIM PAHs
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-06-010-2249**	**N/A**	**Solid**	**GC/MS AAA**	**11/11/14**	**11/11/14 19:52**	**141111L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Naphthalene	ND	0.020	0.0060	1.00	
2-Methylnaphthalene	ND	0.020	0.0036	1.00	
1-Methylnaphthalene	ND	0.020	0.0040	1.00	
Acenaphthylene	ND	0.020	0.0030	1.00	
Acenaphthene	ND	0.020	0.0036	1.00	
Fluorene	ND	0.020	0.0029	1.00	
Phenanthrene	ND	0.020	0.0020	1.00	
Anthracene	ND	0.020	0.0016	1.00	
Fluoranthene	ND	0.020	0.0020	1.00	
Pyrene	ND	0.020	0.0020	1.00	
Benzo (a) Anthracene	ND	0.020	0.0031	1.00	
Chrysene	ND	0.020	0.0023	1.00	
Benzo (k) Fluoranthene	ND	0.020	0.0028	1.00	
Benzo (b) Fluoranthene	ND	0.020	0.0020	1.00	
Benzo (a) Pyrene	ND	0.020	0.0020	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.020	0.0021	1.00	
Dibenz (a,h) Anthracene	ND	0.020	0.0021	1.00	
Benzo (g,h,i) Perylene	ND	0.020	0.0019	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	87	22-130	
Nitrobenzene-d5	74	20-145	
p-Terphenyl-d14	88	33-147	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

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Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Project: ExxonMobil 70234

Date Received: 11/08/14
Work Order: 14-11-0690
Preparation: EPA 5030C
Method: EPA 8260B
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V6,3	**14-11-0690-1-A**	**11/07/14 10:50**	**Solid**	**GC/MS OO**	**11/10/14**	**11/11/14 23:07**	**141111L019**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	0.0051	0.00013	1.00	
Toluene	ND	0.0051	0.00052	1.00	
Ethylbenzene	ND	0.0051	0.00015	1.00	
o-Xylene	ND	0.0051	0.00057	1.00	
p/m-Xylene	ND	0.0051	0.00027	1.00	
Xylenes (total)	ND	0.0051	0.00027	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0051	0.00030	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.051	0.0053	1.00	
Diisopropyl Ether (DIPE)	ND	0.010	0.00049	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.010	0.00052	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.010	0.00036	1.00	
Naphthalene	ND	0.051	0.00083	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	96	60-132	
Dibromofluoromethane	97	63-141	
1,2-Dichloroethane-d4	98	62-146	
Toluene-d8	98	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Project: ExxonMobil 70234

Date Received: 11/08/14
Work Order: 14-11-0690
Preparation: EPA 5030C
Method: EPA 8260B
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
V6,6.5	**14-11-0690-3-A**	**11/07/14 11:45**	**Solid**	**GC/MS OO**	**11/10/14**	**11/11/14 23:34**	**141111L019**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	0.0051	0.00013	1.00	
Toluene	ND	0.0051	0.00053	1.00	
Ethylbenzene	ND	0.0051	0.00016	1.00	
o-Xylene	ND	0.0051	0.00057	1.00	
p/m-Xylene	ND	0.0051	0.00027	1.00	
Xylenes (total)	ND	0.0051	0.00027	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0051	0.00030	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.051	0.0053	1.00	
Diisopropyl Ether (DIPE)	ND	0.010	0.00049	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.010	0.00052	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.010	0.00036	1.00	
Naphthalene	ND	0.051	0.00083	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	97	60-132	
Dibromofluoromethane	100	63-141	
1,2-Dichloroethane-d4	100	62-146	
Toluene-d8	99	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Date Received: 11/08/14
Work Order: 14-11-0690
Preparation: EPA 5030C
Method: EPA 8260B
Units: mg/kg

Project: ExxonMobil 70234

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-796-9097**	**N/A**	**Solid**	**GC/MS OO**	**11/11/14**	**11/11/14 16:18**	**141111L019**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	0.0050	0.00013	1.00	
Toluene	ND	0.0050	0.00052	1.00	
Ethylbenzene	ND	0.0050	0.00015	1.00	
o-Xylene	ND	0.0050	0.00056	1.00	
p/m-Xylene	ND	0.0050	0.00027	1.00	
Xylenes (total)	ND	0.0050	0.00027	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0050	0.00030	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.050	0.0052	1.00	
Diisopropyl Ether (DIPE)	ND	0.010	0.00048	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.010	0.00051	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.010	0.00035	1.00	
Naphthalene	ND	0.050	0.00081	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	95	60-132	
Dibromofluoromethane	96	63-141	
1,2-Dichloroethane-d4	96	62-146	
Toluene-d8	98	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Quality Control - Spike/Spike Duplicate

ETIC Engineering, Inc.		Date Received:	11/08/14
898 N. Fair Oaks Avenue, Suite A		Work Order:	14-11-0690
Pasadena, CA 91103-3065		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: ExxonMobil 70234			Page 1 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
V6,3	**Sample**	**Solid**	**GC 1**	**11/10/14**	**11/11/14 01:17**	**141110S039**
V6,3	**Matrix Spike**	**Solid**	**GC 1**	**11/10/14**	**11/11/14 01:53**	**141110S039**
V6,3	**Matrix Spike Duplicate**	**Solid**	**GC 1**	**11/10/14**	**11/11/14 02:29**	**141110S039**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	ND	10.00	10.61	106	9.941	99	48-114	7	0-23	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Project: ExxonMobil 70234

Date Received: 11/08/14
Work Order: 14-11-0690
Preparation: EPA 3545
Method: EPA 8270C SIM PAHs
Page 2 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-11-0754-3	**Sample**	**Solid**	**GC/MS AAA**	**11/11/14**	**11/11/14 20:15**	**141111S01**
14-11-0754-3	**Matrix Spike**	**Solid**	**GC/MS AAA**	**11/11/14**	**11/11/14 19:06**	**141111S01**
14-11-0754-3	**Matrix Spike Duplicate**	**Solid**	**GC/MS AAA**	**11/11/14**	**11/11/14 19:29**	**141111S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Naphthalene	ND	0.2000	0.1829	91	0.2081	104	20-150	13	0-33	
2-Methylnaphthalene	ND	0.2000	0.2030	101	0.2296	115	29-137	12	0-31	
1-Methylnaphthalene	ND	0.2000	0.1918	96	0.2125	106	34-136	10	0-29	
Acenaphthylene	ND	0.2000	0.1908	95	0.2087	104	29-131	9	0-32	
Acenaphthene	ND	0.2000	0.1847	92	0.2041	102	29-137	10	0-28	
Fluorene	ND	0.2000	0.1969	98	0.2117	106	36-132	7	0-27	
Phenanthrene	ND	0.2000	0.1766	88	0.1890	95	20-144	7	0-27	
Anthracene	ND	0.2000	0.1848	92	0.1962	98	26-134	6	0-27	
Fluoranthene	ND	0.2000	0.1901	95	0.2014	101	20-151	6	0-26	
Pyrene	ND	0.2000	0.1897	95	0.2021	101	20-150	6	0-32	
Benzo (a) Anthracene	ND	0.2000	0.1831	92	0.1938	97	24-150	6	0-24	
Chrysene	ND	0.2000	0.1788	89	0.1897	95	25-145	6	0-28	
Benzo (k) Fluoranthene	ND	0.2000	0.1721	86	0.1831	92	28-148	6	0-26	
Benzo (b) Fluoranthene	ND	0.2000	0.1765	88	0.1893	95	21-153	7	0-26	
Benzo (a) Pyrene	ND	0.2000	0.1703	85	0.1813	91	29-149	6	0-22	
Indeno (1,2,3-c,d) Pyrene	ND	0.2000	0.1951	98	0.2142	107	20-154	9	0-25	
Dibenz (a,h) Anthracene	ND	0.2000	0.1885	94	0.2110	105	20-132	11	0-26	
Benzo (g,h,i) Perylene	ND	0.2000	0.2131	107	0.2288	114	20-148	7	0-27	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

ETIC Engineering, Inc.		Date Received:	11/08/14
898 N. Fair Oaks Avenue, Suite A		Work Order:	14-11-0690
Pasadena, CA 91103-3065		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: ExxonMobil 70234			Page 3 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-11-0767-1	**Sample**	**Solid**	**GC/MS OO**	**11/11/14**	**11/11/14 17:12**	**141111S020**
14-11-0767-1	**Matrix Spike**	**Solid**	**GC/MS OO**	**11/11/14**	**11/11/14 17:39**	**141111S020**
14-11-0767-1	**Matrix Spike Duplicate**	**Solid**	**GC/MS OO**	**11/11/14**	**11/11/14 18:07**	**141111S020**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	0.05000	0.04455	89	0.04194	84	61-127	6	0-20	
Toluene	ND	0.05000	0.04223	84	0.03877	78	63-123	9	0-20	
Ethylbenzene	ND	0.05000	0.04053	81	0.03580	72	57-129	12	0-22	
o-Xylene	ND	0.05000	0.03998	80	0.03538	71	70-130	12	0-30	
p/m-Xylene	ND	0.1000	0.07937	79	0.06919	69	70-130	14	0-30	HX
Methyl-t-Butyl Ether (MTBE)	ND	0.05000	0.04300	86	0.04167	83	57-123	3	0-21	
Tert-Butyl Alcohol (TBA)	ND	0.2500	0.2438	98	0.2323	93	30-168	5	0-34	
Diisopropyl Ether (DIPE)	ND	0.05000	0.04296	86	0.04153	83	57-129	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	0.05000	0.04108	82	0.04032	81	55-127	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	0.05000	0.04224	84	0.04081	82	58-124	3	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

ETIC Engineering, Inc.		Date Received:	11/08/14
898 N. Fair Oaks Avenue, Suite A		Work Order:	14-11-0690
Pasadena, CA 91103-3065		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: ExxonMobil 70234			Page 1 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-571-1973	**LCS**	**Solid**	**GC 1**	**11/10/14**	**11/10/14 23:30**	**141110L072**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Gasoline	10.00	10.49	105	70-124	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

ETIC Engineering, Inc.
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Project: ExxonMobil 70234

Date Received: 11/08/14
Work Order: 14-11-0690
Preparation: EPA 3545
Method: EPA 8270C SIM PAHs
Page 2 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-06-010-2249	**LCS**	**Solid**	**GC/MS AAA**	**11/11/14**	**11/11/14 18:43**	**141111L01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Naphthalene	0.2000	0.1636	82	51-129	38-142	
2-Methylnaphthalene	0.2000	0.1837	92	50-127	37-140	
1-Methylnaphthalene	0.2000	0.1691	85	54-132	41-145	
Acenaphthylene	0.2000	0.1724	86	50-123	38-135	
Acenaphthene	0.2000	0.1680	84	53-125	41-137	
Fluorene	0.2000	0.1775	89	55-127	43-139	
Phenanthrene	0.2000	0.1615	81	50-122	38-134	
Anthracene	0.2000	0.1703	85	50-132	36-146	
Fluoranthene	0.2000	0.1719	86	55-127	43-139	
Pyrene	0.2000	0.1767	88	50-134	36-148	
Benzo (a) Anthracene	0.2000	0.1698	85	50-133	36-147	
Chrysene	0.2000	0.1650	82	51-129	38-142	
Benzo (k) Fluoranthene	0.2000	0.1608	80	49-150	32-167	
Benzo (b) Fluoranthene	0.2000	0.1598	80	50-142	35-157	
Benzo (a) Pyrene	0.2000	0.1572	79	50-134	36-148	
Indeno (1,2,3-c,d) Pyrene	0.2000	0.1863	93	50-148	34-164	
Dibenz (a,h) Anthracene	0.2000	0.1859	93	50-133	36-147	
Benzo (g,h,i) Perylene	0.2000	0.1988	99	50-130	37-143	

Total number of LCS compounds: 18
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

ETIC Engineering, Inc.		Date Received:	11/08/14
898 N. Fair Oaks Avenue, Suite A		Work Order:	14-11-0690
Pasadena, CA 91103-3065		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: ExxonMobil 70234			Page 3 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-796-9097	**LCS**	**Solid**	**GC/MS OO**	**11/11/14**	**11/11/14 15:19**	**141111L019**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Benzene	0.05000	0.05330	107	78-120	
Toluene	0.05000	0.05249	105	77-120	
Ethylbenzene	0.05000	0.05471	109	76-120	
o-Xylene	0.05000	0.05375	107	75-125	
p/m-Xylene	0.1000	0.1082	108	75-125	
Methyl-t-Butyl Ether (MTBE)	0.05000	0.04325	87	77-120	
Tert-Butyl Alcohol (TBA)	0.2500	0.2608	104	68-122	
Diisopropyl Ether (DIPE)	0.05000	0.04681	94	78-120	
Ethyl-t-Butyl Ether (ETBE)	0.05000	0.04347	87	78-120	
Tert-Amyl-Methyl Ether (TAME)	0.05000	0.04324	86	75-120	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

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Glossary of Terms and Qualifiers

Work Order: 14-11-0690 Page 1 of 1

Qualifiers	Definition
AZ	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
B	Analyte was present in the associated method blank.
BA	The MS/MSD RPD was out of control due to suspected matrix interference.
BB	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
DF	Reporting limits elevated due to matrix interferences.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
GE	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
HD	Chromat. profile inconsistent with pattern(s) of ref. fuel stnds.
HO	High concentration matrix spike recovery out of limits
HT	Analytical value calculated using results from associated tests.
HX	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS was in control.
IL	Relative percent difference out of control.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
LD	Analyte presence was not confirmed by second column or GC/MS analysis.
LP	The LCS and/or LCSD recoveries for this analyte were above the upper control limit. The associated sample was non-detected. Therefore, the sample data was reported without further clarification.
LQ	LCS recovery above method control limits.
LR	LCS recovery below method control limits.
ND	Parameter not detected at the indicated reporting limit.
QO	Compound did not meet method-described identification guidelines. Identification was based on additional GC/MS characteristics.
RU	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
SG	A silica gel cleanup procedure was performed.
SN	See applicable analysis comment.

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

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Return to Contents

Cecile L de Guia

From: Sean Bowen [sbowen@eticeng.com]
Sent: Monday, November 10, 2014 12:54 PM
To: Cecile L de Guia
Cc: Sandy Tat
Subject: RE: ExxonMobil 70234; 14-11-0690

Yes please analyze as SIM.

Sean Bowen
Project Manager
sbowen@eticeng.com
www.eticeng.com
ETIC Engineering, Inc.
898 North Fair Oaks Ave.
Suite A
Pasadena, CA 91103
Tel: 626-432-5999 x15
Fax: 626-432-5998
Mobile: 626-688-0563

Return to Contents

From: Cecile L de Guia [mailto:CecileLdeGuia@eurofinsUS.com]
Sent: Monday, November 10, 2014 12:27 PM
To: Sean Bowen
Cc: Sandy Tat
Subject: ExxonMobil 70234; 14-11-0690
Importance: High

Good Afternoon Sean,

Please confirm if the PAHs by EPA 8270C should be analyze as SIM?
Thank you.

Best regards,
Cecile de Guia
Project Manager

Eurofins Calscience
7440 Lincoln Way
Garden Grove, CA 92841-1427
(714) 895-5494
Email: ceciledeguia@eurofinsUS.com
Website: www. eurofinsus.com

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7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL: (714) 895-5494 . FAX: (714) 894-7501

Site Name

Provide MRN for retail or AFE for major projects

Retail Project (MRN)

Major Project (AFE)

Project Name 70234

CHAIN OF CUSTODY RECORD

Date 11-7-14

Page 1 OF 1

ExxonMobil Engr: **Jennifer Sedlachek**

LABORATORY CLIENT:
ExxonMobil c/o ETIC Engineering, Inc.

ADDRESS:
898 North Fair Oaks Avenue

CITY:
Pasadena, CA 91103

TEL: **626-432-5999** FAX: **626-432-5998** E-MAIL: see below

GLOBAL ID # COELT LOG CODE:
T06019757161

PROJECT CONTACT:
Sean Bowen

SAMPLER(S): (SIGNATURE)

P.O.
4410233413

LAB USE ONLY
14-11-0690

COOLER RECEIPT
Temp = _____ °C

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☑ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL _____/_____/_____

SPECIAL INSTRUCTIONS:
Email report to SBowen@eticeng.com;kgillette@eticeng.com
eticlabreports@eticeng.com

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	LOCATION/ FIELD POINT NAME	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT	TPH-g (8015B)	BTEX, 5 Oxys, naphthalene By 8260B	PAHs BY 8270	Moisture Content (ASTM D2216-92)	Porosity (including dry bulk density) by SSSA #5 or equivalent methods	Total Organic Carbon (TOC) by EPA 9060A or equivalent methods	Air-Filled Void Space by API 40RP			CONTAINER TYPE
1	V6, 3	V6	11/07/14	1050	Soil	1	x	x	x							
2	V6, 6	V6	11/07/14	1120	Soil	1				x	x	x	x			
3	V6, 6.5	V6	11/07/14	1145	Soil	1	x	x	x							

Relinquished by: (Signature)	Received by: (Signature)	Date, & Time: 11/7/14 1600
Relinquished by: (Signature) Tom O'Malley to 650 11/7/14 1730	Received by: (Signature)	Date, & Time: 11/8/14 0900
Relinquished by: (Signature)	Received by: (Signature)	Date, & Time:
Relinquished by: (Signature)	Received by: (Signature)	Date, & Time:

Return to Contents

0690

GSO

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

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CEL
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

COD:
$0.00

Reference:
TERRA PACIFIC GROUP, ETIC

Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Tracking #: 526094571

SDS

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A

GARDEN GROVE

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Package 1 of 1

Send Label To Printer | ☑ Print All | Edit Shipment | Finish

LABEL INSTRUCTIONS:

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

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

ADDITIONAL OPTIONS:

Send Label Via Email | Create Return Label

TERMS AND CONDITIONS:

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

Return to Contents

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WORK ORDER #: 14-11-0690

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: ETIC DATE: 11/08/14

TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 3.0 °C - 0.2 °C (CF) = 2.8 °C ☑ Blank ☐ Sample

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

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

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

Ambient Temperature: ☐ Air ☐ Filter **Checked by:** SR

CUSTODY SEALS INTACT:

☑ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☐ N/A **Checked by:** SR

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Checked by:** 739

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☑Sleeve (5) ☐EnCores® ☐TerraCores® ☐_____

Aqueous: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB ☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** 739

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** 776

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:** $Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered **Scanned by:** 776

Return to Contents

eurofins | Calscience

Supplemental Report 1

Subcontract analyses are reported as a stand-alone report.

WORK ORDER NUMBER: 14-11-0690

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ETIC Engineering, Inc.

Client Project Name: ExxonMobil 70234

Attention: Sean Bowen
898 N. Fair Oaks Avenue, Suite A
Pasadena, CA 91103-3065

Approved for release on 11/25/2014 by:
Cecile deGuia
Project Manager

ResultLink

Email your PM

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Contents

Client Project Name: ExxonMobil 70234
Work Order Number: 14-11-0690

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Work Order Narrative

Work Order: 14-11-0690 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 11/08/14. They were assigned to Work Order 14-11-0690.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: http://www.calscience.com/PDF/New_York.pdf

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

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Return to Contents

eurofins | Calscience

Sample Summary

Client:	ETIC Engineering, Inc. 898 N. Fair Oaks Avenue, Suite A Pasadena, CA 91103-3065	Work Order:	14-11-0690
		Project Name:	ExxonMobil 70234
		PO Number:	4410233413
		Date/Time Received:	11/08/14 09:00
		Number of Containers:	3
Attn:	Sean Bowen		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
V6,3	14-11-0690-1	11/07/14 10:50	1	Solid
V6,6	14-11-0690-2	11/07/14 11:20	1	Solid
V6,6.5	14-11-0690-3	11/07/14 11:45	1	Solid

Return to Contents

Cecile L de Guia

From: Sean Bowen [sbowen@eticeng.com]
Sent: Monday, November 10, 2014 12:54 PM
To: Cecile L de Guia
Cc: Sandy Tat
Subject: RE: ExxonMobil 70234; 14-11-0690

Yes please analyze as SIM.

Sean Bowen
Project Manager
sbowen@eticeng.com
www.eticeng.com
ETIC Engineering, Inc.
898 North Fair Oaks Ave.
Suite A
Pasadena, CA 91103
Tel: 626-432-5999 x15
Fax: 626-432-5998
Mobile: 626-688-0563

Return to Contents

From: Cecile L de Guia [mailto:CecileLdeGuia@eurofinsUS.com]
Sent: Monday, November 10, 2014 12:27 PM
To: Sean Bowen
Cc: Sandy Tat
Subject: ExxonMobil 70234; 14-11-0690
Importance: High

Good Afternoon Sean,

Please confirm if the PAHs by EPA 8270C should be analyze as SIM?
Thank you.

Best regards,
Cecile de Guia
Project Manager

Eurofins Calscience
7440 Lincoln Way
Garden Grove, CA 92841-1427
(714) 895-5494
Email: ceciledeguia@eurofinsUS.com
Website: www. eurofinsus.com

eurofins | Calscience
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL: (714) 895-5494 . FAX: (714) 894-7501

Site Name

Provide MRN for retail or AFE for major projects

Retail Project (MRN)

Major Project (AFE)

Project Name 70234

CHAIN OF CUSTODY RECORD

Date 11-7-14

Page 1 OF 1

ExxonMobil Engr: **Jennifer Sedlachek**

LABORATORY CLIENT:
ExxonMobil c/o ETIC Engineering, Inc.

ADDRESS:
898 North Fair Oaks Avenue

CITY:
Pasadena, CA 91103

TEL: **626-432-5999** FAX: **626-432-5998** E-MAIL: see below

GLOBAL ID # COELT LOG CODE:
T06019757161

PROJECT CONTACT:
Sean Bowen

SAMPLER(S): (SIGNATURE)

P.O.
4410233413

LAB USE ONLY
14-11-0690

COOLER RECEIPT
Temp = _____ °C

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☑ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL _____/_____/_____

SPECIAL INSTRUCTIONS:
Email report to SBowen@eticeng.com;kgillette@eticeng.com
eticlabreports@eticeng.com

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	LOCATION/ FIELD POINT NAME	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT	TPH-g (8015B)	BTEX, 5 Oxys, naphthalene By 8260B	PAHs BY 8270	Moisture Content (ASTM D2216-92)	Porosity (including dry bulk density) by SSSA #5 or equivalent methods	Total Organic Carbon (TOC) by EPA 9060A or equivalent methods	Air-Filled Void Space by API 40RP			CONTAINER TYPE
1	V6, 3	V6	11/07/14	1050	Soil	1	x	x	x							
2	V6, 6	V6	11/07/14	1120	Soil	1				x	x	x	x			
3	V6, 6.5	V6	11/07/14	1145	Soil	1	x	x	x							

Relinquished by: (Signature)	Received by: (Signature)	Date, & Time: 11/7/14 1600
Relinquished by: (Signature) Tom O'Malley to 650 11/7/14 1730	Received by: (Signature)	Date, & Time: 11/8/14 0900
Relinquished by: (Signature)	Received by: (Signature)	Date, & Time:
Relinquished by: (Signature)	Received by: (Signature)	Date, & Time:

Return to Contents

0690

GSO

WebShip

800-322-5555 www.gso.com

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

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

COD:
$0.00

Reference:
TERRA PACIFIC GROUP, ETIC

Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Tracking #: 526094571

SDS

ORC

A

GARDEN GROVE

D92845A

30620928

Print Date : 11/07/14 15:48 PM

Package 1 of 1

Send Label To Printer | ☑ Print All | Edit Shipment | Finish

LABEL INSTRUCTIONS:

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

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

ADDITIONAL OPTIONS:

Send Label Via Email | Create Return Label

TERMS AND CONDITIONS:

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

Return to Contents

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WORK ORDER #: 14-11-0690

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: ETIC DATE: 11/08/14

TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 3.0 °C - 0.2 °C (CF) = 2.8 °C ☑ Blank ☐ Sample

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

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

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

Ambient Temperature: ☐ Air ☐ Filter **Checked by:** SR

CUSTODY SEALS INTACT:

☑ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☐ N/A **Checked by:** SR

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Checked by:** 739

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☑Sleeve (5) ☐EnCores® ☐TerraCores® ☐_____

Aqueous: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB ☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** 739

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** 776

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:** $Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered **Scanned by:** 776

Return to Contents

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Subcontractor Analysis Report

Work Order: 14-11-0690 Page 1 of 1

One or more samples in this work order have tests that were subcontracted. The subcontract report(s) follows.

For subcontracted tests, please reference the laboratory information noted below.

1. PTS Laboratories, Inc. - Santa Fe Springs,CA
   Geotechnical Properties Testing

Return to Contents

PTS Laboratories, Inc.

8100 Secura Way • Santa Fe Springs, CA 90670
Telephone (562) 347-2500 • Fax (562) 907-3610

November 25, 2014

Cecile de Guia
Eurofins Calscience, Inc.
7440 Lincoln Way
Garden Grove, CA 92841

Re: PTS File No: 44745
Physical Properties Data
ExxonMobil 70234; 14-11-0690

Dear Ms. de Guia:

Please find enclosed report for Physical Properties analyses conducted upon the sample received from your ExxonMobil 70234; 14-11-0690 project. All analyses were performed by applicable ASTM, EPA, or API methodologies. An electronic version of the report has previously been sent to your attention via the internet. The sample is currently in storage and will be retained for thirty days past completion of testing at no charge. Please note that the sample will be disposed of at that time. You may contact me regarding storage, disposal, or return of the sample.

PTS Laboratories Inc. appreciates the opportunity to be of service. If you have any questions or require additional information, please contact Morgan Richards at (562) 347-2509.

Sincerely,
PTS Laboratories, Inc.

Michael Mark Brady, P.G.
Laboratory Director

Encl.

Return to Contents

Project Name: ExxonMobil 70234
Project Number: 14-11-0690

PTS File No: 44745
Client: Eurofins Calscience, Inc.

TEST PROGRAM - 20141111

CORE ID	Depth ft.	Core Recovery ft.	TOC/foc Walkley-Black	Moisture Content ASTM D2216/API RP40	Dry Bulk Density API RP40	Air-Filled Porosity API RP 40			Comments
		Plugs:	Grab	Vert. 1.5"	Vert. 1.5"	Vert. 1.5"			
Date Received: 20141111									
V6, 6	N/A	1.00	X	X	X	X			
TOTALS:	1 core	1.00	1	1	1	1			

Laboratory Test Program Notes
Contaminant identification:
Standard TAT for basic analysis is 10 business days.
Air-Filled Porosity: Includes Total Porosity.

PTS Laboratories

PTS File No: 44745
Client: Eurofins Calscience, Inc.
Report Date: 11/25/14

PHYSICAL PROPERTIES DATA

Project Name: ExxonMobil 70234
Project No: 14-11-0690

METHODS:			API RP 40 / ASTM D2216	API RP 40		API RP 40		
				DENSITY		POROSITY, %Vb (2)		
SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENTATION (1)	MOISTURE CONTENT, % weight	DRY BULK, g/cc	GRAIN, g/cc	TOTAL	AIR-FILLED	WATER-FILLED
V6, 6	N/A	V	16.7	1.55	- -	41.22	15.3	- -

(1) Sample Orientation: H = horizontal; V = vertical; R = remold
(2) Total Porosity = all interconnected pore channels; Air Filled = pore channels not occupied by pore fluids.
Vb = Bulk Volume, cc; - - = Analysis not requested.

Return to Contents

PTS Laboratories

PTS File No: 44745
Client: Eurofins Calscience, Inc.
Report Date: 11/25/14

ORGANIC CARBON DATA - TOC (foc)

(Methodology: Walkley-Black)

Project Name: ExxonMobil 70234
Project No: 14-11-0690

SAMPLE ID.	DEPTH, ft.	ANALYSIS DATE	ANALYSIS TIME	SAMPLE MATRIX	TOTAL ORGANIC CARBON, mg/kg	FRACTION ORGANIC CARBON, g/g
V6, 6	NA	20141124	1300	SOIL	660	6.60E-04
Blank	NA	20141124	1300	BLANK	ND	ND
SRM D085-542	NA	20141124	1300	SRM	5320	5.32E-03
				Reporting Limit:	100	1.00E-04

QC DATA

SRM ID/Lot No.	REC (%)	Control Limits	Certified Concentration mg/kg	QC Performance Acceptance Limits, mg/kg Lower	Upper
SRM D085-542	101	75-125	5290	3968	6613

ND = Not Detected

Return to Contents

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PTS - Attn: Morgan

44745

CHAIN OF CUSTODY RECORD

DATE: 2014-11-11

PAGE: 1 OF 1

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

LABORATORY CLIENT: eurofins Calscience, Inc.

ADDRESS: 7440 Lincoln Way

CITY: Garden Grove STATE: CA ZIP: 92841-1427

TEL: 714-895-5494 E-MAIL: CecileLdeGuia@eurofinsUS.com

CLIENT PROJECT NAME / NUMBER: ExxonMobil 70234/14110690

P.O. NO.:

PROJECT CONTACT: Cecile de Guia

SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

☐ COELT EDF GLOBAL ID: LOG CODE:

SPECIAL INSTRUCTIONS:

PTS Quote#: Q14-065

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	Moisture Content (ASTM D2216-92)	Porosity (including dry bulk density) by API RP40	Total Organic Carbon (TOC/foc) by Walkley-Black	Air-Filled Void Space by API 40RP
	V6, 6	11/07/14	1120	S	1	X			X	X	X	X

492-F

Relinquished by: (Signature) — Received by: (Signature/Affiliation) PTS Labs Inc — Date: 11/11/14 — Time: 1028

Relinquished by: (Signature) — Received by: (Signature/Affiliation) — Date: — Time:

Relinquished by: (Signature) — Received by: (Signature/Affiliation) — Date: — Time:

06/02/14 Revision

Return to Contents

Appendix F

Photos of Cathodic Well


AP TEST